CONSTRUCTION CONTRACT VARIATIONS

MICHAEL SERGEANT
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HOLMAN FENWICK WILLAN LLP

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Changes to the work on construction projects are a common cause of dispute. Such variations lead to thousands of claims in the UK every year and many more internationally. Liability for variations is not only relevant to claims for sums due for extra work, but is also an important underlying factor in many other construction disputes such as delay, disruption, defects and project termination. This is the first book to deal exclusively with variations in construction contracts and provide the detailed and comprehensive coverage that it demands.

Construction Contract Variations analyses the issues that arise in determining whether certain work is a variation, the contractor's obligation to undertake such work, as well as its right to be paid. It deals with the employer's power to vary and the extent of its duties to approve changes. The book also analyses the role of the consultant in the process and the valuation of variations. It reviews these topics by reference to a range of construction contracts.

This is an essential guide for practitioners and industry professionals who advise on these issues and have a role in managing, directing and compensating change. Participants in the construction industry will find this book an invaluable guide, as will specialists and students of construction law, project management and quantity surveying.

Michael Sergeant graduated in law from Manchester University in 1991, qualified as a solicitor in 1995, and has specialised in construction law ever since. He became a partner at the construction law niche practice Winward Fearon in 2001, which merged to become Maxwell Winward in 2007. In April 2013, the Maxwell Winward construction team moved to Holman Fenwick Willan LLP, where he is now a partner, based in London but with extensive involvement on international projects. During the course of his career he has acted for a range of clients, including contractors, employers and consultants, and on a wide variety of projects from retail development to transport infrastructure through to energy facilities. His work involves him in advising at all stages of the construction process, from procurement through to dealing with the problems that arise during the life cycle of a project.

Max Wieliczko studied law at University College London. He has worked exclusively as a construction lawyer since 1987, providing advice in relation to all aspects of project procurement, delivery, dispute avoidance and resolution. Before moving to Holman Fenwick Willan LLP in April 2013 he headed up the construction group at Winward Fearon, and then Maxwell Winward. Max is based in London, but advises project sponsors, and major international construction companies in relation to projects around the globe, both on- and offshore. His work has a particular focus on heavy engineering, including oil and gas production, tunnelling and infrastructure, all manner of process plants, including energy from waste facilities, power stations and wind farms.

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By

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PREFACE

Variations, as a subject, has been largely ignored. Whilst there are specialist books on many other areas of construction law, there are no specialist books on this subject.[1] The construction law bibles, *Keating* and *Hudson*, deal with the subject as well as the inevitable constraints of space will allow, with *Keating* giving 20 pages to the topic and *Hudson* 70 pages. By having the opportunity to devote an entire book to the topic we have been able to analyse the problems and issues that arise in much more detail and from first principles. We have been able to look at variations in conjunction with other subjects, where the general texts have considered them separately. For example, we have been able to consider the interpretation of the contract, and in particular the defined scope of works, specifically in the context of changes that may need to be made.

This subject has perhaps been neglected because of a perception that disputes about variations are disputes about valuation, and that they are low value and straightforward. Valuation is an important element of the subject and one this book covers, but variations as a topic involves many other issues. Perhaps the most important of these is the whole question whether certain work is within the scope, and therefore part of the contractor's obligation to construct the works, or whether it is outside the scope and therefore is work that the employer needs to instruct as an extra. When parties are seeking to resolve a variation account, a disagreement on this point will often be described as a difference in principle because, once resolved, there may be no difference on quantum. The question whether or not work is part of the contract scope is the underlying substantive issue on a wide range of disputes. Delay and disruption disputes will often have this point at their core. Disagreements over defects often depend on whether the contractor is obliged to correct a failure of the design, or whether the corrective work is extra and therefore something that the employer should instruct. Variations are therefore at the heart of many of the largest and most intractable disputes and the subject is much broader than disagreements about the correct rate to be applied. Chapter 1 contains an overview of the subject matter of this book which highlights further the breadth of the subject.

Max and I chose to write on this subject precisely because we felt it had been unduly ignored. Our aim has been to add something new to the current texts on construction law, rather than produce a book that synthesizes what has been written before on a well-trodden topic. This has brought its own challenges. Because comparatively little has previously been written on variations, we have spent significantly more time researching and analysing the subject than would have been required had we tackled a topic that had already been covered in detail by specialist texts.

Writing this book has been an enormous challenge. Max and I started the process in 2009 and had initially planned to complete it within two years. Perhaps inevitably, this coincided with a very busy period of work for clients, with the result that our deadline was put back

1. *Variations in Construction Contracts* by Peter Hibberd is the only book we are aware of that seeks to cover a similar field, but it is written from a quantity surveying perspective. It was published in 1986, is relatively short, and principally concerns valuation.

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on several occasions. Not only has the last few years seen us involved in a number of very substantial projects, many of them overseas, but we have also moved firm. Our construction law team had enjoyed a number of successful years at Winward Fearon (latterly Maxwell Winward), but by 2012 we had reached the point where so much of our work was located outside the UK that we needed to be part of a firm with an international reach. In April 2013, we moved our team to Holman Fenwick Willan LLP, which, with 14 offices worldwide, has the global footprint we needed. Whilst the move has been a further diversion, we have been greatly supported by our new colleagues at the firm.

In undertaking this work, I would like to thank the construction law team at Holman Fenwick Willan LLP for all their help. In particular Huw Wilkins, James Plant and Richard Booth who all helped with in depth research, and also Tim Atwood, Victoria Nichols, Katherine Doran, Adam Wortman and Joanne Button. The views and comments of Nick Longley and Robert Blundell, my fellow partners in the Holman Fenwick Willan LLP construction team, have also been much appreciated. Thanks also to my fellow partner, Anthony Woolich, who specialises in competition law, for his input in relation to procurement legislation. Last, but not least, many thanks to my secretary, Lyanda Watson, for her patience and attention to detail with the many last-minute manuscript changes to the text.

Michael Sergeant, lead author
Holman Fenwick Willan LLP

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Pressetext Nachrichtenagentur GnbH v. Republik Österreich (Bund), APA-OTS Originaltext - Servie GmbH and APA Austria Presse Agentur registrierte Genossenschaft mit beschränkter Haftung (Case C-454/06) [2008] ECR I-0440 ..... 5.202
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TABLE OF LEGISLATION

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Contract Disputes Act 1978 (USA) 4.31, 9.12
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CHAPTER ONE

OVERVIEW

SECTION A: INTRODUCTION 1
SECTION B: QUESTIONS CONCERNING THE NATURE OF VARIATIONS 1
SECTION C: SUMMARY OF CONTENT BY CHAPTER 11

SECTION A: INTRODUCTION

Variations to the work undertaken on construction contracts is a wide topic involving numerous issues. The purpose of this chapter is to provide an introduction to the topic and to highlight some of themes that run through this book. **1.1**

Section B of this chapter poses, and answers, a number of high-level questions relating to variations. In considering these issues, reference is made to the sections of this book which deal in more detail with the particular topics raised. In this way, this section provides a useful introduction to particular issues which run across a number of chapters. **1.2**

Section C of this chapter contains a brief review of the content of each chapter, highlighting the particular topics covered by the sections within each chapter. For those unfamiliar with this book, this may provide a useful starting point in identifying where the topic they are researching is covered. **1.3**

SECTION B: QUESTIONS CONCERNING THE NATURE OF VARIATIONS

This section considers a number of questions concerning variations as a means of giving an overview of some of the topics covered by this book. **1.4**

What variations are covered by this book?

This book considers, in broad terms, changes to the works that are undertaken on a construction project.[1] **1.5**

A contract may specify, not only the permanent works, but also the way that they are required to be built.[2] The contractor will have an obligation to follow the specified works unless changes are sanctioned by the employer. **1.6**

1. This book does not use the word 'variation' in any defined sense to mean a particular type of change. The term 'variation instruction' is used to mean orders that direct changes to the works that are instructed under a contract provision that provides for this. Construction contracts from the US normally refer to variations as 'changes' and variation instructions as 'change orders'.
2. Changes to the way the works are undertaken, as opposed to the permanent works, are discussed at Chapter 3, section E.

1.7 The most common way of instigating change is for the employer to exercise its unilateral power to vary the works, by operating the variation mechanism incorporated in the contract. This is the principal subject covered by this book.

1.8 Changes to the works can, however, be sanctioned in a variety of other ways, and this book also considers these alternative situations.[3]

1.9 A construction contract may contain provisions that allow the employer to direct, or approve, changes to the works without a variation being instructed under the contract mechanism – for example, using powers the employer may have to alter the sequence of construction, or the nature of the temporary works, under another contract provision.[4] Alternatively, the contract may allow the contractor to change the way it undertakes works on the occurrence of specified events, without prior permission or instruction from the employer.[5]

1.10 Changes to the works may be permitted by the employer without a variation being instructed under the contract.[6] The parties may simply agree a change to the scope, possibly as part of a wider renegotiation of the contract.[7]

1.11 The employer's desire to procure additional works may be satisfied by entering into a new contract with the contractor.[8] The employer may, however, seek to let the new work to a substitute contractor.[9]

1.12 The additional work may not be undertaken under a contract at all, in which case the contractor may have a right to be paid on a claim in restitution.[10]

1.13 The extent and nature of changes to construction work considered by this book are therefore much wider than simply variations to the permanent works instructed under the contract mechanism.

3. One of the reasons it is important to consider the other ways in which the scope can be changed is that disputes will often arise as to whether the employer has consented to a change. Disputes may also arise in relation to whether the employer has instructed a variation under the contract (which will typically entitle the contractor to money and time) rather than simply allowing a change to be made or sanctioning it respectively as a concession, in which case these entitlements will not be due (see Chapter 9, section B). In these circumstances it will often be necessary to consider the differences between the different ways in which change can be sanctioned. It will therefore often be necessary to consider not only whether a change has been approved, but how it has been sanctioned. See Chapter 9 generally.

4. The alteration may be within the employer's discretion, and because no formal variation is instructed, there may be no entitlement to additional money and time. See *infra*, paras. 3.112–3.118, 3.190–3.195 and 5.13.

5. For example, clauses providing for the need for the contractor to alter the way it works on the discovery of unforeseen ground conditions. Or loss and expense clauses which compensate the contractor for additional disruption costs, where those costs consist of the use of additional resources which amount to a change in the way that the works are undertaken. See Chapter 9, section H.

6. Such concessions are considered at Chapter 9, section B.

7. Chapter 9, section C.

8. Chapter 9, section F.

9. See *infra*, paras. 5.171–5.182.

10. Chapter 9, section G.

Why are variations made to the works?

1.14 A variation may arise because the employer decides it wants something different from the original plan. Alternatively, the change may be driven by construction issues relating to the build process: either because the works can be improved, or the cost and/or time of the project can be reduced, or because the defined scope cannot be built.

1.15 With the first category of change, the variation arises from a desire to change the finished product.[11] This desire can arise as a result of a number of factors. The employer may simply change its mind, perhaps for aesthetic reasons. The change may instead be required for commercial reasons, perhaps because the market has changed since the original design was formulated or because it is considered that a variation will result in a more valuable end product.

1.16 The second category of variation arises because of technical adjustments to how the project is built. The employer will still want the project as originally conceived, or as close to it as possible.

1.17 Such changes may be introduced to make it quicker or cheaper to build and the cost of such variations may therefore be borne by the contractor.[12]

1.18 Such changes may need to be made because they are necessary in order to progress and complete the project. This can arise for two reasons. The scope as described in the contract may be inadequate such that it cannot be built, or alternatively, an event may occur during the course of the project which means that the contract scope can no longer be built. [13]

1.19 Inadequacies with the technical scope of works contained in a contract are far from uncommon. This can occur because, for various reasons, insufficient time has been spent on developing the technical scope,[14] or because of inadequacies with the approach taken by the employer in managing the preparation of the contract documents.[15]

1.20 It will often be possible to construe the contract documents in such a way as to resolve inconsistencies and errors.[16] However, in certain circumstances, the design of the works as described in the technical documents will be such that it cannot be built, and a variation to the design will need to be instructed.[17]

1.21 The design, as contained in the contract, may have been adequate at the time it was prepared, but subsequent events may mean that it can no longer be followed. For example, the

11. Clearly there can be overlap between the two categories. The commercial justification for the facility may have changed since the planning stage such that it is necessary to complete the project at a lower cost, which may lead to a redesign to reduce the budget.
12. It depends on the contract risk allocation. If the employer instructs a variation, the contractor may have a right to be paid even though the change is made for the contractor's benefit: see Chapter 6 and Chapter 7, section C.
13. See Chapter 2, section A, which gives a number of examples in relation to each category.
14. See *infra*, para. 3.10.
15. See *infra*, para. 3.12.
16. See Chapter 3, section C.
17. See Chapter 3, section D.

contractor's defective work during construction may mean that the design of the scheme needs to be changed.[18]

1.22 Any problems inherent in the contract documents themselves, or as a result of events that result in the original design becoming unbuildable, can be the contractual responsibility of either the employer or the contractor, depending on the contract.

1.23 Where the risk is the liability of the employer, then it may instruct a variation in order to escape a problem for which it would otherwise be responsible. The employer may, for example, instruct a variation where its design would otherwise be defective. Or, the employer may be responsible for inaccurate site data upon which the contractor has relied, and the employer may agree to vary the design in order to resolve the problem.

1.24 If the employer refuses to issue an instruction, where the contract design cannot otherwise be built, then the project can reach an impasse.[19] The contractor may understandably not wish to implement a change if no instruction has been issued. Various contract mechanisms may exist entitling the contractor to be paid for work undertaken without an instruction in such circumstances, and which are aimed at avoiding such a standstill to the project arising.[20]

Why do construction contracts contain unilateral variation provisions?

1.25 The parties to a construction contract can agree changes to the scope. However, such consensual variations require the mutual agreement of the parties. For significant and complex changes to the scope, such a consensual variation approach may be the most appropriate course of action.[21] However, such an approach will typically be time-consuming, inconvenient and place the employer in a poor bargaining position.

1.26 In order to avoid these problems, construction contracts will typically incorporate a unilateral power to vary the works, so as to give the employer the right to change the scope without the need to obtain the contractor's consent in respect of each variation. Such a unilateral power to vary is much more common under construction contracts than under other commercial agreements because of the inherent features of the construction process.[22] The nature of the process is such that some changes to the contract scope are almost inevitable and may be essential simply in order for the project to reach completion.[23] In addition, a contractor will typically be able to implement changes to the product it is supplying more easily than would a seller in other commercial environments, because it is not constructing on a

18. See Chapter 2, section A.
19. See Chapter 3, section C.
20. See *infra*, paras. 2.33–2.41.
21. The parties may agree a change to other elements of their contract as part of a change the scope. As part of such a consensual variation this may include a change not just to the contract sum and the completion date, but also, for example, to the sequencing of the works and the provision of resources by the employer. See Chapter 9, section C.
22. As to unilateral variations in other commercial contexts, see *infra*, paras. 5.2 and 5.28.
23. Chapter 2, sections A and C.

production line and therefore does not have the same constraints on its resources.[24] Having said this, the obligation on the contractor to undertake variations that are ordered, typically with very few provisos, represents a significant risk.[25]

1.27 A contract administrator does not have implied authority to vary the terms of a contract on behalf of the employer. If, as is frequently the case, the contract provides for the contract administrator to issue instructions on the employer's behalf, then this will amount to a representation by the employer to the contractor that the contract administrator has the necessary ostensible authority. Therefore, where the contract administrator instructs variations in accordance with the contract provisions, the contractor can rely on these as binding the employer.[26]

What are the characteristics of an instructed variation?

1.28 The unilateral power to instruct variations under a contract depends on the wording of the relevant clause. The employer, or the contract administrator on its behalf,[27] can only exercise the power in accordance with its express provisions.

1.29 The contract will set out the form that the variation instruction must take. Typically, the contract will specify that it must be issued in writing by the contractor administrator, and may specify that it must be issued in advance of works being undertaken.[28]

1.30 By its nature, a variation instruction will involve a change to the scope,[29] rather than a direction to undertake work that is already part of the contractor's obligations.[30] The contract will also specify the extent and nature of the change that can be made. This may, or may not, allow the employer to instruct a change to the method of construction or the sequencing of the works.[31] There may also be limits as to the type of extra work that can be instructed, the volume of additional work, and when changes can be made.[32] A unilateral power to vary will normally be narrowly construed by the courts.[33]

24. For example, whilst the shipbuilding process has many similarities with construction, shipbuilding contracts do not commonly contain a unilateral right to insist on changes. The provisions involving variations normally require the employer to get the consent of the contractor. This is generally said to be because shipbuilding involves a production line. See Curtis, *The Law of Shipbuilding Contracts*, 4th Edn (2012, Informa Law), p. 91.

25. See *infra*, paras. 1.34–1.39.

26. See Chapter 8, section C.

27. The contract administrator will only have authority to instruct change only if it does so in accordance with the contract provisions. See Chapter 8, section C.

28. Chapter 8, section B. The employer may waive the need to comply with such requirements, see Chapter 9, section D.

29. Issues concerning the assessment of whether work is within the contract scope are discussed in Chapter 3.

30. Variations clauses will almost always use such words as 'change' or 'alteration' and so an instruction that orders the contractor to undertake work that is already part of its scope will not amount to a variation under the definition of that term in the contract. However, it is possible for certificates under contracts to be finally determinative on the question whether the work described in them is extra. In theory, therefore, an instruction could operate in this way and amount to a variation instruction (entitling additional monies) even though it ordered work that was, properly assessed, within the scope. See *infra*, paras. 10.44–10.47. This is highly likely to occur under modern construction contracts.

31. See Chapter 3, section E and Chapter 5, section B.

32. See Chapter 5.

33. See *infra*, para. 5.28.

1.31 If the instruction does not comply with the contract formalities, or does not fall within the work that may be ordered, then the contractor will have no obligation to comply with the order.[34]

1.32 A contract will normally provide that the contractor is entitled to additional money and time where it undertakes an instructed variation.[35] These entitlements are triggered only if the variation has been validly instructed.

1.33 Therefore, if the contractor undertakes the extra work without a valid instruction, there is a risk that the employer will refuse to pay for it. This is because the contract administrator has authority to order variations on behalf of the employer only if it does so in accordance with the provisions of the contract. The employer will not be bound by an order for extras that was issued without its authority.[36]

What risks does a unilateral variation power pose for a contractor?

1.34 Additional work on a contract can, depending upon the pricing mechanism, improve the profitability of a project for the contractor. However, the employer's right to instruct additional work can also represent a significant risk for a contractor. This is because the power to instruct is normally very wide.

1.35 The contract will often allow the employer the right to instruct any additional work at any point in the project. This can mean that the contractor is required to undertake extra works even though it may not have the necessary resources, or the work may be uneconomic. Instructions issued at a late stage in the project, and after the relevant package of works has been undertaken, can entail extensive redesign and rework. This can also force the contractor to remain on site for significantly longer than planned.

1.36 Such additional difficulties will be ameliorated if the contract mechanisms adequately compensate the contractor for the cost of such changes. This will not always be the case, however, and in any event the contractor's claims for additional payment may take some time to be processed.

1.37 The contractor's right to additional payment will typically depend on the valuation provisions. The rates at which the contractor is paid for additional work will depend on the pricing schedule in the contract.[37] The contractor will typically be bound by those rates even though the actual cost of undertaking the work may be substantially higher.[38]

34. See *infra*, paras. 5.35–5.43. The contractor may agree to undertake the work in exchange for an uplift on the rates.

35. This will not always be the case. See *infra*, paras. 1.40–1.44.

36. See *infra*, paras. 5.44–5.48.

37. Variations will be paid either on the basis of the breakdown of prices included in the contract sum or by reference to a separate pricing schedule that is specific for valuing extra work. The two approaches are compared *infra*, at paras. 11.8–11.21.

38. The contract prices are treated as sacrosanct: see *infra*, paras. 11.35–11.44. It can even be the case that under the valuation rules the entitlement to payment for additional work is nominal or non-existent: see *infra*, para. 1.42.

A contractor will normally have no right to be paid for extras unless the employer, or the contract administrator on its behalf, has issued a variation instruction. However, it can often be far from clear whether certain work that needs to be undertaken on a project represents work that is truly additional to the original contract scope. The description of the contract scope, as contained in the technical schedules forming the contract, will often be complex and may contain many inconsistencies.[39] There can often be disagreements as to whether particular work forms part of the contractor's original scope or whether it is extra. A contractor will therefore need to decide whether to undertake the work in question, or to refuse to carry it out unless it is first formally instructed. Undertaking a comprehensive analysis of the scope of work during the course of a busy project, before reaching such a decision, will often be impossible.[40] If the contractor carries out extra work without an instruction it may have no right to be paid.[41] If the contractor refuses to carry out work within the contract scope (incorrectly thinking that it is a variation), then it may be liable for delay and additional costs.[42] **1.38**

A contractor must carry out additional work in compliance with the required standards for workmanship and design, in the same way as it undertakes the original contract scope. However, whilst the contractor can review the risks involved in the original contract scope when it decides to tender for the project, it has no equivalent right in relation to additional work. The contractor is obliged to undertake the extra work instructed, subject to limited rights to refuse. The contractor is then responsible for the performance of that work in accordance with the standards set down by the contract.[43] **1.39**

Is a contractor entitled to extra money and time for additional work?

Whether a contractor is entitled to extra money for the additional work depends on the contract provisions governing the work. **1.40**

The work may be undertaken under a variation agreed between the parties, in which case it will depend on the terms of their variation agreement, be they express or implied.[44] If the work has been undertaken under a new contract, then that new contract will govern payment.[45] **1.41**

If the work has been undertaken in compliance with a variation instruction, then the valuation provisions under the contract will usually govern entitlement. The parties can agree under their contract whatever they want in respect of whether or not the contractor will get paid for extra work instructed. In theory, there is no reason why they should not agree that the contractor will be paid only a nominal amount or even nothing for additional work.[46] **1.42**

39. Chapter 3, section B.
40. Chapter 2, section D.
41. Chapter 2, section B.
42. Chapter 2, section C.
43. Chapter 4, section F.
44. See Chapter 11, section D.
45. See *infra*, paras. 9.195–9.196.
46. See *infra*, paras. 11.23–11.25. The parties' entitlements are governed by the contract. An instructed variation is a unilateral variation to a contract and therefore there is no need for a mutual exchange when a change is ordered. In order for the parties to a contract to vary their agreement (i.e. a consensual variation), then consideration is

1.43 If the work is governed by a variation instruction issued under the contract, then the contract may provide that the contractor is entitled to additional payment irrespective of the underlying reason why the instruction had to be issued. The contract administrator may, for example, have to instruct the variation because of a failure for which the contractor is responsible, such as a defect in its design. However, a contract may make no distinction as to the reasons why a change was instructed, such that this will not affect the contractor's right to be paid for the variation.[47]

1.44 The contractor's right to additional time in order to undertake variations will again be governed by the provisions in the relevant contract or in a separate variation agreement.

1.45 If the contract does not contain an extension of time provision, or if the extension of time provision does not allow for variations, then in circumstances where the contractor is critically delayed by additional work it will normally be entitled to a reasonable period in which to complete the works.[48] This will mean that the contract completion date is not refixed by the contract, time will be at large, and the employer will lose its right to deduct liquidated damages.[49] It is important to be aware, however, that the right to a reasonable period to complete arises as a result of the implied duty to cooperate and, as with any implied term, can be excluded by express provision. The parties' contract can therefore provide that the contractor does not get additional time in the event that extra work is instructed.[50]

What risks does a unilateral variations provision pose for an employer?

1.46 The contract administrator will have ostensible authority to change the works on the employer's behalf.[51] If the contract administrator does not liaise closely with the employer, change can be made to a project that the employer does not want and was not expecting. In addition, the employer may have to pay for such changes. The contract administrator's ostensible authority derives from the provisions of the contract, and so this can be limited by restrictions on the power to vary: for example, a cap on the value of variations that may be ordered.[52] The contract administrator may also be liable for acting in excess of its actual authority, irrespective of the provisions of the construction contract.[53]

1.47 If the contract administrator instructs a variation that is required only because of a problem that is the contractor's responsibility, then, depending on the contract wording, the

required because the formalities applying to contract formation apply in those circumstances: see *infra*, paras. 9.88–9.94. However, in respect of a unilateral variation, the parties have already agreed this arrangement under the contract and consideration for the right to instruct changes (on the basis of agreed valuation rules) has been given under that contract. See also Sean Wilkin and Karim Ghaly, *The Law of Waiver, Variation and Estoppel*, 3rd rev'd Edn (2012, Oxford University Press), para. 19.07.

47. See Chapter 6, section B.
48. See Chapter 12, section B.
49. See *infra*, paras. 12.48–12.57.
50. See *infra*, paras. 12.58–12.65.
51. See Chapter 8, section C for more detail concerning the contract administrator's authority and its role as agent.
52. See Chapter 5 generally. There may also be limitations on changes that may be made to the works because of the interests of third parties, such the party that will occupy and operate the project facility: see Chapter 5, section F.
53. See *infra*, para. 8.90.

employer may still be liable to pay for the change. This is because construction contracts will often entitle the contractor to more money and time irrespective of the reason why the variation was instructed.[54]

1.48 Even if the variation instruction does direct additional work that the employer wants, it may pay more for it than it expects, and may pay more than the market rate for the work. The contractor's entitlement depends on the provisions of the contract, and typically, therefore, the price for the extras will be derived from the rates that were agreed with the contractor and incorporated into the contract at the time of tender. This may have been priced by the contractor in a way that is advantageous to it when additional work comes to be instructed.[55]

1.49 Extra work may also mean more time for the contractor to complete the project.[56] If the contract does not provide adequately for extensions of time for extra work, then the contractor may be entitled to a reasonable period to complete and the employer may lose its right to liquidated damages.[57]

1.50 If a variation is instructed, the contractor's entitlements to both money and time are resolved through the contract procedures. The assessment can seem relatively subjective and either party will be able to seek to have it reviewed at a later stage by a tribunal. Once a variation has been instructed, the employer's liability in respect of it will be uncertain, and may remain so for some time. This can be avoided by the employer agreeing entitlement with the contractor in advance.[58]

1.51 Agreeing a variation in advance will be particularly beneficial on design and build projects.[59] An instruction to vary on such a project can be even more uncertain in outcome than with a traditional build only contract. This is because the employer will often direct the change by altering the employer's requirements. This may just change the requirements that the contractor's design needs to fulfil, with the contractor left to decide upon the details of how this will be achieved. Having instructed the change, the employer will be uncertain as to how this will be implemented. For this reason, design and build contracts will typically involve more sophisticated processes to ensure that the details of how the variation instruction is implemented are agreed first.

What are the most common disputes that arise in relation to variations?

1.52 Disagreements as to whether certain work falls within the originally agreed contract scope, or whether it is a variation, are very common. The complex nature of the construction process, and extensive technical documentation contained in a contract to describe those

54. The employer ought to permit the change as a concession in this situation. See Chapter 6, section B.
55. See *infra*, paras. 11.15 and 11.174.
56. If the contractor is entitled to additional time because it has been critically delayed by the extra work, then it is also likely to be entitled to more money to compensate it for the extended period of time on site.
57. See Chapter 12, section D.
58. Chapter 8, section E.
59. As to design and build contract variation procedures, see Chapter 3, section F.

works, will often mean that this is a difficult question to answer. The contractor can often be obliged to undertake work that is not expressly referred to in the technical documents because it is held to be implicit as part of its duty to build the defined works, such that this is not a variation under the contract.[60]

1.53 This issue as to what work forms part of the contractor's scope is a common underlying factor in disputes on construction projects. This can lead to a stand-off between the parties as to whether the contractor is required to undertake certain work, with the contractor insisting that a variation instruction is issued, and the employer refusing to instruct.[61] Such an impasse can lead to delay on a project and potentially termination.

1.54 It will often be the case that in this type of situation the contractor will undertake the change to the works with no agreement as to whether it is a variation, and the parties' disagreement will be resolved later.[62] The employer's liability for the cost of the change, and the critical delay to the project as a result of it, will depend on whether the work is within the contractor's scope. It can often be the case that such disputes are not resolved until the final account stage.

1.55 Disagreement concerning the scope can also lie behind disputes in relation to defects. The correction of a defect will often involve changing the design. However, the parties may disagree as to who is responsible for the change. The employer may argue that the contractor's scope includes responsibility to change the design to the extent that it is defective, and that this extra work is within its scope and therefore not a variation. The contractor may argue that it is obliged only to undertake the works as described in the technical documents and that the design change represents a variation.[63]

1.56 The contractor's right under the contract mechanism to be paid for a variation will often turn on whether the change was instructed in accordance with the contract procedures. If a formal instruction has not been issued, then arguments may arise as to whether this requirement has been waived by the employer.[64] There may be other means by which the contractor may seek to establish payment; for example, by establishing that the parties had agreed the change, or that the additional work was undertaken under a separate contract.[65]

1.57 The disagreement may not relate to payment for the change but whether the contractor was entitled to depart from the scope at all. If the contractor makes an unapproved departure from the scope during the course of the works, then the employer may try to get the work corrected. The employer may also have right to terminate if the work is not corrected, and

60. See Chapter 3, section C.

61. Chapter 2, section C.

62. It may, from a practical perspective, simply not be possible for the contractor to stop work and obtain a variation instruction each time a change to the works, or a change to the way that the works are constructed, is made. See *infra*, paras. 2.8 and 2.32.

63. Design responsibility and the degree to which this may require the contractor to undertake work that is additional to the technical scope are discussed in Chapter 3, section F.

64. Chapter 9, section D.

65. See Chapter 9 generally.

may seek to refuse a completion certificate.[66] If the contractor does not correct the works, then the employer may be entitled to damages to compensate it for the fact that the contractor has failed to deliver the promised product.[67]

1.58 Disputes may also arise as to whether the employer is entitled to instruct certain changes to the works. The contract may contain express or implied limits on the type of change that can be instructed,[68] whether the employer can alter the contractor's method of working,[69] or the volume of work.[70] There may be constraints on whether the employer can direct a change because of the stage that the project has reached.[71] There may be disagreements as to whether an employer can bring a new contractor onto site to undertake work on the project and whether the employer can omit work from the contractor's scope.[72] Many of these disagreements will ultimately turn on whether the contractor will be adequately compensated for the change that the employer wants to make.

1.59 Finally, even if it is agreed that the contractor is in principle entitled to be paid for the variation, disputes as to how the change to the works should be valued, and how much the contractor should be paid will, to some extent, impact on virtually every project.[73]

SECTION C: SUMMARY OF CONTENT BY CHAPTER

1.60 This section contains a summary of the subject matter of each chapter.

Chapter 2: Employer approval

1.61 Chapter 2 discusses the need for the contractor to obtain the employer's approval for changes to the works, even changes that could be said to amount to improvements. The variations clause entitles the employer to insist on variations to the work, but only so long as it complies with the procedural steps under the contract and instructs changes that fall within the parameters of permitted alterations under that clause (section B). This chapter considers situations in which the contract scope cannot be constructed unless the employer approves an alteration. If the employer does not give approval, then the works may reach a standstill. Section C of this chapter considers why such impasses arise and briefly reviews how such a situation may be avoided or resolved. Section D considers how an impasse sometimes arises because of a difference of opinion between the parties as to whether or not a certain item of work is an extra, and therefore whether or not a variation instruction needs to be issued.

66. Chapter 4, sections B, C and D.
67. Chapter 4, section E.
68. Chapter 5, section B.
69. Chapter 5, section B and Chapter 3, section E.
70. Chapter 5, section C.
71. Chapter 5, section D.
72. Chapter 5, section E.
73. Chapter 11.

Chapter 3: Scope

1.62 One of the most common areas of disagreement on a construction project is whether or not an item of work is within the contract scope, and therefore whether or not it is a variation. This chapter considers this issue in detail. In doing so it reviews the rules of contract interpretation and their application in analysing the inconsistencies that often exist within the technical scope.

1.63 The chapter considers the way in which the contract conditions may require the contractor to undertake work that is additional to that described in the technical scope documents, such as the specification and drawings. For example, the contractor's buildability obligation (section E) or design obligation (section F) may mean that it has to undertake extra work to that expressly described, such that these extras are treated as being within the contractor's duty to undertake the contract works and are not variations. The chapter considers whether the provision by the employer of additional design information represents change, or simply further particularisation of the employer's requirements and therefore within the original scope.

1.64 The contract may contain procedures for resolving inconsistencies between documents, such as mechanisms that allow the contract administrator to make determinations (section H) and provisions which deem a variation to have been instructed in order to resolve the ambiguity (section G).

1.65 This chapter also looks at how changes to the scope of works are assessed where the contract is not based on a lump sum but instead involves an alternative pricing model, such as measurement contracts (section I). Changes to the scope under services contracts are also reviewed (section J).

Chapter 4: Contractor's obligations in respect of the works

1.66 Chapter 4 considers a number of different aspects of the contractor's obligation to build the original scope of works and instructed changes to that scope.

1.67 The complexity of construction works means that departures from the defined scope are almost inevitable. However, these may be relatively minor and may have little or no impact of the utility of the completed project. If the employer does not approve such changes to the scope, then it may be necessary to consider the parties' respective liabilities. This chapter considers the remedies that may be available to the employer during the course of the project to have the nonconforming work corrected (section B) and its right not to pay the contract price in such circumstances (section C). If the matter is not resolved during the course of the works, then the contractor may not be entitled to a completion certificate (section D) and the employer may be entitled to damages (section E).

1.68 This chapter also discusses the contractor's responsibilities in relation to the varied work instructed. In the same way that the contractor has workmanship, and possibly design,

obligations in relation to the original scope, it will also have duties in respect of the additional work. Section F considers whether the contractor's responsibilities for new work are to be judged in accordance with the same standards as the original scope.

Chapter 5: Power to vary

1.69 The employer's power to unilaterally order a variation to the works derives from the provisions of the contract. This chapter considers the express and implied limitations on this power. This may include limits on the type of work that may be instructed or changes that the employer can make to the way the works are undertaken (section B). There may be restrictions on the volume of additional work that can be ordered (section C) or when during the course of the project changes may be instructed (section D).

1.70 Section E considers the degree to which an employer can omit work. The employer may not be entitled to use the variations clause to implement major changes to the project by removing significant quantities of work. In addition, there may be constraints on its right to omit work and give it to another contractor to undertake. This section also considers the restrictions on an employer's right to introduce a new contractor to a project to undertake elements of the works.

1.71 This chapter principally concerns constraints on the employer's power to vary under the construction contract. However, constraints may also arise for other reasons. For example, because third parties with an interest in the project can prevent changes being introduced (section F).

Chapter 6: Variations required because of contractor risk

1.72 A variation may need to be made to the works as a result of a risk that is the contractor's responsibility. For example, the contractor's design may prove to be defective, such that a change to the scope is required. This chapter considers the situation where the employer instructs a variation in these circumstances and whether the contractor is entitled to be paid for the change.

Chapter 7: Duty to vary

1.73 Whilst the right to change the works is within the employer's discretion, the question can arise as to whether the employer is obliged to vary the scope in certain circumstances; in particular, where the contractor cannot proceed with, or complete, the project unless an element of the scope is changed. This chapter also considers whether an obligation to change the works arises where the contractor exercises a right under the contract to propose value engineering changes, or where changes would reduce the cost or construction duration.

Chapter 8: Variation instructions

1.74 Chapter 8 considers procedural requirements for instructing variations. In particular, it looks at formal requirements, such as the need for the instruction to be in writing, for it to be given before work is undertaken, or for it to be given by a particular person. It considers the need for a validly issued instruction as a condition precedent to payment as well as notice provisions concerning claims for additional payment.

1.75 Section C discusses the role of the contract administrator in the instruction of variations and in particular the nature and extent of its authority to authorise change. It considers the implications where the contract administrator purports to authorise changes that are beyond the extent of its authority.

1.76 This chapter also looks at clauses which allow authorisation of changes retrospectively (section D) and provisions designed to allow the parties to agree the detail and implications of a variation before execution (section E).

Chapter 9: Change in the absence of a variation instruction

1.77 Whilst the most common way of changing the scope of works under a construction contract involves instructing a variation, this is not the only way in which an alteration may be approved. This chapter considers the various other ways in which a change may be affected. Some of these methods involve employer approval only, such that the contractor gains no entitlement to additional money and time. Other methods of recognising change also give the contractor the right to compensation.

1.78 The employer may allow the contractor to depart from the contract scope as a concession (section B) or it may agree a change to the scope as a consensual variation rather than one that is unilaterally ordered (section C). The employer may waive the need for a formal variation order to be issued (section D).

1.79 The employer, or its contract administrator, may be under a duty to approve or instruct a change. In certain circumstances a tribunal may have the power to review a decision by the contract administrator not to issue a variation instruction (section E).

1.80 Rather than additional work being undertaken as a change to the contract, it may be carried out by the contractor under a separate arrangement. Section F considers collateral contracts and section G considers a contractor's right to be paid for work in restitution where there is no contract.

1.81 A construction contract will typically contain a number of provisions which entitle the contractor to additional time and money for changes to the way work is undertaken despite no variation having been instructed: for example, clauses providing for compensation when unexpected ground conditions are encountered. Loss and expense clauses can also operate in this manner. Section H considers these clauses and their relationship with variations provisions.

Chapter 10: Valuation process

Chapter 10 looks at the process through which variations are valued. Either party's right to challenge the valuation of a variation depends on whether or not the relevant certificate is binding. This subject is considered in section B. **1.82**

Section C considers the contract administrator's role and the obligations it owes to the parties to the construction contract. Section D considers the extent and nature of the employer's duty to the contractor to ensure that the contract administrator undertakes its role properly. That section also considers the position where the certification role can be undertaken by the employer. **1.83**

Rather than the final valuation of variations being undertaken by the contract administrator, the parties may instead seek to agree the value. Section E considers such settlement arrangements. **1.84**

Chapter 11: Entitlement to money

Chapter 11 considers the contractor's entitlement to payment for changes, not only where additional work is instructed and falls to be valued under the contract mechanism, but also where it falls outside that procedure; for example, where variations are consensual (section D). **1.85**

The chapter considers the usual contractual valuation mechanisms which normally fall into one of two categories. Those which use a breakdown of the contract sum to value change (section B) and those which use a separate pricing schedule (section C). **1.86**

This chapter looks at the changes under measurement contracts (section E) and at the relationship between entitlement under variation clauses and compensation for changes under other contract provisions (section F). **1.87**

Chapter 12: Entitlement to time

A change to the works may cause critical delay to the project. This chapter considers the contractor's entitlement to additional time to complete the work in these circumstances and the implications that this may have *vis-à-vis* the employer's right to recover liquidated damages. **1.88**

This chapter considers the various grounds that are commonly listed in a contract as entitling the contractor to an extension of time (section C). **1.89**

The chapter considers the contractor's right to a reasonable period of time to complete where the contract does not contain a formal extension of time provision (section B) or contains a provision which does not provide for varied work (section D). **1.90**

1.91 The chapter considers the contractor's entitlement to additional time in the context of the common problematic scenarios that arise in relation to variations, such as where changes are undertaken without instruction (section E).

CHAPTER TWO

EMPLOYER APPROVAL

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SECTION A: INTRODUCTION

2.1 It may be the case that an employer will order variations to the scope because it changes its mind as to what it wants for aesthetic or commercial reasons. It may instead be the case that the scope defined in the contract has to be changed because the works cannot be constructed as originally planned.

2.2 Issues relating to the need to obtain the employer's approval are often more complex and difficult to resolve in this second type of situation, where change arises because of need rather than choice.

2.3 Such necessary changes fall into two categories. It may be that the design has inherent problems such that it cannot be built as described. Or it may be that an event occurs during the course of the project which means that the works can no longer be built as described in the contract. The following are examples:

- There may be an inherent problem with the design of the permanent works such that they cannot be built and need to be changed if the works are to be completed. For example, in *Holland Hannen & Cubitts (Northern) Ltd* v. *Welsh Health Technical Services Organisation*[1] the employer was responsible for the design of the windows that were to be installed as part of a hospital construction project. The windows leaked extensively such that, even if they were installed, water getting into the building meant that internal finishes could not be completed by the contractor.[2] It may instead be the case that the defect with the design is the contractor's responsibility.[3]
- It may be impossible for the contractor to undertake the defined scope unless another additional element of works is undertaken first. For example, in *Amec Mining Ltd* v. *The Scottish Coal Company Ltd*[4] a contractor was to undertake work on an open cast mining project. In order to carry out the works it was necessary first to remove a layer of peat

1. (1981) 18 BLR 80.
2. This case is discussed in further detail in Chapter 7, section D. The contractor has an obligation to undertake the defined works. If the employer has design responsibility and the design is inadequate, then the contractor may still be able to properly complete the works in accordance with that inadequate design. For example, if the roof as designed has minor leaks, then it may be perfectly possible for the contractor to complete. See Chapter 3, section F.
3. *Simplex Concrete Piles Ltd* v. *The Mayor, Alderman and Councillors of the Metropolitan Borough of St Pancras* (1958) 14 BLR 80, discussed in detail in Chapter 6. See also Chapter 3, section D.
4. [2003] ScotCS 223.

from the surface. The employer was supposed to ensure that the peat layer had already been removed, but had failed to carry out this work. The contractor had to remove the peat layer even though this was not part of its scope.

- It may not be possible to build the permanent works in accordance with the stipulated construction method. For example, in *Yorkshire Water Authority* v. *Sir Alfred McAlpine & Son (Northern) Ltd*[5] the contractor was required to build an outlet tunnel in an upstream direction, but this proved impossible and it had to be built in a downstream direction instead. The method of construction was a requirement of the works which had to be varied.[6]
- The site conditions may be different from those described in the contract, requiring either a change to the design or a change to the way the works are undertaken. For example, if the ground conditions are worse than planned, then the design of the foundations may need to be altered. Or, the design may stay the same but the methodology for undertaking the work may change. For example, in a project involving trench excavation, if the ground conditions are worse than predicted, then the line and level of trenches may remain exactly the same but different equipment and a different working method may be needed.
- The contractor may be prevented from undertaking the works in accordance with the method provided for in contract. For example, in *Havant Borough Council* v. *South Coast Shipping Ltd (No. 1)*,[7] a contractor was employed to undertake beach replenishment work. The hours provided for under the contract were constrained when a neighbour obtained an injunction limiting the working day.
- The contractor may carry out defective works such that the original scope can no longer be built as planned, and the design needs to be changed. For example, in *Howard de Walden Estates* v. *Costain Management Design Ltd*[8] the contractor was undertaking the refurbishment of an old building when a wall collapsed. The works had to be rebuilt to a different design in order to complete the project.
- The materials that the contractor planned to use may no longer be available. For example, in *Kirk & Kirk* v. *Croydon Corporation*[9] the contractor was employed to build a school in accordance with a specification using a certain type of brick. It could not obtain these from the supplier and as a result it had to change the sequence and method of construction.[10]

2.4 If an employer does not instruct a variation in these circumstances, then the project may come to a standstill. A contractor will often be reluctant to alter the works without a variation instruction because it may not then be paid for the change.[11]

5. (1985) 32 BLR 114.
6. This case is discussed in further detail in Chapter 3, section E. It should be recognised, however, that a contractor will normally have an obligation to ensure that it can build the described permanent works. This buildability obligation is discussed further *infra*, at paras. 3.160–3.173.
7. (1998) 14 Const LJ 420.
8. (1991) 55 BLR 124.
9. [1956] JPL 585.
10. In this case the materials in question could be obtained but there was a delay. The change in sequence and working method was approved by the architect so as to limit delay to the project caused by the late delivery. If a material is completely unavailable, then a discussion between the parties as to a replacement material will need to take place.
11. See section B of this chapter.

2.5 The employer may make a conscious decision in these circumstances not to issue an instruction because it is of the view that it does not need to be issued for one of two reasons:

(i) The contractor may be under a duty to depart from the described scope and to undertake additional works as part of the performance of its contractual obligation to deliver the project. For example, the works that a design and build contractor is obliged to deliver may depend on the contractor achieving the employer's project criteria. The contractor may be required to depart, where necessary, from its proposed design as shown on the drawings and specification. If it transpires during the course of the project that the contractor's proposals do not achieve the criteria, then such an adjustment to its planned design will often not amount to a variation. Since the adjustment to the work shown on the contract documents is not a variation, then there is no need for the employer to issue a variation instruction.[12] This obligation to undertake changed or additional work may arise because of various risks, for which the contractor may be responsible under the contract.

(ii) Whilst the employer may accept that a change to the contract scope needs to be made, it may only be prepared to permit the change as a concession,[13] rather than instructing a variation.[14] A contractor will normally be entitled to additional payment only if a variation is instructed.[15] However, the employer may consider that instructing a variation is inappropriate because the contractor was responsible for the change and so should be liable for the costs. See, for example, the instance cited above, where a change to the design was required because of the contractor's defective work. The contractor may consider that a concession is inadequate because it disagrees with the employer about the reasons for the change. Whether a contractor should undertake the change on the basis of a concession only, rather than insisting on a variation instruction, will often turn on the question why the alteration is needed and who bears this risk under the contract.

2.6 The question whether the change is a variation under the contract may well be controversial. It will often turn on a careful analysis of the contract as well as complex technical and factual issues. It will often not be possible to determine within a short timescale, with any degree of certainty, which party's interpretation is correct. This will be a particular problem on a busy project where the parties have limited access to contractual advice and decisions need to be made quickly.[16]

2.7 If the parties disagree, then the employer may refuse to issue an instruction, whilst the contractor may refuse to undertake the change without an instruction. As a result the project may reach an impasse, as discussed further in section C of this chapter.

12. Whether this is the case is a matter of interpretation. See Chapter 3, section C, and the case discussed in that section, *Davy Offshore* v. *Emerald Field Contracting Ltd* (1991) 55 BLR 1, as an example of a case which illustrates this principle.
13. See Chapter 9, section B.
14. Alternatively, the employer may not even approve the change as a concession. It may not want to proceed at all with the works, even in an alternative form – for example, because the project becomes uneconomic as a result.
15. There are exceptions, see Chapter 9.
16. See section E of this chapter.

2.8 It may be the case that the contractor undertakes unapproved additional work because it does not have time to get an instruction first, or because it would be highly inconvenient to stop. The nature of the works may be such that the contractor has to change what is being built, or the way it is being built, in order to overcome a technical difficulty. Its retrospective request for an instruction may then be refused and it may be necessary to consider the means by which a contractor will be compensated, in any event, in such circumstances.[17]

SECTION B: EMPLOYER APPROVAL

2.9 A contractor is obliged to follow the scope defined by the contract or it will risk being in breach,[18] and may not be entitled to additional payment, despite supplying what may be an enhanced product.[19]

2.10 Unless it has an express power to vary, the employer is also stuck with the contract scope. The contract defines the product to be supplied and the employer has no implied right to insist on something different.[20]

2.11 If the employer wants to change the works part way through the project, then it either has to negotiate an alteration with the contractor or it needs to ensure that it has an express contractual power to insist on variations.

2.12 An employer will normally be in a weak position to negotiate changes to the scope part way through a project, which is why construction contracts typically contain a unilateral power to vary, by way of a variations clause.

2.13 The employer, in exercising its unilateral power to vary the works, changes the contractor's obligations in terms of what it is required to build. A variation instruction not only permits a change, it positively requires the contractor to depart from the originally defined scope.[21]

2.14 If the employer orders change through a variation instruction, this will also trigger the contractor's entitlement to extra money and potentially more time to complete the works.

17. See *infra*, para. 2.32.

18. The contractor cannot depart from the contract scope without permission even if it considers the change to be an improvement: see *infra*, para. 4.2. The employer may be able to insist that non-conforming work be removed and the contractor may not be entitled to a completion certificate if it has not built the works according to the contract requirements. The contractor's refusal to build the defined works may entitle the employer to terminate the contract. On the other hand, the court may consider that minor breaches should not allow the employer to insist on such draconian measures. See Chapter 4, which considers the implications for a contractor failing to strictly follow the scope.

19. See *Wilmot* v. *Smith* 172 ER 498; (1828) 3 Car & P 453. Despite the contract requiring the supply of a printing press with a cast iron bottom, the seller supplied one with a superior wrought iron bottom. The buyer had not asked for the upgrade and refused to pay for it. Lord Tenterden CJ: 'Although the putting in of the superior materials may have fairly enhanced the price of the press; yet, if the [contract] has stipulated to complete it with the materials of an inferior value, but which would still have been sufficient for use, he is bound by his bargain, and cannot charge more than the stipulated price.'

20. See *SWI Ltd* v. *P&I Data Services Ltd* [2007] EWCA Civ 663. See Chapter 5.

21. See Chapter 4, section A.

However, the employer may consent to a change being made without instructing a variation using the contract mechanism.[22] A change can be agreed by the employer in various ways: for example, the parties may agree an ad hoc variation of the contract or additional works may form the subject matter of a separate collateral contract.[23] The employer may simply allow the contractor to depart from the contract scope, rather than instructing a variation. Such a concession will simply permit the contractor to depart from the scope, as opposed to an instructed variation, which gives the employer the right to order a change.[24]

2.15 The employer's right to vary is a unilateral power that is derived from the express provisions of the contract. The power must therefore be operated in accordance with the contractual constraints and provisions.

2.16 The contract will describe the characteristics of the changes that the employer is entitled to instruct.[25] As well as allowing the employer to change the permanent works, the contract may allow it also to change the way the works are built and the site environment.[26] Whether the contract gives the employer the right to make such changes, or indeed whether the employer needs to instruct such changes, will depend on the definition of the works and the risk allocation.[27] The contract may place constraints on the changes that can be ordered, such as the amount of additional work and the timing of variation instructions.[28]

2.17 Not only must a variation fall within such contractual boundaries, it must also be instructed in accordance with the contractual procedure. For example, a variation may need to be instructed in writing by the contract administrator. If a request for extra work is not made in accordance with the procedure, then it is not an instructed variation as defined by the contract.[29]

2.18 In order for a variation to be validly instructed under the contract, the employer must comply with these constraints and procedures. The employer's right to insist on change

22. The contract administrator will not typically be able to change the scope on behalf of the employer, outside the contract variations procedure, because it will not have authority. See Chapter 8, section C.

23. The various ways in which a variation may be authorised by the employer outside of the contract variations mechanism are considered in Chapter 9.

24. See Chapter 9, section B, regarding concessions to allow the contractor to depart from the contract scope.

25. For a review of the changes that are permitted under a range of standard form contracts, see Chapter 5, section A.

26. Changing the way the works are built may extend to changes to the temporary works, the build methodology and the sequencing of work. Changes to the site environment would include changes to the site access and working hours. See Chapter 3, section E.

27. The contractor may take full responsibility for, and be given full discretion in respect of, how the permanent works are constructed such that the defined scope does not describe temporary works or methodology. In such circumstances the employer does not need to direct the contractor in relation to the working method. See Chapter 3, section E. The contract may allow the employer to alter how certain aspects of the works are being undertaken, in accordance with other powers under the contract, such that this does not represent a variation. See, for example, *Kitsons Sheet Metal Ltd* v. *Matthew Hall Mechanical & Electrical Engineers Ltd* (1989) 47 BLR 82, where the contractual right to alter the working sequence meant that this was not a variation. See further discussion at Chapter 3, section C.

28. See Chapter 5. Constraints applicable under the contract fall into the following categories: the type or nature of the work and how it is carried out, the volume of extra work, its timing, and constraints on the omission of work.

29. See Chapter 8.

depends on following these constraints and procedures because a contractor is only obliged to implement a change if it has been instructed in accordance with the contract. Indeed, the contractor is only entitled to implement a change, and be compensated for it under the contract, if it has been correctly instructed.[30]

2.19 The mutual rights and obligations that are dependant on a properly approved and instructed change were summed up in the following passage:[31]

> '. . . a "Variation" is something which is instituted by the Site Manager by way of an "Instruction". An "Instruction" is defined. . . as something given in writing. . . The reason for these terms is clear. It is to define the precise circumstances in which the contractor may or may not be paid for additional work. It gives to the employer a power to instruct additional work and, if that power is exercised in terms of the contract by written "Instruction", the contractor will come under an obligation to carry out that work but will have a corresponding right to payment for it. . . . Under and in terms of the contract, if there is no formal "Instruction", there is no obligation on the part of the contractor to carry out any additional work but conversely there is no right to payment if he chooses to do such work.'

2.20 As this passage indicates, the contractor is under no obligation to undertake changed work unless properly approved. It will not be paid extra for undertaking changes or additional work of its own volition, without any instruction from the employer.

2.21 The need to obtain prior employer approval can potentially lead to unfairness in two situations, which can be interrelated:

- the contractor cannot proceed with, or complete, the works unless the works are varied;[32]
- at the point in time when the change needs to be implemented it is difficult, or impossible, to establish with any certainty whether the change in question amounts to a variation for which an instruction is required.[33]

SECTION C: PROJECT IMPASSE

2.22 It may not be possible to build in accordance with the contract scope without a variation being implemented. On the other hand, the employer may refuse to give its approval to such a change. If the employer does not give approval, then the contractor is not entitled to depart from the contract design. This situation whereby the project, or an element of the project, can reach an impasse, or standstill, is discussed in this section.

30. As noted previously, and as discussed further in section C of this chapter, a change can be approved by the employer outside of the contract variations mechanism. See also Chapter 9 generally.

31. *Amec Mining Ltd* v. *The Scottish Coal Company Ltd* [2003] ScotCS 223, Lord Carloway, Outer House in the Scottish House of Session. See para. 50 of that judgment.

32. See section A of this chapter.

33. See section D of this chapter.

2.23 The employer may refuse an instruction because it considers that the change in question does not constitute a variation under the contract.[34] Or because it does not want to continue with the project if aspects of the design have to be compromised.[35]

2.24 Alternatively, the employer may be prepared to grant a concession to allow the change to be made only because it considers that the change is driven by a contractor risk.[36] The contractor may refuse to undertake the change on the basis of a concession. It may consider that it is entitled to be paid and therefore may insist on a variation instruction being given.

2.25 The question whether the employer is entitled to refuse to give an instruction in such circumstances can be complex. It will often turn on the interpretation of the scope of works, which may itself be found in lengthy technical documents containing discrepancies and ambiguities. It will often not be possible for either party to undertake a comprehensive analysis of the contractual responsibilities involved within the context of a busy project.[37]

2.26 If the contractor undertakes work without an instruction it may not be entitled to money or time, even if it subsequently turns out that the employer should have ordered the variation.[38] The employer may be reluctant to issue the instruction because of a concern that this may result in its being liable to pay for any work directed.

2.27 If the impasse arises simply because of a disagreement as to whether certain work is within or outside the contract scope, then the employer will often be able to issue an instruction which is non-committal as to whether the ordered work is a change. The contractor can then undertake the works with the security of an instruction and the question whether additional payment should be made can be resolved later.[39]

2.28 However, the position is more complex where the employer accepts that the work represents a change to the scope, but it does not want to pay for it because it considers the contractor is responsible for the need to make the change. In those circumstances an instruction, as opposed to a concession, may be treated under the contract as a variation because it directs an alteration to the contract scope. As such, the employer may be reluctant to issue any form of instruction to avoid possible liability to pay.[40]

2.29 If the contractor refuses to undertake the change without an instruction and it later transpires that it was obliged to undertake the work, then it is likely to be responsible for the

34. The parties may disagree as to whether, on the correct interpretation of the contract, certain work accords with what the specification and drawings describe: see Chapter 3, section C.

35. The project may simply be commercially unviable if the design is changed.

36. See *supra*, para. 2.5.

37. See section E of this chapter.

38. The contractor must obtain employer approval. See section B of this chapter.

39. It is theoretically possible but highly unusual for instructions to be determinative as to whether the work instructed is a change. See *infra*, paras. 3.15 and 10.44–10.47.

40. See Chapter 6, and the case *Simplex Concrete Piles Ltd* v. *The Mayor, Alderman and Councillors of the Metropolitan Borough of St Pancras* (1958) 14 BLR 80.

delay caused.[41] In such circumstances, the contract may give the employer the right to terminate.

2.30 Irrespective of the final outcome, in the short term, stopping work will often cause the contractor to incur considerable costs. In some situations stopping work may be unsafe and the contractor may have to continue, at least until it has undertaken further temporary works. A professional contractor's normal inclination will be to find and implement a technical solution. Stopping work whilst waiting for a formal instruction will go against most contractors' professional instincts.

2.31 An impasse on a project also entails risk for the employer. If the contractor is entitled to stop work pending an instruction, the consequent delay will increase the employer's project cost. If the employer terminates because of the impasse, then it may expose itself to very significant claims.

2.32 It may be the case that there is little or no discussion between the parties before the contractor proceeds with the changed work, without approval. There may be insufficient time for the contractor to get an instruction. It may be unrealistic for the contractor to stop work first. Whilst there is then no impasse because the contractor has proceeded with the change without permission, it will often be necessary to consider the scope for the contractor being paid in these circumstances.[42]

Solutions to the problem of project impasse

2.33 The need for prior approval is entirely understandable when the employer needs to make important decisions about the design of the permanent works as these may affect the viability of the project. However, as a number of the examples in section A of this chapter illustrate, a necessary change may not involve an alteration to the design for the permanent works.

2.34 For example, where the ground conditions are not as predicted the contractor may have to implement a changed working method in order to proceed. In such circumstances the design of the permanent works delivered to the employer will not change. The need to obtain employer approval may seem unnecessary when the change concerns the method of working and there is no alternative, other than abandoning the project.[43] Indeed, in certain circumstances it may be quite unrealistic for the contractor to obtain consent before proceeding.

2.35 The parties may be able to resolve the problem by using an expedited dispute resolution procedure, such as adjudication or a disputes review board process, which can give the parties

41. The employer may have permitted the change as a concession and the contractor may refuse to undertake the work without an instruction because it wants to be paid. The employer may be justified in taking this position if the change is brought about by a contractor risk event.

42. The ways in which a contract may be structured to compensate the contractor for undertaking such necessary changes needs to be considered: see *infra*, paras. 2.33–2.42. See also Chapter 9 generally.

43. The change in the method will still, however, often increase the contract price and project period. The employer may decide to abandon the project in exceptional circumstances if the change means that the project becomes uneconomic.

a decision within a short period of time. This may allow the disagreement to be determined by a third party before the need to undertake the relevant work critically delays the project.

2.36 Alternatively, the parties may be able to cooperate to reach an interim solution. For example, an agreement that the contractor undertakes the necessary work, so as to avoid a project impasse, but on the understanding that a final determination is subsequently made by an independent tribunal, and the contractor is not prejudiced by the lack of any formal instruction.[44]

2.37 There are also contractual models and procedures in existence which can help avoid this type of problem or at least reduce its impact.

2.38 The contract may specifically provide that the contractor is under no contractual duty to proceed with the work if this is impossible. The contract may put the employer or contract administrator under a positive obligation to issue instructions to resolve the standstill in such circumstances.[45]

2.39 The pricing under measurement contracts can be designed to compensate a contractor for having to undertake different types of work, depending on the site conditions experienced. For example, on a tunnelling contract the parties may have limited knowledge of the rock conditions that will be experienced. However, the actual conditions will affect the tunnel lining works, with extensive lining work if the rock encountered is weak, but limited lining where it is strong. The contract may provide that the contractor gives a rate for the work involved in tunnelling through a variety of different rock types. As the work progresses the rock type will be assessed by the engineer. Depending on the grade, different works will be required and the contractor will be entitled to differential rates of payment according to the conditions. Such an approach does not require variations to be instructed, as the contract is structured so that the contractor is paid in respect of the different types of work necessitated by the variable conditions.[46]

2.40 Certain contracts provide for deemed variations to avoid this problem. The contract will provide that, in the event of the need for a change arising on the occurrence of a defined event, a variation will be deemed to have been instructed by the employer. For example, if a statutory change means that the design or method of construction is unlawful, a variation is deemed to have been instructed. The contractor will be obliged to comply with the change in law but will be compensated for the increased costs.[47]

2.41 A construction contract will typically contain various clauses which compensate the contractor for the additional costs it incurs as a result of certain identified events or risks. These will

44. As an example of how the works may be monitored in the meantime, see *Howard de Walden Estates* v. *Costain Management Design Ltd* (1991) 55 BLR 124. This is discussed further at Chapter 6, section C.

45. See, for example, the ICC Measurement Contract 2011, Clauses 13 and 51, which are discussed, in this context, at Chapter 7, section B.

46. See Chapter 3, section I, where measurement contracts and this type of financial arrangement are discussed further.

47. See Chapter 3, section G.

not normally entitle the contractor to be paid for the direct costs of additional work undertaken.[48] However, they may compensate the contractor for changes to the method of working or the resources employed to complete the permanent works. For example, a contract may entitle the contractor to be paid for the additional costs of constructing in unexpectedly bad ground conditions. Or a loss and expense clause may compensate the contractor for disruption where the additional costs incurred relate to the increased resources employed. An instructed variation can involve an order to change the construction method or resources and therefore this type of compensation provision can operate so as to entitle the contractor to be paid for a change in the absence of an instruction.[49]

2.42 Over the years, contractors have sought payment for additional work undertaken in the absence of a formal instruction. The courts have often been receptive because of a concern to avoid the potential unfairness arising where a contractor is pressured into undertaking work because otherwise the project would reach an impasse.[50] Chapter 9 of this book considers in detail the various arguments that have been successfully raised by contractors in these circumstances, including:

- The parties may have agreed to a change to the scope of the works as a variation of the contract itself. The fact that there is a mechanism in the contract, allowing the employer unilaterally to order a variation, does not preclude the parties from agreeing to a change to the scope outside that procedure. The price for the change may not be agreed, in which case the contractor is likely to be due a reasonable sum.[51]
- The employer may have acted so as to waive the requirement for a formal instruction to be issued in respect of variations under the contract. Approval in some form will still be required, but specific requirements such as written instructions may have been waived.[52]
- The employer may be under an obligation to instruct a variation in certain limited circumstances. The contract may place an express duty on the employer. There is also judicial authority for the proposition that an arbitrator may open up a contract administrator's decision to refuse an instruction.[53]
- The additional work was undertaken outside of the parties' contract and the contractor is entitled to be paid via that separate legal arrangement. The works may be undertaken under a separate collateral contract or may be undertaken in the absence of a contract, such that recovery on a restitutionary basis is permitted.[54]

48. In certain instances this type of clause could be construed so as to entitle the contractor to be paid for a change to the permanent works. See discussion of ground conditions contracts at Chapter 9, section H.

49. Such compensation clauses and their relationship to variation provisions is discussed in further detail in Chapter 9, section H.

50. See also the US concept of the constructive change order, which has been developed to ensure that an equitable result is achieved in this type of situation. See *infra*, para. 9.12.

51. See Chapter 9, section C.

52. See Chapter 9, section D.

53. The question whether the employer has a duty to vary is considered in Chapter 7. Chapter 9, section E considers the arbitrator's power to open up the refusal to issue an instruction and the question whether the principle may be applied in the context of other tribunals.

54. For collateral contracts, see Chapter 9, section F. For restitutionary remedies, see Chapter 9, section G.

Refusal by employer to approve any change

2.43 An impasse on a project will often occur not because the employer is not prepared to allow the contractor to implement a change but because of its refusal to issue a formal instruction.

2.44 However, the employer may not be prepared to approve any form of change to the works, even as a concession. The type of change that would be required to allow the works to proceed may be such as to render the project uneconomic and the employer may therefore prefer to see it abandoned altogether.

2.45 If the problem in proceeding with the works arises because of an employer risk, then the employer may be under a duty to instruct a change.[55]

2.46 If the problem in proceeding arises because of a contractor risk, then the employer will not normally be under any obligation to approve the alteration, whether by concession or formal variation. After all, the contractor has agreed to perform the scope, and the employer is under no obligation to accept something different. However, if the works cannot be completed unless the employer does approve changes to the scope, the employer may not be entitled to recover the costs of the project being abandoned from the contractor. This will depend on the nature and extent of the changes that the employer would have to agree to, whether they would have altered the nature or commercial viability of the project, and therefore the reasonableness of the employer's stance.[56]

2.47 The contractor may simply proceed with the necessary change without the employer's approval. It will be in breach of its obligations to build in accordance with the scope, but the remedies available to the employer at a later stage may be limited. After all, the breach may be comparatively insignificant, such that the employer is not entitled to withhold a completion certificate and the damages to which it is entitled may be only nominal.[57]

Disagreements as to the validity of the instruction

2.48 Whether a contractor ought to proceed with instructed works and whether it will be compensated may depend on the validity of the relevant instruction. A contractor will not want to undertake work only to discover that the instruction it acted upon was invalid and therefore does not trigger payment. This issue will typically arise for two reasons.

2.49 The instruction may not have been validly issued. For example, it may be necessary for it to be in a particular format. Or, it may be necessary for it to be issued by the contract administrator whilst it has, in fact, been issued by a different consultant in the employer's team.[58]

55. See Chapter 7, section D.
56. See Chapter 7, section C.
57. See Chapter 4.
58. See Chapter 8.

2.50 The order may relate to works that cannot be validly instructed under the contract. For example, there may be a cap on the value of additional works that can be ordered and the instructed work may be above this level.[59]

Can the impossibility of undertaking work result in the frustration of a contract?

2.51 If it is impossible to perform a contract, then this can lead to the contract being frustrated, which in turn will mean that both parties are discharged from their obligations. However, the nature of the doctrine of frustration means that it is highly unlikely to arise in the circumstances contemplated by this section, whereby the project cannot be completed unless the works are varied.

2.52 The doctrine is concerned with events which occur after the date of contract formation. If a variation is required because of an inherent problem with the contract design, then it will certainly not apply. If the seller of goods has promised to undertake works which it should have known could not have been delivered, then it cannot rely on the doctrine to avoid the bargain. The classic statement of the doctrine of frustration was set out in *Davis Contractors Ltd* v. *Fareham UDC*, when Lord Radcliffe said:[60]

> '. . . [f]rustration occurs whenever the law recognises that without default of either party a contractual obligation has become incapable of being performed because the circumstances in which performance is called for would render it a thing radically different from that which was undertaken by the contract. *Non haec in foedera veni.* It was not this that I promised to do. . . There must be such a change in the significance of the obligation that the thing undertaken would, if performed, be a different thing from that contracted for.'

2.53 An event may occur, the effect of which is that the works cannot be built unless a variation to the design is instigated.[61] However, the doctrine of frustration applies only where the event is such that the work to be undertaken becomes radically different from that contracted for.[62] Contracts will normally contemplate and allocate the risk associated with certain events; for example, a change in the law pertaining to the use of specified materials. Those events cannot therefore be said to result in the work becoming radically different from that which the contract envisaged.

59. See Chapter 5.

60. [1956] AC 696 at 729. See also *J. Lauritzen AS* v. *Wijsmuller BV (The Super Servant Two)* [1990] 1 Lloyd's Rep 1, in which Bingham LJ set out five propositions in respect of the doctrine of frustration.

61. For example, defective works mean that the original design can no longer be followed. See section A of this chapter, which discusses the two types of event that can lead to its becoming necessary to vary the scope in order to proceed with the works.

62. See *McAlpine Humberoak Ltd* v. *McDermott International Inc (No.1)* (1992) 58 BLR 1, where at first instance it was found that a large number of variations was such as to frustrate the contract. This approach was very strongly criticised by the Court of Appeal, not least because the contract contemplated variations being instructed and therefore the ordering of them (albeit a large number) could not be treated as a frustrating event.

2.54 Therefore, other than in exceptional circumstances, the doctrine will not apply where the risk of the event is allocated under the contract.[63] If the risk was not allocated under the contract but was foreseeable, or was contemplated by the parties, then the event will not frustrate the contract.[64] Equally, a contract may specifically provide for the discharge of the parties' obligations to perform where impossibility of performance would lead to frustration.[65]

2.55 *Wong Lai Ying* v. *Chinachem investment Co Ltd*[66] concerned the off plan purchase of apartments in two blocks of flats called University Heights being constructed by the developer. During the course of construction there was an unforeseeable landslip on a hillside above the site and hundreds of tons of earth destroyed the works, as well as killing 67 people. The area was unsafe, work had to stop for an uncertain period of time and the contractor's construction permit lapsed. The Privy Council found that this did amount to a frustrating event because it was quite uncertain as to whether future performance was going to be possible. The landslip meant that the timing and nature of any future development project on the site was uncertain. The risk was not contemplated and allocated under the contract. The purchasers of the apartments sought to bring a specific performance claim for the rebuilding of the apartment block but this was rejected by the Privy Council, finding instead that the contract had been frustrated.

2.56 Since modern construction contracts have very comprehensive provisions to allocate the risk of events occurring, it seems highly unlikely that a party will be able to establish frustration where the contractor cannot complete the works without a variation.

SECTION D: COMPLEXITY IN ASSESSING RESPONSIBILITY FOR CHANGE

2.57 As discussed in section A of this chapter, the employer may refuse to issue a variation instruction, even though it wants the work in question to be undertaken, because it does not consider that the work is a variation or that an instruction is warranted.

63. The doctrine of frustration is intended to operate with respect to events which have been neither foreseen nor provided for in the contract. It is now common for contracts to include contractual provisions dealing with the effect on the contract of those events which one would traditionally expect to have given rise to a claim that the contract had been frustrated – such as force majeure clauses, which commonly provide for an entitlement to terminate in the event of war, civil commotion or natural disaster, among other matters, and which also sometimes extend to 'any circumstance not within a party's reasonable control'. To the extent that the force majeure provision covers the relevant event, then that would normally exclude the application of the doctrine of frustration. However, this is subject to the proviso that where a force majeure clause is drafted in very broad terms, then the more catastrophic the event, the less likely it is to be covered by the provision, unless very clear words are used. One such example is the case of *Wong Lai Ying* v. *Chinachem Investment Co Ltd* (1979) 13 BLR 81, in which it was held that a landslip which destroyed two tower blocks under construction was not an 'unforeseen [circumstance] beyond the vendor's control', which was contractually provided for, but was instead a frustrating event.

64. If the risk should reasonably have been foreseen or was in fact foreseen, then the event does not have the effect of changing the nature of the contract: *Tamplin SS Co Ltd* v. *Anglo-Mexican Petroleum Co* [1916] 2 AC 39.

65. See, for example, FIDIC Red Book 1999, Clause 19.7, which provides that where 'any event or circumstance outside the control of the Parties. . . arises which makes it impossible or unlawful for either or both Parties to fulfil its or their contractual obligations', then they shall be released from further performance. Since this clause refers to circumstances outside the control of the parties, this would not appear to relate to situations where the contractor took the risk for this circumstance arising: see Chapter 3, section D. As such, it would seem to have a narrower remit than Clause 13(1) of the ICC Measurement Contract 2011, discussed further in Chapter 7, section B.

66. (1979) 13 BLR 81.

2.58 The employer may consider that the work in question is not a variation because it believes that it already forms part of the contract scope, which the contractor is obliged to undertake.[67] Alternatively, the employer may consider that the need for the extra work has arisen only because of a factor that is at the contractor's risk, and a concession to allow a change is therefore sufficient.[68]

2.59 Assessing whether work is within the contract scope can be very complex and controversial. Chapter 3 discusses the issues that need to be considered in making this assessment. It will often be necessary to interpret a number of contradictory obligations in different documents forming the parties' agreement. As that chapter explains, the contractor may be obliged to undertake work that is additional to, or different from, that stated in the technical documents if those requirements are overridden by other provisions in the agreement.[69]

2.60 During the course of a project an issue may arise as to the precise requirements of what the contractor is obliged to build. For example, one contract document may refer to one material being used and another document may refer to a different material. Or a change to the scope described in the contract documents may be needed, but the employer may consider that it should be made by the contractor as part of its design obligations, such that it does not represent a variation.[70]

2.61 Such disagreements as to the exact requirements of the defined contract scope are, of course, commonplace on construction projects. The employer may direct the contractor to undertake the work in a particular way, using a certain material, but may refuse to instruct a variation on the basis that this does not represent a change.[71] Alternatively, the decision as to whether the work in question properly amounts to a variation, which needs to be instructed under the contract, may fall to be determined by the contract administrator.

2.62 If the employer does not issue an instruction but still requires the change to be implemented, then, if the contractor considers the work in question to be outside its scope, it is placed in a difficult position. It could refuse to undertake the work using the material specified by the employer, on the basis that no valid variation instruction has been issued. However, if the contractor refuses to use the material favoured by the employer, then it may be in breach, which may expose it to claims, liability for project delay and potentially to contract termination.[72] If the contractor does not want to take that risk, then it could undertake the

67. This issue is also discussed *infra*, paras. 3.87–3.99.

68. See Chapter 6.

69. See Chapter 3, section 3.

70. As an example of such a situation see *Davy Offshore* v. *Emerald Field Contracting Ltd* (1991) 55 BLR 1, discussed *infra*, paras. 3.58–3.70.

71. If the employer issues an instruction in circumstances where the need for the change is the contractor's responsibility, then it may be liable to pay for the work. See *Simplex Concrete Piles Ltd* v. *The Mayor, Alderman and Councillors of the Metropolitan Borough of St Pancras* (1958) 14 BLR 80, as discussed in Chapter 6.

72. This situation can be compared to instances where the employer does issue an instruction but the contractor considers that it is not entitled to do so, because it does not have the power under the contract. For example, the contract may contain limits as to the volume or type of work that the employer may instruct, which the contractor considers to have been exceeded. In such a situation the contractor may refuse to undertake the works, but again this may constitute a significant risk because, if the contractor is wrong, the employer may be entitled to terminate and recover significant damages. See *infra*, para. 5.37.

work using the employer's favoured material, but may then be debarred from claiming extra payment because no formal instruction was issued.[73]

2.63 In such situations it may be unrealistic to expect a contractor working on a busy project to come to a considered view, in a short period of time, as to whether or not certain work is within the contract scope.[74] However, a very significant sum of money could turn on this assessment.

2.64 Uncertainty as to whether or not certain work is a variation may arise in circumstances where that work has to be carried out in order for the project to be able to progress. Such an impasse, where the contractor will not undertake work without an instruction, was discussed in section C of this chapter.

2.65 Ideally, in this situation, the contract will provide that instructions can be issued, with the question whether the work is outside or inside the scope being finally determined later. The contractor will then have the comfort of knowing that the disagreement will be resolved and that it will be paid extra if the work is found to be a variation. Even if the contract does not provide for this, parties working cooperatively together will adopt such an approach.

2.66 It is sometimes the case that the problem is not resolved amicably. The contractor may undertake the works and payment may then be refused. In such circumstances, the courts have sought to find ways of compensating the contractor if the work is found to be a variation, but the only basis for refusing payment is the lack of an instruction.

2.67 As discussed in the introductory section to this chapter, whilst it is typically the case that the employer's formal approval of a change is a prerequisite to payment, it would seem very unfair to deny compensation in these circumstances. After all, the employer in these situations does not refuse to issue the instruction because it does not want the change, but because it does not think that the instruction needs to be issued, because of its own incorrect assessment of contractual risk and responsibilities.

2.68 The different approaches adopted are reviewed in Chapter 9. In the type of situation described above, the courts have on occasion found that the employer is estopped from refusing payment on the basis that a formal instruction was not issued.[75] Or, that the employer's actions reflect an implied promise to pay if it is later found to be wrong in its assessment of whether the work amounts to a variation.[76]

2.69 Where the decision not to issue an instruction was made by the contract administrator, based on its assessment of the contractor's duties under the contract, then this has been treated as

73. For an example of such a situation, see *Brodie* v. *Corporation of Cardiff* [1919] AC 337. The case is discussed further in Chapter 9, section E.

74. See the judgment of Lord Atkinson in *Brodie* for a detailed discussion as to the difficult position in which a contractor is placed and the fact that simply refusing to undertake work in such a situation is unrealistic: see p. 356 of judgment.

75. See Chapter 9, section D.

76. See *Liebe* v. *Molloy* (1910) 102 LT 616, PC, Chapter 9, section D.

a decision that a tribunal can open up. Such an approach treats the decision of the contract administrator not to issue a variation instruction as being something akin to the decisions made in its certifying capacity under the contract, such as the decision to award an extension of time.[77]

SECTION E: APPROVAL VIA WAIVER AND CONCESSION

2.70 The employer may approve a change to the scope as a concession to the contractor, rather than as an ordered variation instruction.

2.71 By issuing a variation instruction the employer orders the contractor to implement a change to the scope, whereas a concession permits the contractor to make the change. A contractor that departs from the contract scope on the basis of such a permission will not be in breach, but equally will not be entitled to compensation under the contract variations mechanism.[78]

2.72 Since this form of approval is not given under the contract mechanism, the limitations on what may be instructed do not apply.[79] The formal procedures, such as the need for an instruction in writing, also do not apply.[80] An invalid instruction, such as an oral one under a contract where written orders are stipulated, may therefore constitute a concession to allow the contractor to change the works.

2.73 A concession constitutes a waiver by the employer of the contractor's obligation to follow the contract terms. The contract administrator typically has no power to waive the contractor's obligation to comply with the contract requirements. Whilst, therefore, the contract administrator has authority to instruct variations under the contract, provided the correct procedures and limitations are respected, it has no implied authority to grant a concession.[81] Therefore, in order for such a concession to bind the employer, the contractor needs to ensure that the employer grants it directly, or that the contract administrator has express authority to act in this manner on the employer's behalf.

2.74 As discussed previously, if the contractor implements a change without approval, then it will be in breach. However, the practical implications of such a breach may be limited. It is possible that the contractor's departure could lead to the employer refusing to certify completion, or seeking an order that the contractor correct the non-conforming work. The extent to which any of these remedies may be available to the employer will often depend on the seriousness of the breach. It may well be the case that a departure from the scope will not prevent the contractor from being entitled to a completion certificate and the employer's right to damages may be nominal.[82]

77. See *Brodie*, discussed further at Chapter 9, section E.
78. See Chapter 9, section B, discussing concessions in more detail.
79. Such limitations can involve, for example, limits on the type and volume of work that can be instructed. See Chapter 5.
80. See Chapter 8.
81. See Chapter 8, section C.
82. See Chapter 4 for a detailed discussion as to the employer's remedies in these situations.

CHAPTER THREE

SCOPE

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SECTION A: INTRODUCTION

3.1 Construction contracts will define the scope of works that the contractor is required to undertake. In determining whether there is a variation it will be necessary to consider whether the work under review was part of that original scope.

3.2 It will be necessary to define the scope that a contractor has agreed to undertake in exchange for an ascertainable contract price. The scope needs to be defined, in the sense of being able to pinpoint the construction obligations for which the contractor has taken the risk in exchange for the contract price. The definition of what is to be built may not be fully developed and articulated in the contract documents, but this is not necessarily required in order for the contractor's obligations to be crystallised. It is necessary to be able to determine from the contract what risks associated with the construction process the contractor has agreed to undertake. For example, a design and build contractor may agree to deliver a facility that will achieve defined performance criteria based on a limited outline design. Such a design may not contain full details as to what will be constructed, but this type of agreement will typically define what the contractor is required to achieve by reference to the performance criteria and risk allocation. It will therefore be possible to determine whether the scope that the contractor is required to build has been varied, for example by the employer changing the performance criteria.

3.3 Ascertaining what constitutes the contract scope of works, against which variations will be judged, involves not only an analysis of the description of the works contained in the technical documents, such as the specification and drawings; it is also a matter of considering the risks that the contractor has assumed under the contract. The risks that the contractor takes will often require it to undertake work that is additional to that described in the technical scope documents forming part of the contract.

3.4 Since a variation involves an entitlement to additional payment in exchange for a change to the scope, the contract must provide for the defined works to be undertaken for an ascertainable price. With certain contracts the price may not be defined, but the method of ascertaining the price that is due in exchange for the defined scope of works will be fixed. For example, a measurement contract may not state the price that will be paid for undertaking the defined works, but it will represent a binding agreement as how to calculate the price due. Under such a contract the works will be defined even though the exact quantities are calculated only once the works have been undertaken. Payment, and therefore the contract price, can be calculated only once the final quantities have been determined. The scope of works will nonetheless have been defined and variations can be assessed by reference to it.[1]

Interpretation of contract documents

3.5 The description of the scope of work will normally be contained in a variety of contract documents. Construction works can be described in a number of different ways. A construction contract will typically involve the provision of both goods and services.[2] These may be described in very general terms or in considerable detail. The scope may stipulate the way the works are to be undertaken, or it may be silent as to the methodology, leaving it to the contractor to determine how it will deliver the permanent works.[3]

3.6 The technical description of the works as contained in the contract documents will often contain ambiguities, gaps and contradictions. In order to determine the correct extent of the contractor's obligations it will be necessary to apply the principles of contract interpretation, as considered in section B of this chapter.

3.7 As discussed above, assessing the contractor's build obligation does not just involve considering the technical description of the works. It is also necessary to consider the allocation of risk and responsibility in the contract conditions. Departures from the technical description will not be variations if they are in accordance with the scope that the contractor is obliged to build.[4] The relationship between the technical description of the scope, and the contractual obligations, and the extent to which they may require additional or changed work, is discussed in detail in section C of this chapter.

3.8 Two of the most important contractual obligations that need to be considered when interpreting the extent of the scope of works are the design obligation and the buildability obligation. The risk that the contractor takes in relation to each will have an important effect on the interpretation of the works that the contractor is required to build and the extent to which

1. See section I of this chapter in relation to measurement contracts.
2. Changes to the scope of services are discussed in section J of this chapter.
3. As to the contractor's obligations in relation to the method of undertaking the works, see section E of this chapter.
4. As the previous example of a design and build contractor illustrates, the full extent of the scope of works may not be ascertainable from the technical documents. The contract conditions may require the contractor to undertake work that is extra in fulfilment of its contractual obligations to complete the works. See para. 3.214. See also *Davy Offshore* v. *Emerald Field Contracting Ltd* (1991) 55 BLR 1, as discussed *infra*, at paras. 3.58–3.70, for an example of such an arrangement.

the contractor may have to undertake work in addition to that described in the technical documents. These risks are considered in turn at sections E and F of this chapter.

Reasons for ambiguities and errors in the scope

3.9 Ambiguities and errors within the contract documents are not uncommon and can arise for a number of reasons.

3.10 Insufficient time may have been spent in preparing the contract documents. This may be because the employer has gone out to tender early and has therefore finalised the contract with an inadequately developed design. This may be a calculated risk driven by the commercial benefits of accelerating the development process. Or it may arise because of the employer's desire to get the project started early for other reasons. For example, there may be political pressures behind a public body wanting to announce the commencement of an infrastructure project.

3.11 Inadequacies with the contract description of the scope cannot always be blamed on an early contract start and will sometimes simply be the result of poor document management.

3.12 It can often be the case that there is inadequate understanding on the part of those preparing the technical documents as to what they need to achieve and how they are supposed to interact with the contract conditions.[5] The nature and extent of the contractor's obligation to build the works depends not only on the technical description of the scope but also on the duties described in the conditions. The interrelationship between, for example, the drawings, specification, employer's requirements and pricing documents depends on the role and status given to those documents in the conditions.[6] The person involved in preparing the specification may incorporate performance and testing procedures and criteria in respect of certain works described in that document. However, those provisions may be rendered irrelevant because of obligations in other contract documents. Another example is the way that employer's requirements are often prepared with a level of prescriptive detail as to what will be built which is out of kilter with what the contract conditions contemplate.[7]

3.13 These problems will often arise because there is inadequate communication between separate teams preparing the contract conditions and the technical documents.[8]

5. This is not necessarily the fault of those preparing the technical documents. Those documents may need to be prepared in a certain way and to contain certain information because of the way they will be used during the course of the project. The problem, rather more, is the way that those documents interact with the contract conditions and other documents within the contract package. The contract conditions need to be drafted to take account of what the technical schedules contain.

6. See Chapter 3, section B.

7. See also *infra*, paras. 3.243–3.247. The approach in preparing the technical documents to be incorporated into the contract can often be to include everything. The view on the employer's side often seems to be that, by including everything, the contractor's obligations are made as wide as possible. This can, however, just lead to uncertainty because of ambiguity with the documents.

8. In particular on large projects, the legal team involved in negotiating the contract conditions may not, for various reasons, get involved in reviewing the technical documents or communicate adequately with the team preparing them.

No requirement to instruct work already within the scope

3.14 There is no requirement for an employer to issue instructions directing that work, which already forms part of the contract scope, should be built. This will be the case even if the work is built defectively or damaged part way through a project and the contractor needs to rectify work or rebuild it to conform to the defined scope.[9] Such correction work simply involves ensuring that the contract scope is undertaken and delivered and therefore does not constitute a variation.[10]

3.15 The contract administrator may issue instructions during the project clarifying what needs to be carried out, and this may refer to contract work. However, an instruction which directs the contractor to undertake work that is already part of the contract scope will typically not amount to a variation instruction. This is because a variation instruction is normally defined under the contract as being an 'alteration' or 'change'.[11] An instruction will therefore not amount to a variation if it simply directs the contractor to undertake work which is already within the scope because this will not be a variation instruction as typically defined by a construction contract.[12] If the work instructed is a change but that change is required only as a result of an event which is the contractor's risk, then this will amount to a variation.[13]

3.16 If the contract gives the contractor options as to how it may undertake the works, then an instruction that limits that choice will amount to a variation.[14] The extent and nature of what may be changed by way of variation depends on the provisions of the contract.[15]

3.17 In the absence of a variation instruction, a contractor may be reluctant to undertake work which it considers to be a change because the contractor will, justifiably, be concerned that it will not be entitled to be paid.[16]

9. See Chapter 4, section A concerning the obligation to construct in accordance with the scope.

10. It could be the case that, as a result of defective work having been undertaken by the contractor, the originally planned design can no longer be maintained. The change to the design may need to be approved as a variation, although since such work is only required because of a default by the contractor, it is unlikely to attract additional payment. See Chapter 7, section C, and Chapter 6.

11. See Chapter 5, section A for a review of the language used in common standard form contracts to describe a variation.

12. It is sometimes said to be the case that an instruction directing a contractor to undertake work that is already part of its scope fails due to a lack of consideration. Whilst consideration is a requirement for a consensual variation to a contract, a unilateral variation that is instructed under a clause providing such a power does not require mutual exchange each time extra work is ordered. See *supra*, para. 1.42. Ultimately, however, the contractual effect of an instruction depends on what the contract provides, and it is theoretically possible for an instruction to be finally determinative on the question whether or not the work it describes is extra. In practice this is highly unlikely to be the case. There are a number of nineteenth-century cases in which a contract administrator issued a certificate under the contract that was found to be determinative as to whether the work in question was additional to the contract scope: see *Goodyear* v. *Weymouth and Melcombe Regis Corpn* (1865) 35 LJCP 12, discussed *infra*, paras. 10.45–10.47.

13. Chapter 6, section B.

14. See *English Industrial Estates* v. *Kier Construction* (1991) 56 BLR 93. The engineer instructed the contractor to crush hard arisings to undertake the works in circumstances where the contract gave the contractor the option to import suitable fill. This limitation of the contractor's choice was found to be a variation.

15. See Chapter 5.

16. If the contractor departs from the contract scope without approval, then it is not only liable not to be paid for such work, it may well also be in breach of contract; see Chapter 2, section B.

3.18 The process of interpreting the contract scope can be complex because of ambiguities between documents, overlaid with a tension between the description of the works and the obligations derived from the conditions. It may therefore be difficult for parties to properly assess whether the work under discussion is a change to the scope.[17] In the meantime, the project may reach a standstill. Such an impasse entails considerable risk for both parties because assessing responsibility can be complex and uncertain, and the cost of the delay that may ensue as a result could be significant.[18]

SECTION B: CONTRACT INTERPRETATION

3.19 Whilst this section reviews the interpretation of the contract scope generally,[19] later sections of this chapter expand on the particular issues identified, such as the degree to which the contractor has an obligation to undertake work not expressly referred to.[20]

3.20 As discussed in the introduction to this chapter, the contractual description of the scope of works will often contain inconsistencies and it will be necessary to consider how such inconsistencies are resolved. This can create a variety of problems. For example, there may be a direct contradiction between two technical requirements. The obligations in the contract conditions may require the contractor to achieve certain standards that contradict the specifics of the technical scope. The technical scope may contain gaps, such that there are no details as to how certain aspects of the works should be built.[21]

3.21 The contract itself will often contain provisions that seek to clarify how the agreement should be interpreted. For example, the contract might set out the respective priorities of the various documents forming the agreement[22] and provide that the contract administrator may resolve inconsistencies.[23] The purpose of such provisions is to assist the process of construing the contract, and so it will still be necessary to consider the common law principles of contract interpretation.[24]

3.22 The rules concerning contract interpretation were comprehensively reviewed and restated by the House of Lords in the seminal case of *Investors Compensation Scheme Ltd* v. *West Bromwich Building Society (No. 1)*.[25] That case emphasised that a purposive approach should be adopted and that the aim of the process of contract interpretation is simply to determine the common intention of the parties. The analysis is objective: the assessment of what the parties appear to have agreed is made from the perspective of the reasonable bystander, rather than that of the parties. Many of the principles discussed below concern

17. See Chapter 2, section D for a discussion about the complex nature of this assessment and the risks involved.
18. See Chapter 2, section C.
19. For a more detailed review, see Lewison, *The Interpretation of Contracts*, 5th Edn (2013, Sweet & Maxwell).
20. See section C of this chapter.
21. The contradictions and lack of information can mean that the absence of certainty is such that there is no contract at all. See *infra*, para. 3.41.
22. See *infra*, para. 3.35.
23. See section H of this chapter.
24. See *RWE Npower Renewables Ltd* v. *JN Bentley Ltd* [2013] EWHC 978 (TCC), discussed *infra*, para. 3.37.
25. [1998] 1 WLR 896.

situations where there is a lack of clarity on the face of the contract documents as a result of contradictions and inconsistencies.

3.23 In seeking to make this assessment from an objective perspective, the presumption is that the wording of the contract document accurately sets out the parties' agreement. A written contract will normally be construed as it stands. However, if a party can produce convincing proof that the agreement does not reflect the intentions of the parties (at the time of entering into the contract), then that agreement may be rectified so that it accurately reflects those intentions. A mistake may be common to both parties,[26] or may alternatively be made by only one party.[27] This remedy is known as 'rectification'.[28]

3.24 It is necessary to construe the contract by adopting the ordinary meaning of the words used, albeit that particular technical or commercial terms will be read in accordance with the meaning relevant to their field.

3.25 The contract documents are not construed in a vacuum. The courts will consider the factual background and circumstances within which the parties were acting and the contract was concluded. In applying the objective test as to what a reasonable person would assess to be the common intention of the parties, this background information can be taken into account. For example, it will be important for the court to take account of the commercial context, such as the background behind the agreement and the market environment. The particular words used in a contract may take on a different meaning in the light of the factual matrix existing at the time. However, when the literal meaning of the contract wording is clear and unambiguous, then the background facts may well add nothing to the task of assessing the parties' common intention.

3.26 Whilst the court will consider background circumstances in seeking to assess the common intention, it will not consider the parties' subjective intentions or evidence relating to their negotiations.[29] Since, as a matter of principle, the parties are taken to have agreed what is set

26. Peter Gibson LJ summarised the law of rectification due to common mistake in *Swainland Builders Ltd* v. *Freehold Properties Ltd* [2002] 2 EGLR 71 at 73, stating: 'The party seeking rectification must show that: (1) the parties had a common continuing intention, whether or not amounting to an agreement, in respect of a particular matter in the instrument to be rectified; (2) there was an outward expression of accord; (3) the intention continued at the time of the execution of the instrument sought to be rectified; (4) by mistake, the instrument did not reflect that common intention.' This was subsequently endorsed by Lord Hoffmann in *Chartbrook Ltd* v. *Persimmon Homes Ltd* [2009] UKHL 38, who considered that for rectification for common mistake, the document must differ from what the parties agreed – based on an objective, not subjective approach. For further details see Beale, *Chitty on Contracts*, 31st Edn (2012, Sweet & Maxwell) (hereafter '*Chitty*'), 5.111–5.121.

27. A mistake will not always be common to the parties. It may be the case that one party (A) makes a mistake as to the terms of a contract, such as believing a term had been deleted, when in fact it had not. If the second party (B) was aware of A's mistake and did not bring it to the attention of A, then the contract may be rectified. There are contrasting judgments as to whether it is necessary that A's mistake was to the benefit of B. For further details, see *Chitty*, 5.122–5.129.

28. The following general principles apply, inter alia: (i) the burden lies with the party seeking rectification, who must provide 'convincing proof'; (ii) the court has a discretion whether or not to grant rectification; (iii) delay in seeking rectification may bar a party's right; (iv) rectification will not be available where the parties can no longer be restored to their position prior to interim into the contract. For further details, see *Chitty*, 5.130–5.145.

29. Such evidence can be relevant in the context of a claim for rectification. When a party contends that the wrong words were included in the contract document, then it is highly unlikely that the rules of interpretation will assist it, unless, for example, it can claim that there is an absolute contradiction between two provisions and one

out in the final contract document, they are not entitled to produce in evidence the various intermediate drafts in order to influence the process of interpretation.

3.27 The courts may, in interpreting the parties' agreement, take into account deletions to the printed document. In a construction contract context the courts have considered amendments from a standard form. In *Team Services* v. *Kier Management*[30] the Court of Appeal had to construe a 'bespoke' contract that had clearly been based on a particular standard form contract. In relation to the key clause on which the case turned, some of the wording from the original standard form had been omitted. The court found that it was entitled to consider the original standard form wording in the process of construing the contract without offending the general rule that evidence of negotiations was inadmissible.

3.28 In order to give expression to the parties' intentions it will be necessary to interpret contract documents in the light of the purpose for which they were created. The description of work that a document contains may be incidental to its primary purpose. For example, the contract may append pricing documents which in some way describe the work to be undertaken. However, the description of the works in the pricing documents may not be intended to be definitive as to the works to be undertaken. The common intention of the parties as to the correct description of the work may be better gleaned from the specification and drawings which were produced with that specific purpose in mind. The same will often be true of work scope descriptions on programming documents.

Contradictions between documents

3.29 The documents forming the contract must be read as a whole. Even when considering the meaning to be applied to an individual word or clause it will be necessary to consider it in the context of the whole of the contract. In this way the provisions should be read in a way that is mutually explanatory. As per Lord Davey in *The North Eastern Railway Company* v. *Lord Hastings*:[31]

> '. . . the deed must be read as a whole in order to ascertain the true meaning of its several clauses, and that the words of each clause should be interpreted as to bring them into harmony with the other provisions of the deed if that interpretation does no violence to the meaning of which they are naturally susceptible. . . .'

3.30 Where provisions in a contract are inconsistent, effect will be given to that part which reflects the proper intention of the parties as determined by considering the document as a whole. Where there is a contradiction between two provisions such that effect cannot be given to both, then the inconsistent provision will be discarded. As per Lord Halsbury LC in the House of Lords case *Glynn* v. *Margetson & Co*:[32]

should take priority. When the wrong words have been included in the contract, then a party's remedy will be asking that the courts rectify the contract.

30. (1993) 63 BLR 76.
31. [1900] AC 260 at 267.
32. [1893] AC 351 at 357.

> 'Looking at the whole of the instrument, and seeing what one must regard. . . as its main purpose, one must reject words, indeed whole provisions, if they are inconsistent with what one assumes to be the main purpose of the contract.'

3.31 It may be the case that the two provisions are only partially in conflict. If possible, such provisions should be read together so as to give meaning to both. For example, it may be possible to give meaning to both if one provision is read as only qualifying another, rather than entirely contradicting it.[33]

3.32 The courts will look at the commercial intent behind the contract and try to give meaning to it rather than necessarily focusing too much on specific details which may defeat the overall objective. As stated by Moore-Bick LJ in *Ravennavi SpA* v. *New Century Shipbuilding Co Ltd*:[34]

> 'Unless the dispute concerns a detailed document of a complex nature that can properly be assumed to have been carefully drafted to ensure that its provisions dovetail neatly, detailed linguistic analysis is unlikely to yield a reliable answer. It is far preferable, in my view, to read the words in question fairly as a whole in the context of the document as a whole and in the light of the commercial and factual background known to both parties in order to ascertain what they were intending to achieve.'

3.33 In seeking to determine the common intention of the parties, the courts have traditionally given priority to those parts of the contract that the parties have specifically negotiated rather than to standard printed conditions, the logic being that the parties must have considered more carefully bespoke negotiated terms as opposed to standard provisions. Standard printed terms in contracts will often consist of 'small print' on the back of documents such as order forms that the parties, and in particular the buyer, may not have considered. However, in a construction context, the parties will often be very familiar with the standard form terms, as they will have used them on numerous projects in the past. On the other hand, very lengthy bespoke documents can be prepared by the parties and inserted into the contract without being fully checked, or with insufficient effort made to ensure that they are consistent or appropriate.[35] When considering case precedents it is important to recognise that developments in the technology used for preparing documents may have rendered obsolete any pronouncements as to the importance of printed or typed documents in ascertaining the parties' intentions.[36]

3.34 In seeking to assess the common intention of the parties, it is likely that greater emphasis will be placed on those documents which seek to describe the overall objectives of the project, such as the employer's requirements. After all, the purpose of the technical documents,

33. See *Re Strand Music Hall Co Ltd* (1865) 35 Beav 153 at 153: 'The proper mode of construing any written instrument is to give effect to every part of it, if this be possible, and not to strike out or nullify one clause in a deed, unless it be impossible to reconcile it with another and more express clause in the same deed.'

34. [2007] EWCA Civ 58 at para. 12.

35. See discussion *supra*, paras. 3.9–3.13.

36. See the later review of *English Industrial Estates Corp* v. *George Wimpey & Co Ltd* (1972) 7 BLR 122 in this section, paras. 3.49–3.57, which illustrates this point.

such as the specification and drawings, is to set out detailed design proposals which have the aim of achieving those employer's requirements. Where a conflict arises between the two it makes commercial sense to treat the detailed technical proposals as being subordinate to the overriding objectives. A contract will normally state that the contractor is required to achieve the employer's requirements at the expense of departing from the detailed description of the works.[37]

3.35 A construction contract will sometimes contain a clause setting out an order of priorities against which the contract should be interpreted. Normally such provisions also make it clear that the contract needs to be read as a whole and that the various documents forming part of the agreement need to be read together. See, for example, FIDIC Red Book 1999, Clause 1.5:

> 'The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence. . .'

3.36 The clause then goes on to set out a list of priority, running from the Contract Agreement through to the Schedules. While the JCT Standard Form of Contract 2011 does not list an order of priorities, it does contain a clause that states that the conditions of contract will take priority over provisions in the bills of quantities.[38]

3.37 This type of provision is designed to assist the process of interpretation. The approach to be taken in construing such provisions was considered in *RWE Npower Renewables Ltd* v. *JN Bentley Ltd*,[39] which concerned a project undertaken on an amended NEC3 Contract. The dispute turned on the interpretation of the contract, and discrepancies between various documents forming part of it. The contract contained a priorities clause, which stated that 'The following documents are deemed to form and be read and construed as part of this Agreement in the following order of precedence. . .'.

Akenhead J emphasised that such a clause does not mean that wording in a higher priority document automatically excludes consideration of wording in a lower priority one. It is still necessary to try to construe the documents together in order to see whether possible ambiguities can be resolved:[40]

> '. . . the order of precedence is effectively prefaced by the words that all the documents are "deemed to form and be read and construed as part of this Agreement". Accordingly, this is a contract which is to be construed in the usual way by reference to all the documents forming part of the Contract. It is only if there is an ambiguity or discrepancy between two or more contract documents that one then needs to have regard to the order of precedence.'

37. See *Davy Offshore* v. *Emerald Field Contracting Ltd* (1991) 55 BLR 1, discussed *infra*, paras. 3.58–3.70.
38. Clause 1.3.
39. [2013] EWHC 978 (TCC). The approach of the judge at first instance was upheld by the Court of Appeal, *RWE Npower Renewables Ltd* v *J N Bentley* [2014] EWCA Civ 150, paragraphs 15–17.
40. *Ibid*. at para. 24.

3.39 The judge went on to discuss the way that the contract documents may contain irreconcilable differences, giving the example of a contract in which one document stated that a building had to be painted black, and another document stated that it had to be painted white. In that situation the priority clause would deal with the contradiction. Akenhead J went on to state:[41]

> 'What one can not and should not do is to carry out an initial contractual construction exercise on each of the material contract documents on any given topic and then, so to speak, compare the results of that exercise to see if there is an ambiguity. If it is possible to identify a clear and sensible commercial interpretation from reviewing all the contract documents which does not produce an ambiguity, that interpretation is likely to be the right one; in those circumstances, one does not need the "order of precedence" to resolve an ambiguity which does not actually on a proper construction arise at all.'

3.40 The contract may contain procedures to allow the contract administrator to resolve ambiguities.[42] It may specifically provide that the scope of works will be deemed to be varied in the event of certain inconsistencies.[43]

Incomplete information

3.41 If a contract is incomplete, the courts may imply obligations and provisions to deal with the missing details.

3.42 In the context of a scope of works where the description is incomplete, it will be necessary to determine whether the intention of the parties was that the contractor had no obligation to undertake work not specifically referred to. Alternatively, it may be the case that the work not referred to is implicitly required in order to complete the permanent works that the contractor has promised to deliver.

3.43 The case of *Williams* v. *Fitzmaurice*[44] concerned the construction of a house and the contract described the work in general terms, including the number of storeys. The description of the work did not expressly refer to the floors themselves, so the builder tried to claim extra money for constructing them. The court found that the building of the floors was necessarily required for the construction of the house which had been generally described. This work was to be implied into the description of the scope that the contractor was required to build and therefore was not a variation.

3.44 Temporary works will often not be referred to within the description of the works that the contractor has to undertake. However, it is implicit that such work has to be undertaken in order to achieve the work that the contractor has promised to deliver.[45]

41. *Ibid*.
42. See section H of this chapter.
43. See section G of this chapter.
44. (1858) 3 H&N 844.
45. See section E of this chapter, which discusses in more detail the obligation to undertake temporary works, and in particular, *Strachan & Henshaw Ltd* v. *Stein Industrie (UK) Ltd (No. 2)* (1997) 87 BLR 52.

3.45 Where the contract does not specify a price, then the courts may imply an obligation that the buyer will pay a reasonable price for the works.[46] This may be of relevance where the parties have agreed to vary the contract works but have not agreed a price, and there is no contract mechanism for determining the price.[47]

3.46 If there is a lack of certainty as to the terms of the agreement, the courts may find that no contract has come into existence. It is normally necessary for agreement to have been reached on all essential terms to show that there has been a meeting of minds. For example, in *G Scammell and Nephew Ltd* v. *HC & JG Ouston*[48] the parties had reached an agreement based on a sale 'on hire purchase'. The terms of the agreement were found to be too uncertain for there to be a binding contract, since there were many different forms and bases for a hire purchase agreement. There was no meeting of minds as to what had been agreed.

Contractual obligation to undertake work not referred to

3.47 The contract may also place obligations on the contractor to undertake further work not referred to in the description of the scope contained in the contract. Such obligations may require the contractor to depart from the technical description of the works in the scope. For example, the contractor may take responsibility for the design of the works, such that if the design of the works as described in the drawings and specification is defective it may be obliged to depart from that description.

3.48 Section C of this chapter discusses in detail how this may arise. Two of the most important contract risks, which can lead to the contractor assuming an obligation to undertake additional work, are design and the risk associated with buildability and temporary works. The particular aspects of these risks that are relevant to variations are discussed in further detail in sections D and E of this chapter.

Cases illustrating interpretation of the contract scope of works

3.49 *English Industrial Estates Corp* v. *George Wimpey & Co Ltd*[49] is a Court of Appeal decision which involved the interpretation of the conditions of contract and provisions in the technical documents where these were in conflict.

3.50 The contractor, George Wimpey, had been employed by English Industrial Estates to build a large extension to a factory used by the tenant, Reeds Corrugated Cases. Reeds made corrugated cardboard and continued to operate its business from part of the factory whilst the work was being carried out by George Wimpey. Part way through the works a fire broke out, causing significant damage.

46. Sale of Goods Act 1979, s. 8(2) provides that, if no price is determined by the contract, a reasonable price must be paid. Under Supply of Goods and Services Act 1982, s.15(1) a reasonable sum must similarly be paid where a contract for the supply of services fails to fix the remuneration to be paid for them.
47. See Chapter 11, section D.
48. [1941] AC 251.
49. (1972) 7 BLR 122.

3.51 The contract conditions, based on a standard form, provided that the contractor would insure against fire and pay for damage caused.[50] Clause 16 of the conditions stated that if the employer (or its tenant) took possession of part of the works prior to practical completion, then it would take the risk of fire. However, the bill of quantities contained provisions which contemplated that Reeds would occupy part of the factory during the whole of the works but the contractor would nevertheless continue to insure and take the risk.

3.52 Therefore, there was a discrepancy between the provisions in the conditions and those in the bill. Clause 12 of the contract conditions, which had not been amended, stated:

> 'Nothing in the Contract Bills shall override, modify, or affect in any way whatsoever the application or interpretation of that which is contained in these Conditions.'

3.53 Lord Denning took the view that since the provisions in the bill of quantities had been specifically drafted for the purposes of this project, then they should take precedence over Clause 16 of the standard form conditions (see further discussion on this below). This was despite the fact that Clause 12 clearly set out a prioritisation which stated that nothing in the bills should override the provisions of the contract.

3.54 The two other Court of Appeal judges (Edmund Davies and Stephenson LJJ) were not prepared to follow the same analysis. Their view was that Clause 12 of the contract was perfectly clear in providing that the contract conditions took precedence over the bills. The fact that the latter document had been specifically agreed for the project did not alter the way the conflict should be analysed, because Clause 12 dealt clearly with the ambiguity. The principle referred to earlier – that specifically negotiated terms take precedence over standard terms – is relevant where there is a contradiction between two provisions. But in this case there was no ambiguity because the contract expressly provided for prioritisation if a contradiction arose between the two documents.

3.55 The case did not turn on this point since all three judges found that Reeds' ongoing presence in the factory during the works was not the form of possession that was contemplated by Clause 16. In coming to this conclusion both Edmund Davies and Stephenson LJJ considered that they could have regard to the provisions in the bill. The wording in the bill helped to explain what could amount to possession, as this indicated that the parties contemplated that Reeds would remain in the factory, and that this was not 'possession' for the purposes of Clause 16.

3.56 Lord Denning's judgment emphasises that the bills of quantity had been typed out specifically for this contract, as opposed to the standard form conditions which was a printed document. As discussed earlier in this section, it should be recognised that parties to a construction contract will often be very familiar with the standard form conditions. This emphasis on a typed document reflects how the technology involved in preparing documents can influence how they are interpreted.

50. The contract was based on an old JCT standard form.

3.57 Many of the lengthy technical documents that are incorporated into contracts these days are produced very quickly by copying text over from documents used on previous projects. When *English Industrial Estates* was decided in the 1960s, those technical documents were individually typed out on a typewriter. The 'typed' document would typically have been more carefully prepared and reviewed. It was therefore understandable that emphasis would be placed on such documents when seeking to determine the parties intentions. It is important to recognise how such documents would have been produced in considering such cases, and the applicability of the principles referred to in those judgments when applying them in a modern context.

3.58 *Davy Offshore* v. *Emerald Field Contracting Ltd*[51] is a case which illustrates the process of interpretation where there are a large number of complex technical appendices to the contract. Inconsistencies between them led to the inevitable problems in establishing the contractor's work scope obligations. A significant part of the lengthy judgment involves a careful examination of each of the relevant contract clauses concerning the defined works, and an analysis of how they should be read together.

3.59 Davy had been employed to design and build a floating oil production and storage unit for use in the North Sea. The contract incorporated a large number of technical documents describing the works to be undertaken. HHJ Thayne Forbes QC was asked to determine a number of preliminary issues concerning the interpretation of certain contract clauses.

3.60 Part of Davy's case concerned its obligation to comply with the two principal technical specifications, Appendices A and B. Appendix B contained the fully detailed scope of work and ran to six books. Appendix A was a summary version of this scope, running to 64 pages. Davy's case was that it was contractually required to comply with all work described in both Appendices A and B, and if it was unable to do so because of contradictions between the appendices and the other contract documents, then this amounted to variation for which it should be paid extra.

3.61 Clause 2.1 (Scope of Work) stated that Davy would undertake the 'Work', as defined, '. . . consistent with the design basis referred to in Appendix A and Appendix B. . . [and]. . . all in accordance with the provisions of the Contract'. The contract was defined as including Appendices A and B as well as the general contract conditions, which were said to take precedence.

3.62 Importantly, the contract conditions also contained a clause which stated that Davy must ensure that its work complied with the 'Development Description', which was a further short appendix setting out the employer's overall requirements of the facility.

3.63 The 'Work' was defined as:

> '. . . all work to be carried out under the Contract as generally described in clause 2.1 and more particularly described in Appendix B including all other services to be

51. (1991) 55 BLR 1.

> rendered by the Contractor in accordance with the Contract. . . and the work and particulars and details of which are not expressly defined in the Contract but which are necessary, or can reasonably be inferred therefrom, for the performance of such Work as described herein *together with such design, work and services of whatever nature as shall be necessary to enable the Contractor to ensure that the Work and Facilities comply in all respects with the terms and conditions of the Contract*'.[52]

3.64 In the context of these provisions the judge found that Davy's obligation was to construct in accordance with the scope as defined in Appendices A and B but only to the extent that those requirements were in accordance with the other obligations set out in the contract conditions.

3.65 HHJ Thayne Forbes QC held that Clause 2.1 and the definition of the 'Work' placed emphasis on the overriding obligation to comply with the contract conditions, and that they in turn required the achievement of the project objectives, or employer's requirements, defined in the 'Development Description'. In addition, whilst Clause 2.1 and the definition of the 'Work' refer to Appendices A and B, they did not do so in such a way as to stipulate that all the work described in those documents must be completed. The judge considered that the use of the words 'referred to' in Clause 2.1 suggested that not all the works described in the two appendices would necessarily need to be implemented.

3.66 Finally, the judge placed importance on the last few lines of the definition of the 'Work' (see italicised section from the quotation above). He considered that this wording meant that the work that Davy was required to undertake included the work necessary to ensure that the facilities complied with the requirements in the conditions of contract, including the project objectives. The judge concluded:[53]

> 'In my judgment, Appendix A and Appendix B do form part of the "work", but only to the extent that the details, provisions or requirements contained in those appendices are in accordance with the other provisions of the contract and thus do not prevent [Davy] from complying with the terms and conditions of the contract.'

3.67 Having reached this conclusion, the judge went on to consider the contractor's claims that the works had been varied because it had to depart from its build obligations as defined in Appendices A and B. The judge found that there were no variations because, to the extent that Appendices A and B contained provisions that were in conflict with the other obligations, and in particular the employer's requirements, then they were to be ignored.

3.68 In seeking to interpret the contract work scope from a number of inconsistent documents, it will often be necessary to reject certain stipulations in the specification. As explained previously, the contract will often contain a clause prioritising documents to deal with contradictions between them.

52. Emphasis explained *infra*, para. 3.66.
53. (1991) 55 BLR 1 at 31.

3.69 This case illustrates how, even if there is no order of precedence clause, the wording of the contract will often indicate that one document takes priority over another. The contractor will often be required to achieve the technical specification, but only to the extent that this allows it to achieve the overriding objectives stipulated elsewhere, such as in the employer's requirements.

3.70 The way in which the obligations under the contract conditions may require the contractor to undertake more work, or work additional to that described in the technical scope is explored in more detail in section C of this chapter.

3.71 *Demolition Services Ltd* v. *Castle Vale Housing Action Trust*[54] considered the interpretation of the scope of works that a contractor was required to undertake.

3.72 The contractor in this case was employed to demolish two residential housing blocks that were known to contain asbestos. The contract contemplated asbestos decontamination and removal by the contractor prior to the main structural disassembly. However, the extent and nature of the asbestos was greater than anticipated and the contractor claimed extra payment as a variation or as a provisional sum.

3.73 The contractor's case was that the defined scope required it to undertake the removal of only asbestos lagging and insulation sheets. Once the works commenced, it was found that asbestos had been used as an additive to paint and as a result it was also to be found in the finishes to the ceilings, walls and floors. The employer instructed a revised method statement to take account of the need to extract the asbestos finishes. It initially instructed and paid for this work as a variation, but the employer changed its mind part way through, declared it was contract work and stopped paying for it as an extra.

3.74 The description of the works referred to the contractor removing all 'asbestos' and 'asbestos based materials'. It was necessary for HHJ Thornton QC to determine whether these terms included the painted finishes which included a small trace of asbestos.

3.75 The contract appended an asbestos report, produced by the employer's consultant, that referred to the asbestos lagging and insulation sheets but not the asbestos paint and finishes. The judge came to the view that the use of the terms 'asbestos' and 'asbestos based materials' should be read as meaning materials which were wholly or mainly made of asbestos, as this was consistent with the descriptions in the report. As such, these terms caught the asbestos lagging and sheeting, but not the painted finishes which contained only small traces. Therefore he concluded that the definition of the work scope, covered by the price, included the lagging and sheeting, but not the painted finishes.

3.76 The judge was also influenced by the manner in which the word 'asbestos' was used in the bills of quantity, in the context of provisional sums. The contract expressly stated that the bills were to be produced in accordance with SMM7, which in turn provided that provisional sum work can be either defined or undefined. The bills referred to 'asbestos' work as being

54. (1999) 79 Con LR 55.

defined work. For defined work the contractor took the risk for it in terms of programming and preliminaries costs. For undefined work the contractor did not take this risk. The judge took the view that 'asbestos' as referred to under the bill must have meant the lagging and sheeting work because it was only this work that could have been treated by the contractor as being defined. The contractor could not have taken the programming and preliminaries costs risk for the finishes and therefore the word 'asbestos' should be taken to mean lagging and sheeting work, when referred to throughout the contract documents.

3.77 The employer also raised the fact that the contract contained various provisions requiring the contractor to inspect the site. For example, it required the contractor to '. . . ascertain the nature, position and content of the Works to be executed and to inspect and identify the presence of asbestos, toxic waste, etc. . . as no claim arising from want of knowledge will be considered'. In interpreting the word 'asbestos' to mean materials made mainly from asbestos, such as the lagging and sheeting, rather than meaning materials containing any asbestos at all, the court limited this obligation to inspect accordingly.

3.78 In analysing contract obligations, tribunals will sometimes be tempted to consider whether a particular interpretation makes sense from a commercial perspective. In this case, the judge stated that the employer's interpretation that the contractor had taken the risk of removing all asbestos materials could not be correct because this '. . . would appear to defy business common sense'. He went on to state that this would have involved the contractor in '. . . contracting under something of a gamble'. The judge pointed out that the asbestos work price amounted to £25,000 and, had the contractor been required to remove absolutely all asbestos (including the finishes) for this sum, then it would have involved an enormous risk because '. . . there was no way in which [the contractor] could accurately gauge and price the risk of such removal'.

3.79 Whilst taking account of the commercial purpose of the transaction may facilitate contract interpretation, it is important to remember that construing the contract must be undertaken objectively.

3.80 In any event, contractors routinely take significant risks on contracts and indeed will often take risks which they cannot accurately gauge. It is difficult for a court to assess properly what may or may not be an acceptable commercial risk in the circumstances. The comments of Neuberger LJ in *Skanska Rashleigh Weatherfoil Ltd* v. *Somerfield Stores Ltd* are instructive:[55]

> '. . . [I]t seems to me that the court must be careful before departing from the natural meaning of the provision in the contract merely because it may conflict with its notions of commercial common sense of what the parties may must or should have thought or intended. Judges are not always the most commercially-minded, let alone the most commercially experienced, of people, and should, I think, avoid arrogating to themselves overconfidently the role of arbiter of commercial reasonableness or likelihood.'

55. [2006] EWCA Civ 1732 at para. 22.

3.81 *Linklaters Business Services* v. *Sir Robert McAlpine Ltd*[56] concerned the analysis of whether certain work was a variation which, in turn, required the court to determine the extent of the contractor's scope of work under a contract.

3.82 This case involved proceedings brought by the business service vehicle of the well-known law firm. Sir Robert McAlpine had, in 1996, undertaken extensive refurbishment work on Linklaters' premises and had given a warranty in respect of the quality of its work and performance. Linklaters subsequently experienced problems with the chilled water pipework system that McAlpine had installed. In 2008 it hired a new contractor, Como, to undertake remedial and replacement work in respect of the faulty pipework. Linklaters sued McAlpine under the warranty for the costs of employing Como to undertake this work.

3.83 One of the many points considered by the trial judge was McAlpine's argument that, even if they were liable for the sums paid to Como, they should not be responsible for certain payments made for variations. McAlpine alleged that Linklaters should not have made these payments, since the work was not extra under the Como contract. The issue of what was properly a variation under the Como contract turned on an analysis of the scope of Como's work.

3.84 The disputed variations related to re-routing of pipework from that shown on the contract drawings and the associated builder's work. The contract was based on an amended 2005 JCT Standard Contract Without Quantities. The works which Como was required to carry out and complete were said to be as described in the contract documents, which in turn incorporated the drawings, specification and the contract conditions. Clause 2A.1 stated:

> 'The Contractor has had an opportunity of inspecting the physical conditions of the site and shall have fully acquainted himself with the same and shall have obtained all necessary information as to risks, contingencies and all other circumstances which may influence or affect the execution of the Works. No failure on the part of the Contractor to discover or foresee any such condition, risk, contingency or circumstance, whether the same ought reasonably to have been discovered or foreseen or not, shall entitle the Contractor to an addition to the Contract Sum. . .The Contractor shall not and shall not be entitled to rely upon any survey, report or other document prepared by or on behalf of the Employer regarding any matter as is referred to in this clause 2.1A and the Employer makes no representation or warranty as to the completeness of such survey, report or other document. . . .'

3.85 McAlpine argued that, even though work was not shown on the drawings and specification, if it was necessary for the pipework to be constructed, such that the pipe routing had to be changed to overcome physical obstructions, then Clause 2A.1 barred a claim.

Akenhead J rejected McAlpine's argument. Clause 2A.1 with the 'risks, contingencies and all other circumstances which may influence or affect the execution of *the Works*'. That meant the 'Works' as defined. Those defined Works were as set out on the contract documents,

56. [2010] EWHC 2931 (TCC).

including the drawings and specification. If the drawings and specification did not show certain pipework, then that was not part of the required Works. As the judge concluded:[57]

> 'If the Contract Drawings show a pipe run in a specific position, the Contractor is required to put it in that position. If the Architect wants to change that for any reason, that can only be instructed by way of a Variation. If the builder's work for or in connection with a particular pipe run is specified, the Contractor has to do it within its price. If it is not specified, the Contractor has no obligation to do it and can only be instructed by way of Variation.'

SECTION C: CONTRACTUAL OBLIGATION TO UNDERTAKE WORK NOT EXPRESSLY REFERRED TO

3.87 The scope of work that a contractor is obliged to undertake may include works that are not described in the technical documents, such as the specification and drawings. In order to determine whether work is a variation, it will be necessary to consider whether such work forms part of the scope that the contractor is already obliged to carry out.

3.88 Work not referred to in the technical documents may be required because, as a matter of contract interpretation, it is indispensably necessary to the task of completing the work that is described. As discussed in section B of this chapter, the interpretation of the scope may mean that it is necessary to imply work that is not specifically referred to. The case of *Williams* v. *Fitzmaurice*,[58] where the specification described the construction of a house but did not expressly refer to the floors, is an example of a situation where the requirement to carry out certain work will be implied.

3.89 This section discusses the obligation on the contractor to undertake additional work not referred to in the technical scope because strict compliance with that scope may be overridden by other provisions in the contract. This may arise because the contract places certain risks on the contractor, such as an obligation to resolve a problem if an unexpected event occurs. It may arise because the defined scope of works includes not just the obligation to build in accordance with the specification and drawings, but an obligation to depart from that technical scope in order to ensure that the project criteria are achieved or to eliminate design faults.

3.90 The contractor's price may be deemed to include the extra work that needs to be undertaken as a result of certain risk events. For example, in *Pearce (CJ) Co Ltd* v. *Hereford Corp*[59] the contractor was in the process of constructing a new sewer underneath a road when it disturbed and fractured the old sewer. Its works were flooded and the contractor had to undertake additional work to fix the old sewer, and limit the impact of the accident on construction of the new one. The contractor took the risk under the contract for unforeseen obstructions

57. [2010] EWHC 2931 (TCC) at para. 154.
58. (1858) 3 H&N 844.
59. (1968) 66 LGR 647.

and its contract price was deemed to cover all necessary extra work in connection with that risk. The contractor's claim to be paid for this work as a variation was, not surprisingly, rejected.

3.91 A construction contract will normally define the scope of works that the contractor is obliged to build in a manner that encompasses more than just the technical description of the project as contained in the drawings and specification. The contract will normally state that the contractor is obliged to construct the scope as described by those documents, but also in accordance with its obligations under the contract conditions. The contract conditions will in turn require the contractor to undertake additional, or even just different, work to that described in the drawings and specification.

3.92 For example, under a design and build contract, the contractor may be obliged to build the works in accordance with specified performance criteria set out in a document stipulating such employer's requirements. Whilst the contractor's proposed design may be contained in the drawings and specification, it is obliged to depart from those works in order to achieve the employer's requirements. The works will normally be defined in such a way that achieving the performance criteria overrides the design in the drawings and specification. The 'extra' work that is required to achieve those criteria will not therefore be a variation as it will be work that is required to fulfil the contract scope.[60]

3.93 The obligation to undertake additional work that is not referred to in the drawings and specification may arise because of a provision in the contract conditions. If the contractor is required to build the defined works in accordance with the contract conditions, these conditions can mean that it has to depart from the description of the works in the accompanying technical documents.

3.94 For example, suppose a contract contains a specification and drawings that describe a particular roof design, but the contract conditions state that the contractor has responsibility for ensuring that the work it builds is fit for purpose. These provisions, when construed together, will place an obligation on the contractor to follow the specification as far as possible but with an overriding duty to ensure that the roof is fit for purpose. If the roof, as described in the specification and drawings, is not watertight (and therefore not fit for purpose), then the contractor will need to depart from the description of the roof design detailed in the technical documents.[61]

3.95 This is not a variation of the works. In departing from the technical documents the contractor is simply following its obligation to build the defined works. After all, the works it is required to build do not consist exclusively of what is contained in the technical documents. The works are described in the technical documents but, importantly, must be built in

60. The way that design obligations require the contractor to undertake additional work is considered in detail at section F of this chapter.

61. Typically, the obligations in the contract conditions will take priority over the work descriptions in the specification and drawings. The contract documents will normally be construed together, with provisions in the lower priority documents being rejected when inconsistent with the higher priority obligations. See section B of this chapter.

accordance with the contract conditions. The contractor will need to undertake work which is additional to that described in the technical documents, without this being a variation to the works under the contract.

3.96 The case of *Davy Offshore* v. *Emerald Field Contracting Ltd*,[62] considered in detail in section B of this chapter, illustrates how the general obligations in the contract conditions can have priority over the specific technical requirements of the specification. In that case, the contractor had been employed under a design and build contract to construct a floating oil and production platform for use in the North Sea. The lengthy specification contained inconsistencies. In order for the contractor to build the works in accordance with the description of the project set out in the employer's requirements, it had to depart from certain technical details in the specification.

3.97 The build obligations under the contract were such that the contractor was under an duty to achieve the employer's requirements and to follow the specification only to the extent that it was consistent with those requirements. The judge in that case concluded:[63]

> 'In my judgment, [the specifications] do form part of the "work", but only to the extent that the details, provisions or requirements contained in [the specification] are in accordance with the other provisions of the contract and thus do not prevent [the contractor] from complying with the terms and conditions of the contract.'

3.98 The contractor had claimed that any departure that it had to make from the specification amounted to a variation. The judge rejected that analysis. Where the contractor had to depart from the particulars of the specification in order to comply with the employer's requirements, then that element of the specification could not be properly treated as part of the works. The process of construing the contract documents together meant that it was necessary to treat certain obligations under the specification as inconsistent with the overall requirements for the works. The offending provisions were therefore not part of the works that the contractor had to undertake. There was no variation of the scope but certain aspects of the described scope were ignored as part of the process of interpreting conflicting provisions in order to determine what works had to be carried out under the contract.

3.99 The contractor may be obliged to undertake work not referred to in the technical documents because of a requirement of the contract conditions. For example, such a requirement may arise if the contractor has to comply with new legislation, which means that it has to alter materials, or adopt a changed method of construction.[64] Two of the most important factors which lead to changes being made are design obligations and the contractor's obligations associated with buildability. The obligation to undertake additional work as a result of these two obligations is considered under separate sections later in this chapter.[65]

62. (1991) 55 BLR 1.
63. *Ibid.* at 31.
64. *Havant Borough Council* v. *South Coast Shipping (No. 1)* (1998) 14 Const LR 420.
65. See sections E and F of this chapter.

Extent of the contractor's discretion when departing from the scope

3.100 If, for the reasons described above, a change to the work described in the technical documents is not a variation, then there is no need for the contractor to obtain the employer's consent to the change.[66] However, this does not mean that the contractor has complete discretion as to the extent and nature of the change.

3.101 In such circumstances, any departure from the scope needs to be exercised in accordance with the contractor's obligation to undertake the described works. Therefore, the contractor needs to stay as close as possible to the specification.

3.102 Take the example of a contract for the construction of a house, which if built strictly in accordance with the description in the specification would not achieve the energy efficiency levels stipulated in the employer's requirements. Since the employer's requirements will have priority, the contractor must achieve those energy efficiency levels even if that means the contractor has to depart from the specification. The contractor will still, however, have constraints as to how it adjusts the specification in order to achieve its goal of fulfilling the energy efficiency levels. The contractor cannot wholly ignore specification and design a completely different house. As far as possible, the original specification needs to be followed and may only be adjusted to the minimum degree necessary in order to achieve the required energy efficiency levels. This is the consequence of the rules of interpretation which require the provisions in the contract documents to be read in as consistent a manner as possible with one another.[67]

3.103 Another example is that of an office development where the specification requires an unusual wavy roof design which proves not to be watertight. The contract states that the contractor has to achieve a fitness for purpose standard in respect of its work and stipulates that the specification must be followed only to the extent that this standard can be delivered. The contractor would be required to investigate engineering solutions that would maintain the wavy appearance whilst ensuring that the final product was watertight. Once it becomes clear that the wavy roof is not watertight, the contractor is not entitled to ignore completely the original aesthetic appearance when redesigning.

3.104 The parties may disagree as to the appropriate design solution that should be introduced once it is clear that changes need to be made. Since no variation is involved the employer's consent may not be needed, although the contractor may still be obliged to get the employer's sign-off on the details of the design.

3.105 Whilst the employer may not agree with the contractor's proposed adaptation of the design, it may have limited power to influence the change. The employer may take the position that the contractor's design solution means that the works are not in accordance with the contract. As with any situation where an employer considers that the contractor's work does not

66. This is subject to the typical stipulation that the contractor must obtain the employer's consent and approval in relation to detailed and working drawings. However, the employer's right to comment on, and insist on changes to, drawings is normally constrained by reference to what the contract requires the contractor to build.

67. See section B of this chapter concerning rules of contract interpretation.

follow the contractually specified scope, this can lead to an employer giving the appropriate notice under the contract, refusing payment or refusing to certify completion.[68] However, it is important to recognise that the question whether the contractor's revised design is or is not in accordance with its contract obligations can often be highly arguable and subjective. It may therefore be quite uncertain what the outcome would be if the dispute as to whether the departure was unjustified were ever formalised and determined by a tribunal. After all, determining how the design should be changed, and what is acceptable under the contract, can be highly subjective.[69]

3.106 To take the above example of the house which fails to achieve the specified energy efficiency level, in order to achieve the specified energy efficiency level the contractor may decide to incorporate additional insulation material in the roof. However, such an alteration to the design may mean that the loft area is smaller. The employer may argue that the contractor should find a way of achieving the energy efficiency criteria without reducing the loft space. It may, as an alternative, argue that the appropriate design change should involve upgrading the windows from double-glazed to triple-glazed. If the contractor goes ahead with its solution, the employer may claim that the final product is not in accordance with the contract. It may argue that the contractor's departure from the specification is not in accordance with its overall build obligation. If the employer is correct, then it may have remedies arising from the contractor's breach in failing to build in accordance with the works as defined.[70] However, as this example illustrates, such an assessment will often be subjective and the outcome if the dispute escalates into a formal process will, in many situations, be uncertain.

3.107 In the circumstances, therefore, it is always advisable for the parties to seek to reach an agreement as to the solution to be implemented which both of them can live with.

Where the extra work does constitute a change under the variations clause

3.108 This section has considered situations where the contractor is obliged to undertake work that is additional to that described on the specification and drawings, but does not amount to a variation because it falls within the scope that the contractor is required to construct. It will sometimes be the case that such work is a variation even though it is work that is at the contractor's risk under the contract.

3.109 For example, the contractor may have experienced a difficulty in constructing in accordance with its proposed design. It may be impossible for the contractor to build in accordance with the drawings and also achieve the employer's design criteria. The contractor may be obliged to achieve both even though this is impossible.[71]

68. These remedies are discussed in Chapter 4, section B.

69. This type of problem, along with possible solutions such as an expedited disputes process, are discussed in Chapter 2, section D.

70. See Chapter 4.

71. See section D of this chapter, which discusses in detail such contractual arrangements whereby it is impossible for a contractor to perform the defined scope.

3.110 If the contractor is not going to be in breach by failing to follow the scope, and the work is going to proceed, it will be necessary for the employer to agree a change.[72] In such situations, where the contractor's design has failed, then it will typically not be paid extra for the change, but it will still be necessary to obtain the employer's approval for the alteration if the contractor needs to depart from the contract scope.[73] It is a matter of contract interpretation as to whether such work involves a departure from the defined scope, or whether it is simply extra work that needs to be carried out as part of the contractor's obligation to undertake the defined scope.

3.111 Whether the employer's approval for the change is required will not necessarily be clear cut, for example where a contract condition simply refers to the contractor taking the risk of certain additional works, such as the need to undertake extra work because of unexpected underground obstructions, as illustrated in *Pearce (CJ) Co Ltd* v. *Hereford Corp*,[74] referred to earlier in this section. It may be unclear whether the defined scope that the contractor is required to undertake includes the extra work to deal with the obstruction or whether it is outside the scope, such that it is a change that needs to be approved by the employer. The distinction will often be irrelevant since in both circumstances it is likely that the contractor will have no entitlement to be paid for the change. It may become an issue if, for example, the contractor does not accept the risk and refuses to undertake the change without a formal variation instruction.

Change ordered under a provision outside the contract mechanism

3.112 The contract may give the employer the right to alter the works to be undertaken without having to effect this change via the contract variation mechanism.

3.113 For example, under a design and build contract the employer may be entitled to provide updated information for a period of time into the project, which has the effect of adding to the design criteria without this being treated as a change.[75] Or, the contract may give the engineer the right to determine and approve the temporary works such as to alter the extent of such works from that contemplated by the contract.[76]

3.114 *Kitsons Sheet Metal Ltd* v. *Matthew Hall Mechanical & Electrical Engineers Ltd*[77] is another example of a case in which the employer was found to be entitled to change the works under the contract without this amounting to a variation.

3.115 The works in *Kitsons Sheet Metal* related to the construction of Heathrow Terminal 4 in the 1980s. The owner of the airport employed the main contractor, Taylor Woodrow, who

72. If the change is a variation to the works, then the employer may choose simply to approve the departure from the contract scope as a concession. See Chapter 9, section B.

73. See Chapter 6 for a discussion about situations where extra work is required because of events that are at the contractor's risk, and the contractor's right to be paid in such situations.

74. (1968) 66 LGR 647.

75. See *Skanska Construction UK Limited* v. *Egger (Barony) Limited (No. 2)* [2002] All ER (D) 271, as discussed further in section F of this chapter, dealing with design risk.

76. See *Neodox Ltd* v. *The Mayor, Aldermen and Burgesses of the Borough of Swinton and Pendlebury BC* (1958) 5 BLR 34, as discussed further *infra*, paras. 3.191–3.195.

77. (1989) 47 BLR 82.

in turn employed Matthew Hall to undertake pipe and duct work. Matthew Hall employed Kitsons to undertake insulation of the pipes and ducts.

3.116 Kitsons was unable to work to the programme. However, the contract contained provisions which required it to work to Matthew Hall's order. In particular, an order document which was bound into the contract stated, 'Work to be carried out in accordance with the dictates of [Matthew Hall's] site management team'. The word 'dictates' had been questioned by Kitson and the parties had agreed to change it to 'instructions' in later interparty correspondence bound into the contract. In addition, a term in the conditions stated that Matthew Hall would obtain 'as far as [they are] able' parts of the site to enable Kitsons to execute its works. The judge found that, when read together, these provisions reflected the fact that Kitsons was working to the beck and call of Matthew Hall.

3.117 The variations clause defined changes as including 'the alteration in the manner or the sequence of the works'. HHJ John Newey QC found that Matthew Hall's instructions to Kitsons to change its sequence of working were not variations under the contract because the order document entitled Matthew Hall to change the subcontractor's sequence of working in any event. The judge stated:[78]

> 'If the plaintiffs were entitled to carry out their work in accordance with a programme and if the defendants then instructed them to depart from it in some respect or to substitute a later programme for an earlier one, an alteration of sequence and possibly of manner would occur. If, however, I am right in thinking that the defendants had the right to instruct the plaintiffs on an "as required" basis and that programmes could only be guides, without contractual effect, it would follow that any alteration of manner or sequence could not constitute a variation.'

3.118 Where the employer, therefore, is entitled to change the sequence of working anyway, then a direction to make this change cannot amount to a variation. Kitsons was not entitled to additional money and time as a result of Matthew Hall exercising this option.

Measurement contracts

3.119 Under a measurement contract the volume of work may change from that originally predicted. The change in the volume of work will not necessarily equate to an alteration to the scope, as this will normally arise as a result of the final calculation of quantities on completion. See section I of this chapter, concerning measurement contracts.

SECTION D: IMPOSSIBILITY OF BUILDING THE DESCRIBED SCOPE

3.120 In order to assess whether certain work is a variation, it is necessary to determine the scope that the contractor is obliged to undertake, and this in turn involves interpreting a collection

78. (1989) 47 BLR 82 at 110.

of contract documents which may contain inconsistencies. By taking account of the usual rules of interpretation, and contract provisions such as priorities clauses, inconsistent technical requirements can normally be resolved.[79] However, this will not always be the case. The contractor may simply have agreed to undertake works that prove to be physically impossible to perform.

3.121 It may be impossible to build the works because of an inherent problem with the design or because an event occurs which means that the contract design can no longer be followed.[80] The impossibility of proceeding in these circumstances will not mean that the contract is frustrated.[81]

3.122 If the works cannot be built because it is impossible to construct in accordance with the original description of the scope, then this will normally be the contractor's risk.[82] The contractor may, for example, have agreed to build certain specified foundations and also warranted that they achieve certain load tests.

3.123 If the defined works cannot be built because an unexpected event occurs after project commencement, then it is necessary to consider who has taken the risk for that event under the contract. For example, there may be a change in the law such that using the materials or the methods described in the scope is unlawful. If the risk has been assumed by the employer, this change in the law may constitute a deemed variation under the contract.[83] If the risk of the event is assumed by the contractor and amounts to a variation, then the contractor will need to get permission from the employer for the change.[84] This section principally considers cases where the work could not be built because of an inherent problem with the scope described in the contract, but the same issues concerning impossibility apply where a subsequent event causes the difficulty.

3.124 The contractor has simply promised something that it cannot deliver, and as a result will be in breach:[85]

> 'Where there is a positive contract to do a thing, not in itself unlawful, the contractor must perform it or pay damages for not doing it, although in consequence of unforeseen accidents, the performance of his contract has become unexpectedly burdensome, or even impossible.'

3.125 There is no reason why a contract cannot be construed as involving such a promise to deliver a product which the contractor cannot supply. However, one rule of contract interpretation

79. Section B of this chapter considers the rules of contract interpretation.

80. See Chapter 2, section A. The design may have been based on inaccurate assumptions as to the ground conditions: see *Simplex Concrete Piles Ltd* v. *The Mayer, Alderman and Councillors of the Metropolitan Borough of St Pancras* (1958) 14 BLR 80, as discussed in Chapter 6.

81. See Chapter 2, section C, paras. 2.51–2.56.

82. See *Thorn* v. *London Corporation* (1876) 1 App Cas 120, as discussed *infra*, at para. 3.164. Impossibility to construct can be the employer's risk, for example if the employer has supplied the design and has warranted that it can be built. See Chapter 7, section D.

83. See section G of this chapter, discussing such deemed variations.

84. As discussed in section C of this chapter, the contractor may be entitled to depart from the technical description of the works as part of its overall obligation to deliver the works, such that this is not a variation.

85. *Taylor* v. *Caldwell* [1863] 3 B&S 826.

is that there is a presumption that a contract does not require performance of the impossible, although this can be rebutted by clear words. Sir John Donaldson MR in the Court of Appeal judgment in *Eurico SpA* v. *Philipp Bros (The Epaphus)* stated:[86]

> 'My starting point is that parties to a contract are free to agree upon any terms which they consider appropriate, including a term requiring one of the parties to do the impossible, although it would be highly unusual for parties knowingly so to agree. If they do so agree and if, as is inevitable, he fails to perform, he will be liable in damages. That said, any court will hesitate for a long time before holding that, as a matter of construction, the parties have contracted for the impossible, particularly in a commercial contract. Parties to such contracts can be expected to contemplate performance, not breach.'

3.126 If the scope which the contractor has signed up to cannot be undertaken, then it will be necessary for the employer to approve a change if the works are to be completed.

3.127 Such a contractual arrangement is illustrated by *Steel Co of Canada* v. *Willand Management*,[87] which was decided by the Supreme Court of Canada.[88] The contractor had been employed to undertake roofing work. The specification for the work had been prepared by the employer and required the use of an adhesive product called Curadex to attach insulation to the roof sheets. Storms led to the roof sheets blowing off because of a failure of the Curadex adhesive. The contract incorporated a five-year guarantee that all work specified 'will remain weather tight and that all material and workmanship employed are first class and without defect'. Therefore, whilst the specification stipulated Curadex, the use of this product had caused the roof sheets to fail and had led to the contractor being in breach of its performance obligation.

3.128 The lower Ontario Court of Appeal had decided in the contractor's favour but this decision was reversed by the Canadian Supreme Court. The Court of Appeal had concluded that the contractor was not liable because 'under the circumstances the [contractor] guaranteed only that, as to the work done by it, the roof would be weather-tight *in so far as the plans and specifications with which it had to comply would allow*' (emphasis added).

3.129 The Supreme Court of Canada commented that the final words (as italicised in the above quotation) amounted to a restriction on the provisions of the guarantee that were not contained in the contract. The guarantee related to all the works that the contractor was to carry out as described in the specification and plans. The guarantee was not limited to only certain work in the specification. It was a guarantee as to the performance of all the works to be undertaken.[89]

86. [1987] 2 Lloyd's Rep 215 at 218.

87. [1966] SCR 746.

88. In addition to the cases referred to in this passage, see also those referred to in section D of this chapter. Reference is also made to the following nineteenth-century British cases: *Wilson* v. *Wallace* (1859) 21 D 507, *A. M. Gillespie & Company* v. *James Howden & Company* (1885) 12 R 800 (in a shipbuilding context) and *Hydraulic* v. *Spencer* (1886) 2 TLR 554.

89. The fact that the employer produced the specification that referred to Curadex being used did not alter the terms of the contractor's performance guarantee. As had been established by the House of Lords in *Thorn* v. *London*

3.130 The contractor had claimed payment for the work it had undertaken in repairing the damage to the roof sheets caused by the storms. The claim was refused. The judge commented:[90]

> '. . . I think that it follows that when a work so constructed does not perform the function which the contractor agreed that it would perform, the contractor is liable for the failure of the work and is not entitled to extra payment for repairing it so that it will form its stipulated duty.'

3.131 The contractor had agreed to build the specified roof using Curadex. However, since Curadex was defective, this also meant that it would be in breach of its obligation to ensure that the roof would be weather tight. The contractor could not depart from the specification and still comply with its obligation to build a weather tight structure.

3.132 The 2012 case of *Greater Vancouver Water District* v. *North American Pipe & Steel Ltd*[91] involved similar facts to *Canadian Steel* and adopted the same analysis. The contractor (North American Pipe & Steel Ltd) supplied and installed water pipes on two large projects. The pipes in question and the coatings to be used on them were stipulated in the specification that the employer had produced. However, the coating on the pipes proved to be defective.

3.133 The contractor agreed to supply the pipes as described under Clause 4.4.3: 'The Supply Contractor warrants. . . that the Goods. . . will conform to all applicable Specifications. . . and, unless otherwise specified, will form part of the Goods'. Clause 4.4.4 of the contract placed the following design obligation on the contractor: 'The Supply Contractor warrants and guarantees that the Goods are free from all defects arising at any time from faulty design in any part of the Goods'. The difficulty for the contractor was of a similar nature to that in Canadian Steel: if the contractor used the material as specified, as it was obliged to under Clause 4.4.3, then it would be in breach of its design warranty under Clause 4.4.4.

3.134 The lower court judgment (which the Court of Appeal later overturned) had sought to interpret the provisions such that there was no contradiction between them. It viewed the contractor's obligation to follow the specification and its design warranty as inconsistent, and therefore concluded that the design warranty needed to be read with a proviso that it did not apply in relation to materials that the employer had stipulated in the specification.

3.135 The Court of Appeal rejected the analysis of the lower court and said that the trial judge was construing Clauses 4.4.3 and 4.4.4 in a manner that the language did not support. The design warranty under Clause 4.4.4 clearly did not contain the proviso that the trial judge was asserting. Equally, there was no reason why Clauses 4.4.3 and 4.4.4 could not coexist even though this meant that the contractor had signed up to undertake something that could not be achieved. The Court of Appeal commented on the lower court's judgment as follows:[92]

Corporation (1876) 1 App Cas 120, which the Canadian court referred to, an employer could not be taken to have given an implied warranty that the works described in the specification it had produced could be built in the manner described. See *infra*, para. 3.164.

90. [1966] SCR 746 at 754.

91. [2012] BCCA 337.

92. *Ibid.* at para. 23.

> 'On the judge's findings of fact, I do not think the provisions of Clauses 4.4.3 and 4.4.4 are inconsistent logically. I also do not think that they are inconsistent legally.
>
> Pursuant to Clause 4.4.3 and the other provisions of the Supply Agreement, North American was obliged to deliver pipe in accordance with [the employer's] specifications. North American agreed to do so. Quite separately, it warranted and guaranteed that if it so supplied the pipe, it would be free of defects arising from faulty design. These are separate contractual obligations. The fact that a conflict may arise in practice does not render them any less so. The warranty and guarantee provisions reflect a distribution of risk.'

3.136 The Clause 4.4.4 design warranty did not include any qualification and therefore it did not matter who drafted the specification stipulating the ineffective pipe coating. The fact that there may be a conflict between the provisions did not mean that the design warranty had to be curtailed as a matter of contract interpretation. The contractor was clearly giving a warranty in respect of the materials referred to in the specification in its entirety even though the material specified had initially been proposed by the employer.[93] The Court of Appeal judgment of Chiasson J concludes:[94]

> 'North American guaranteed that the pipes would not have defects arising from faulty design. The trial judge held that the pipes did have defects arising from faulty design. . . In my view, on the plain language of the contract, North American is liable for any damages that resulted from those defects. It does not matter whose design gave rise to the defects. There is no such qualification in clause 4.4.4.'

3.137 In both *Greater Vancouver* and *Canadian Steel* the contractor had signed up to build something which could not be achieved and a variation needed to be approved by the employer. This can be compared to the type of contractual arrangement discussed above, at paras. 3.87–3.99, whereby the contractor has an overriding obligation to achieve certain performance criteria and may depart from the design in order to satisfy them. In those circumstances, the scope of work that the contractor must deliver can be achieved without a variation because the contractor has some flexibility to depart from the design.

3.138 The approach that is taken to defining the contractor's build obligations will depend on the nature of the project. If the project is such that the employer's concerns are about end performance rather than aesthetic criteria, a design and build contract with final output tests will typically be chosen. The contract will often allow the contractor discretion as to what to build provided it satisfies the tests. The contractor will typically be able to depart from the contract specification provided it achieves the employer's requirements.

3.139 However, if the employer has a particular interest in the aesthetic appearance of a project or wants a particular material to be used, then the contract will be drafted such that the

93. In both *Canadian Steel* and *Greater Vancouver* the contractor could have escaped liability if it could be said that the employer had given a warranty in relation to material specified. Following *Thorn* v. *London Corporation* (1876) 1 App Cas 120, no such implied warranty could be said to exist simply because the employer has specified the faulty material. See section E of this chapter.

94. [2012] BCCA 337 at para. 23.

contractor can only depart from the specification with permission. An employer may want a building that incorporates a particular design feature, such as an unusual roof design which will be described in the specification and drawings. Under such an arrangement the contractor may still give a guarantee as to its fitness for purpose. If it turns out that the specified roof will not be watertight, then the employer's consent to change the design will be required. Because the aesthetic appearance of the building is important, the employer will want some control over the changes that can be made. This can be contrasted with the contractual arrangement whereby the employer is not concerned about appearance and the contractor has complete flexibility to change the design without approval, provided that its performance criteria are achieved.

3.140 The distinction between the two approaches is further illustrated by the case *Turriff Ltd* v. *The Welsh National Water Development Authority*.[95] The City of Chester employed Turriff to build a sewer system using pre-cast concrete boxed culvert units manufactured by Trocoll, a third party to the litigation. The employer's consultants had spent some considerable time and effort in designing these pre-cast culvert units which were then specified in the contract. However, once the works got under way it transpired that there were major technical difficulties in making and installing the units in the manner specified in the contract. As a question of fact the judge found that the units were not 'impossible' to manufacture but they were impossible 'on an ordinary commercial competitive basis as the parties intended'. This distinction is commented upon in section E of this chapter, but is not relevant in the context of the issues discussed here.[96] The units were, however, strictly impossible to joint and lay to the tolerances required under the specification.

3.141 The contract was based on an ICE standard form, which provided that the defined works had to be implemented but only to the extent that this was not physically impossible. Clause 13 of the contract read:[97]

> 'Save insofar as it is legally or physically impossible the Contractor shall construct and complete the Works in strict accordance with the Contact. . .'

3.142 The employer sought to argue that the contractor had an obligation to find a solution to the difficulties associated with the method of construction to the extent that it was impossible to follow the specification. It claimed that the effect of Clause 13 was that, if construction was impossible, then the contractor was obliged to depart from the strict provisions of the design in order to deliver the sewer system. HHJ Sir William Stabb QC rejected this analysis, instead coming to the conclusion that the contractual obligation was to carry out and complete the works that had been specified. If this proved impossible, then in the light of Clause 13, the contractor would be under no obligation to proceed.

95. [1994] Const LY 122.

96. See *infra*, para. 3.181.

97. The current ICC Measurement Contract 2011 contains a similar provision in Clause 13(1). See also *Yorkshire Water Authority* v. *Sir Alfred McAlpine & Son (Northern) Ltd* (1985) 32 BLR 114, discussed *infra*, para. 3.176, where this clause is also discussed.

3.143 The judge first summarised the employer's position:[98]

> '. . . [the employer] contends that if the contractor finds it absolutely impossible to comply with his obligation to execute, complete and maintain the works in strict accordance with the Contract. . . then the contractor, in pursuance of his overall obligation to execute and complete the works, is excused from strict adherence to the provisions of the Contract, i.e. he is not only entitled but is required to break the Contract in order to render possible what was otherwise impossible, and in that event he will be excused such a breach or, by virtue of Clause 13, such a departure from the Specification will not constitute a breach.
>
> . . . If that be the correct interpretation [the employer] contends that a contractor when faced with a physical impossibility resulting from the. . . design or Specification, is under an obligation to render possible that which the. . . Contract made impossible, and, it would seem, that the contractor must re-design or re-specify some other mode of working, not in compliance with the Contract, in order to achieve the end result.'

3.144 The interpretation argued for by the employer was of the type that was found to exist in *Davy Offshore* v. *Emerald Field Contracting Ltd*,[99] as referred to above at paras. 3.96–3.99. Whilst a contract may, as with *Davy*, give the contractor the flexibility to depart from the design described in the specification, this was not the arrangement under this contract. In *Turriff Ltd* v. *The Welsh National Water Development Authority and Ors*[100] the contractor was obliged to follow the design and was not entitled to depart from it, albeit that it had no obligation to proceed if those works proved impossible to perform.

3.145 The judge went on to comment on how the contract should be interpreted:[101]

> '. . . the Contract should be construed, in my judgement, as one which required Turriff to execute and complete the works by having Trocoll manufacture and themselves laying and jointing units as specified and designed by Chester and only as specified and designed by Chester. If this should prove impossible, then I cannot believe that, in the circumstances, Turriff were under any obligation to re-design this novel unit in order to overcome the impossibility. Many building contracts are absolute in the sense that the contractor binds himself to achieve the result even though as Blackburn J said in *Taylor* v. *Caldwell*, above cited: "in consequence of unforeseen accidents, the performance of this Contract has become unexpectedly burdensome or even impossible".
>
> This Contract was not absolute in that insofar as physical impossibility of performance supervened, the contractor was excused. The performance, which was required and intended to be required, was performance in accordance with the Drawings and Specification, as Chester made plain in correspondence, . . . I cannot, therefore, accept that Turriff were under an obligation to depart from that Specification and those Drawings, when performance in accordance with them became impossible.'

98. [1994] Const LY 122 at 130.
99. (1991) 55 BLR 1.
100. [1994] Const LY 122.
101. *Ibid.* at 132.

3.146 A contractor may sign up to a design which it subsequently discovers is impossible to build. Normally, this will simply mean that the contractor is in breach, as was the case in *Greater Vancouver* and *Canadian Steel*, discussed above. Under this ICE contract, Clause 13, in providing that the contractor had no obligation to proceed if this was physically impossible, altered the usual risk allocation. As a result, it was conversely the employer in this case that wanted to establish that the contractor was free to depart from the strict letter of the design.

3.147 The approach of the court in *Turriff* followed the same logic as *Greater Vancouver* and *Canadian Steel*. The interpretation proposed by the employer was artificial. The contractor had simply signed up to undertake works that were impossible to perform.

3.148 If it is impossible to build in accordance with the design, and this is the contractor's risk, then the contractor will need to obtain the employer's consent to depart from the scope.[102] This approval may be given as a variation instruction under the contract or the employer may permit the change as a concession,[103] and this may in turn affect the contractor's entitlement to be paid for the change.[104] The employer will not normally be obliged to agree to a change to the design. However, it depends on the terms of the contract; for example, Clause 13 of the contract in the *Turiff* case placed such an obligation on the employer.[105]

3.149 If it is impossible to build in accordance with the design, and this is the employer's risk, then the contractor will need to obtain the employer's consent to a change. If the project cannot be completed without making the alteration, then the employer may be under an obligation to vary.[106]

SECTION E: BUILD RISK AND METHODOLOGY

3.150 Section C of this chapter considers the way in which a contractor may be obliged to undertake work that is additional to, or different from, that referred to in the technical documents forming the contract. This section considers how this may arise because of the contractor's obligations to build the permanent works, and the way in which the stipulated method of construction or temporary works[107] may need to be altered as a result.

3.151 This section discusses the contractor's implied duty to construct the works irrespective of the physical difficulties involved, and its obligation to alter the construction methodology in order to achieve this. Before considering this buildability obligation, it is necessary to review the differing ways in which the method of construction may be stipulated in construction contracts.

102. See Chapter 2, section A.
103. See Chapter 9, section B.
104. See Chapter 6.
105. See Chapter 7, section C.
106. See Chapter 7, section D.
107. The term 'temporary works' is typically used to describe the work that is undertaken for the sole purpose of building the end product, such as the erection of cranes and scaffolding. As such, temporary works form part of the method of construction.

The description of the build methodology in contracts

3.152 The contract may not stipulate the methodology and temporary works to be adopted. Instead, the question of how the contractor builds the described permanent works may be within the contractor's discretion. Alternatively, the technical documents may refer to a proposed methodology, but the contract may give the contractor the freedom to depart from the described method.

3.153 If the methodology and temporary works are not specified and stipulated as part of the contract works, then they have to be undertaken as a means to an end. Such work needs to be carried out in order to fulfil the contract obligation to build the permanent works.

3.154 The Court of Appeal case of *Strachan & Henshaw Ltd* v. *Stein Industrie (UK) Ltd (No. 2)*[108] demonstrates the way in which temporary works can be treated as not being part of the contract works at all. The project involved the construction of a power station at St Neots in Cambridgeshire. Strachan & Henshaw Ltd (S&H) had been employed as sub-subcontractors in order to undertake the erection, commissioning and support work of generators at the site. They employed a large number of workmen and had to provide facilities for clocking in and clocking out as well as cabins for tea breaks. These site facilities were initially installed close to the generators. However, the defendants subsequently instructed that the site facilities be moved to a location half a mile from the generators. As a consequence, S&H's labour incurred considerable additional costs as a result of lost time spent walking between the site facilities and the generators.

3.155 The variations clause allowed 'any alteration to the Works whether by way of addition, modification or omission'. The question therefore arose as to whether the instruction to move the site facilities amounted to an alteration to the works. The term 'Works' was defined as including 'work to be done by the Contractor under the Contract'. The court found that the 'work to be done by the Contractor' could not be interpreted so as to encompass the arrangements by which the contractor brought its workforce to the workplace. It found that a change to the methods of working did not amount to a change in the actual work undertaken. The court concluded that the change to the location of the site facilities could not be treated as a variation as defined by the contract.

3.156 If the contract works do not stipulate the construction method, then the way in which the contractor builds merely represents 'how' the subject matter of the contract is to be delivered. The temporary works will need to be undertaken in order for the contractor to fulfil its contract obligation of building the described permanent works.

3.157 The downside with this approach, for the employer, is that the discretion as to how to build is left to the contractor. In practice, the employer may want to exercise a certain amount of control over the building method. It may want the methodology and temporary works to be specified in the contract so that it can insist that the contractor follow an approved approach.

108. (1997) 87 BLR 52.

3.158 The temporary works or method can be described within the technical documents, such as the specification. Certain standard form contracts, such as the FIDIC Red Book 1999, separately define permanent works and temporary works, with the overall definition of project works incorporating both. Contracts will often specifically define variations to include changes to the way in which the works are undertaken.[109] The employer can therefore vary the temporary works or method where it is the contractor's responsibility as to how the works are carried out, albeit it is unlikely to have an incentive to do so.[110] Even if the temporary works and method are not a stipulated element of the scope, the employer may be entitled to direct the contractor to alter the way it is undertaking the works.[111] Where the contractor has a choice under the contract as to how it undertakes the work, an employer's instruction limiting its options will constitute a variation.[112]

3.159 The contractor may therefore be obliged to undertake the works in accordance with a particular specified methodology. It may become difficult or impossible to build the permanent works in accordance with the specified method, for example, because the site conditions are not as anticipated. The contract may expressly provide that the temporary works are the contractor's risk, or the risk event which forces the contractor to change its method of building, such as unexpected ground conditions, may be allocated under the contract. The contract may stipulate the method of construction but provide that the contractor is not responsible if that method does not achieve the desired result.[113] However, as discussed in the following paragraphs, if the risk is not expressly allocated, then the inability to construct the permanent works in accordance with the specified method will be borne by the contractor.

The contractor's buildability obligation

3.160 Unless expressly provided otherwise, the contractor has an obligation to deliver up to the employer the defined works, irrespective of how difficult the process of constructing those works may be, and irrespective of whether the employer produced the design.

3.161 The contractor's obligation to build the works is not qualified. Unless the contract expressly provides otherwise, the contractor cannot say that it attempted to build the described works but since this was not possible it should be released from its obligations. The contractor has promised to build what has been described, and a failure to do so will amount to breach of contract. This is often described as the contractor's buildability obligation.

3.162 The contractor is responsible for building what has been described, even if the employer has designed and specified the works. The scope may be described in the contract specification and drawings that the employer has produced, perhaps originally in order to invite tenders.

109. See, for example, the FIDIC Red Book 1999 under which variations include changes to the 'sequence or timing of the execution of the Works'. See *infra*, para. 5.7.

110. See *Plant Construction Plc* v. *Clive Adams Associates (No. 2)* (1998) 58 Con LR 1. The case illustrates the way that an employer may vary the temporary works, in this case the method of propping a roof which collapsed, because the employer instructed the use of inadequate props.

111. See discussion *infra*, paras. 3.191–3.195. See also Chapter 5, section B.

112. *English Industrial Estates Corp* v. *Kier Construction* (1991) 56 BLR 93.

113. See *infra*, para. 3.174.

When the contractor agrees to undertake that work for an agreed price it is promising that it can fulfil what has been described, and it will therefore be liable if it cannot achieve this. The employer cannot be taken to have given an implied warranty in relation to the buildability of the works as described in its design. It is up to the contractor to work out whether it can build what the employer has asked for and to price the work involved, or indeed not to tender if the contractor thinks that the works cannot be built.

3.163 This principle reflects the nature of any commercial bargain between buyer and seller. The seller's obligation is to supply the goods as described by the contract irrespective of the fact that the description has been drafted by the buyer. If a buyer wants a widget it may produce a specification describing the object and ask for tenders. The seller agrees that it will supply the widget for the price. In doing so, it is agreeing that it can deliver the widget as described in the buyer's specification. The buildability risk allocation simply follows the traditional commercial buyer/seller risk allocation and is typical of the approach adopted in common law jurisdictions.[114]

3.164 In *Thorn* v. *London Corporation*[115] the contractor had been employed to demolish a bridge across the Thames at Blackfriars and build a new one. The specification showed caissons being constructed which would then allow the pier foundations to be built in a dry environment. The caissons were successfully constructed. However, it turned out that the caissons could not resist the pressure of the tide and they had to be abandoned. The work in building the pier foundations had to be undertaken at low tide, which was much more costly and time-consuming. The House of Lords found that the risk of being able to build in accordance with the specified method lay with the contractor. It had agreed to undertake the work as defined in the specification, and if the method had to change, resulting in more time and money, then this was something it could not recover from the employer.

3.165 The contractor argued that the employer should be taken to have impliedly warranted that the specified caissons would withhold tidal pressures and that therefore the bridge could be built using the caissons comparatively inexpensively. The court found that, unless the employer expressly warranted that the works could be built in the manner described, the contractor took the risk. Just because the employer's engineer had produced the specification did not mean that the employer warranted that the work could be performed using the method described. In relation to the suggestion that an employer could be said to impliedly warrant the buildability of the specification, Lord Cairns stated:[116]

> '. . . if it were to be held that there is, with regard to the specification itself, an implied warranty on the part of the person who invites tenders for the contract, that the work can be done in the way and under the conditions mentioned in the specification, so that he is liable in damages if it is found that it cannot be so done, the consequences. . . would be most alarming. There would be consequences which would go to every person who, having employed an architect to prepare a plan for a house, afterwards enters into

114. See the US Supreme Court ruling in *United States* v. *Spearin* 248 US 132 (1918), which takes the same approach.
115. (1876) 1 App Cas 120.
116. *Ibid.* at 128.

a contract to have the house built according to that plan. They would go to every case in which any work was invited to be done according to a specification.'

3.166 The contractor signs up to build what has been described and therefore takes responsibility for additional work that it needs to undertake if the method has to be changed.

3.167 The case of *Bottoms* v. *Yorkshire Corp*[117] is another example of a situation where the contractor took the risk of additional temporary works. The contractor agreed to construct several miles of brick sewer in York. The method of construction involved excavating the trench, then laying down timber boards to make the environment watertight, concreting, and then completing with a brick course. The ground was much wetter and muddier than the contractor had expected. He had priced the work based on certain expectations as to the amount of timber boarding that would be required and how much work would be required to make an area watertight. In practice, much more work was required at this preparatory stage of construction. This made the work much more expensive to carry out, and as the project progressed the contractor got into serious financial difficulty. The contractor claimed that because of the ground conditions he had to undertake additional temporary works to make the ground watertight. The contractor claimed this as a variation. The court found that the employer had made no representations as to the state of the soil and therefore the contractor took the risks of constructing in the site environment as it was found. The contractor's price was for the construction of the sewer, and the extent and nature of the temporary works was the contractor's risk. As such, the contractor could not claim that the need to undertake additional temporary works was a variation.

3.168 These cases illustrate the way in which the buildability obligation results in the contractor being liable for construction difficulties arising as a result of site conditions, such as ground conditions, or tidal conditions in respect of offshore projects. Under a construction contract the contractor agrees not only to build the defined works, but to build them at the identified site. If the site conditions that are discovered are worse than anticipated, which makes construction more difficult and costly, then this is the contractor's risk. If no assurances are given by the employer regarding site conditions, then one cannot imply a qualification into the contractor's promise to build the works. Unless expressly provided otherwise, the contractor's promise to build is not subject to particular site conditions existing.

3.169 This analysis reflects the logical extension of the normal contractual relationship between buyer and seller as considered above in the context of the widget sale. The reason why this risk allocation can seem unfair in the context of construction operations is that whilst the widget is made in the seller's factory and therefore the seller is fully in charge of the build environment, on a construction project the product (i.e. the works) are being built on the buyer's site. The contractor is not necessarily fully in control of the site environment. It will often be the case that the contractor has limited knowledge of the site, and indeed knows less about it than the employer. If the contractor wants to place provisos on its ability to undertake the works in the context of the actual site environment, whether this be the ground or tidal conditions, then this will need to be expressly addressed in the contractual

117. (1892) *Hudson's Building Contracts*, 4th Edn, Vol. 2, p. 208.

risk allocation. If there are no express provisions in the contract, then the contractor takes the same type of risk as the widget seller.

3.170 Limiting the contractor's buildability risk under the contract may, of course, be sensible and economically efficient. The employer may be the party best placed to assess and limit the risk arising from site conditions. If the tendering contractors are required to take this risk, but have limited information on which to assess it, then the tender prices may end up being unrealistically high in order to take account of this uncertainty.

3.171 Whilst the above cases concern planned construction methodologies which are inadequate because they are not suitable for the site conditions, such problems do not arise for this reason alone. The contractor may not properly have reviewed the planned design described in the technical documents. For example, in *Tharsis Sulphur and Copper Co* v. *McElroy*[118] the contractor had agreed to construct girders to a specified thickness. As they cooled it became apparent that the girders were liable to warp and crack, and as a result they had to be built to an increased thickness to stop them deforming. The difficulty in constructing the girders to the specified dimensions was not driven by unexpected site conditions but arose because of inherent problems in the contract design.

3.172 When it becomes apparent that there are inadequacies with the construction method and temporary works, then it will be necessary to consider how they will be changed, or whether instead it may be more appropriate to alter the permanent works. These issues and the approval process involved are considered further in paragraphs 3.184–3.189 below.

3.173 The contractor's buildability obligation, as discussed in this section, has focused on its duties to build the design described in the contract. The contractor may be instructed to undertake new work during the project. The question then arises whether the contractor has a buildability risk in respect of that new work. The contractor might never have agreed to take buildability risk for such work had it been in the contract specification at tender stage. The question whether the contractor takes the same standard of risk for new work as it would for the original contract scope work is considered at Chapter 4, section F.

No buildability risk taken by the contractor

3.174 The parties can expressly agree a risk allocation whereby the contractor is not responsible for the stipulated method of building the works. For example, if the planned method is relatively novel and has been devised by the employer, then it may be appropriate for the contractor to take no responsibility for its suitability. Such an approach may be adopted if the works are technically complex and this is an area where the employer has particular expertise. The contract would then describe the methodology and the contractor would be responsible for ensuring that it is correctly followed. However, the contractor would not be liable if that methodology did not achieve the planned outcome.

118. (1878) 3 App Cas 1040.

3.175 The employer may be responsible for the change to the methodology because it has borne the risk in relation to the event that has caused the change to the temporary works, such as the ground conditions. Alternatively, the employer may expressly warrant the buildability of its design and methodology.[119]

3.176 Another way of altering the usual risk allocation is to provide that the contractor is required to follow the specified methodology, but if this proves impossible it has no obligation to proceed with the works. The case of *Yorkshire Water Authority* v. *Sir Alfred McAlpine & Son (Northern) Ltd*[120] related to a project to extend the Grimwith Reservoir in North Yorkshire. This involved the contractor building an outlet tunnel underneath a dam to take the flow of water into the River Dibb. The outlet tunnel was originally going to be constructed in an upstream direction. It was said that this method of construction proved impossible and instead the tunnel was built in a downstream direction.[121] The case concerned who was responsible for the change in the construction method.

3.177 The contract contained the usual provision that the contractor had to undertake the works in accordance with the contract documents, which included a method statement particularising the original downstream method. Clause 8 of the contract conditions stated that the contractor took 'full responsibility for the adequacy stability and safety of all site operations and methods of construction'. However, this provision, which is really only putting into express words the contractor's normal buildability risk, needed to be read in conjunction with Clause 13(1), which stated:

> 'Save insofar as it is legally or physically impossible the Contractor shall construct and complete the Works in strict accordance with the Contact.'

3.178 The employer argued that the method statement amounted to a form of programme (that the contractor was required to supply under Clause 14) showing how and when the works would be undertaken. If the method statement could be said to form part of the Clause 14 programme, then it would have been subject to change as the works progressed.

3.179 The court, in seeking to interpret these various provisions, took the view that Clause 8 had to be read in conjunction with Clause 13. Whilst Clause 8 did specify that the contractor had the normal risk as to its method of construction, this was subject to the impossibility proviso at Clause 13. The method statement had been included as a contract document because the employer wanted to insist on the work being undertaken in the manner it specified. It was therefore part of the works and subject to Clause 13. The judge's conclusion reads:[122]

119. In *Thorn* v. *London Corporation* (1876) 1 App Cas 120, discussed *supra,* para. 3.164, the contractor took the risk associated with the need to change the methodology because the court found that the employer gave no implied warranty in that respect. The employer could, of course, give an express warranty in relation to the proposed construction method in which case the employer would be responsible if it needed to be changed.

120. (1985) 32 BLR 114.

121. The case involved a notice of motion in relation to the decision of an arbitrator. The question whether the construction method required to be changed because, as a matter of fact, the original method was impossible, was left to the arbitrator to subsequently determine. It is assumed for the purposes of this explanation that it was impossible.

122. (1985) 32 BLR 114 at 116.

> 'In this case the [employer] could have left the programme and methods as the sole responsibility of the [contractor] under clause 14. . . The risks inherent in such a programme or method would then have been the [contractor's] throughout. Instead, they decided they wanted more control over the methods and programme than clause 14 provided. Hence. . . the method statement; hence the incorporation of the method statement into the contract imposing the obligation on the [contractor] to follow it save in so far as it was legally or physically impossible. It therefore became a specified method of construction by agreement between the parties who must be taken, in my judgment, to have had the provisions of clause 8 in mind as relevant to any programme subsequently submitted under clause 14(1). No such programme was submitted or demanded, presumably because the [employer] were content with the control over the programme afforded by the specified method statement.'

3.180 The variations clause also contained a provision that the engineer 'shall order a variation to any part of the Works that may in his opinion be necessary for the completion of the Work'. The court's conclusion was that, in the light of the fact that the works were impossible to undertake in accordance with the original methodology, which had been stipulated, then it was necessary to vary in order to ensure that the works could be completed.

3.181 A similar conclusion was reached in the case of *Turriff Ltd* v. *The Welsh National Water Development Authority and Ors*.[123] The contractor, Turriff, had been employed to build a sewer system using pre-cast concrete boxed culvert units manufactured by its subcontractor, Trocoll. When it came to undertake the work, Trocoll experienced difficulties in fabricating the units and Turriff experienced difficulties in installing them in the manner specified in the contract.

3.182 As a question of fact, HHJ Sir William Stabb QC found that the installation process was impossible on the basis of the specified method. However, the judge found that the fabrication process was not actually 'impossible' but was impossible 'on an ordinary commercial competitive basis as the parties intended'. However, even on this wider test the judge found that the works were caught by Clause 13. In other words, the contractor was not required to undertake the works (both installation and fabrication), on the basis that it was 'impossible'. This term should be read to mean impossible on an ordinary commercial basis, since this is what the parties must have intended by the wording. This interpretation of the word 'impossible' puts a very strained meaning on the provision. This case predates *Yorkshire Water*, but was not referred to in the judgment.[124]

3.183 The cases referred to above involve the physical impossibility of undertaking works. It can also be the case that there is a legal prohibition on proceeding with the works in accordance with the proscribed methodology. It may be prohibited by statute, for example on health and safety grounds, or because the construction method contravenes restrictions within

123. [1994] Const LY 122.

124. See also in this context *Holland Hannen & Cubitts (Northern) Ltd* v. *Welsh Health Technical Services Organisation* (1981) 18 BLR 80, which involves similar circumstances to *Yorkshire Water* and *Turriff*. Whilst it does not involve a detailed review of the issues, the case does consider the circumstances surrounding the incorporation of a method statement into a contract, and the contractor's obligation and entitlement to follow it.

the planning permission granted for the project. In *Havant BC* v. *South Coast Shipping Ltd*[125] the contractor was undertaking work on a beach replenishment scheme at Hayling Island. After work had commenced, a local resident obtained an injunction limiting the working hours during which the works could be undertaken. The employer was obliged to instruct a variation since the hours of working specified in the contract could no longer be maintained.

Changes required because the construction method proves inadequate

3.184 If the construction method described in the contract is inadequate, then an alternative solution will need to be found in order to deliver the permanent works. It will be necessary to consider whether the change constitutes a variation and whether the employer's approval is required.

3.185 The contractor may be obliged to change its method of working without this constituting a variation to the works. There may be no need for the contractor to obtain the employer's approval since the nature and extent of the temporary works may be wholly within the discretion of the contractor. The contractor may be obliged to alter the construction method to the extent necessary to achieve the defined permanent works. In *Bottoms* v. *Yorkshire Corp*,[126] for example, the contractor was obliged to increase the amount of timber boards in order to deal with worse than expected ground conditions.

3.186 Alternatively, the contractor may be required under the contract to follow the specified methodology such that it will need to obtain formal approval from the employer in order to make any changes. The contractor may need to get the employer's approval to change the methodology. For example, in *Thorn* v. *London Corporation*[127] the contractor obtained the engineer's approval for the change from using caissons to building at low tide.

3.187 Such approval will not necessarily need to be given as a variation instruction if the change is necessitated because of an event which is the contractor's risk, for example when the contractor is responsible for the adequacy (or otherwise) of the method of working. Typically, a concession will be sufficient and indeed preferable from the employer's perspective, in order to avoid possible liability for the cost.[128]

3.188 The employer may instead be responsible for the construction method and, as *Yorkshire Water* above illustrates, the contractor may have no obligation to proceed unless the employer agrees to a change. The employer may wish to approve the change to the methodology as a concession rather than instructing a variation, albeit this may not be acceptable to the contractor since it will not trigger payment.

125. (1998) 14 Const LJ 420.
126. (1892) *Hudson's Building Contracts*, 4th Edn, Vol. 2, p. 208.
127. (1876) 1 App Cas 120.
128. Concessions are discussed at Chapter 9, section B. The employer's potential liability in respect of changes required as a result of a contractor's risk event are discussed at Chapter 6.

3.189 Rather than altering the methodology, the best solution may be a relatively minor adjustment to the permanent works. The case of *Tharsis Sulphur and Copper Co* v. *McElroy*[129] is an example of where this occurred. The contractor had agreed to build the iron work for a calcination plant that was being constructed in Cardiff. The contractor found that it had difficulty in constructing the girders to the specified thickness required by the contract. As the metal girders cooled they were liable to warp and crack. The only solution was to increase the thickness of the girders. The contractor sought, and the engineer gave consent to, this deviation from the specification.[130] If the solution is to change the permanent works, then, as discussed in relation to changes to the methodology, it will be necessary to consider who is responsible for the need to make the change and whether it should be approved as a concession or a variation instruction.

Power of the employer to direct temporary works outside variation procedure

3.190 The contract may give the employer, its site representative, or the engineer a role in determining what temporary works should be adopted. The employer may be entitled to require that more extensive temporary works are undertaken, without this amounting to a variation.

3.191 In *Neodox Ltd* v. *The Mayor, Aldermen and Burgesses of the Borough of Swinton and Pendlebury BC*[131] the court found that the contract allowed the engineer discretion to determine what temporary works were required. Under the terms of the contract this was not a variation and therefore there was no price adjustment for the contractor for undertaking more temporary works than it expected.

3.192 The contractor had been employed to construct a network of sewers in Lancashire. Its planned working method involved excavating trenches and then using timber planks to stabilise 50 per cent of them. For the other 50 per cent the contractor planned to use a mechanical excavator to batter the sides of the trench. However, the engineer instructed the contractor, despite its strong objections at the time, to use timber on a much a higher proportion of the trenches.

3.193 As a question of fact it was found that the contractor could safely have undertaken the works using a much lower proportion of timbered trenches than the engineer required. However, the contract specifically provided that the support and securing of the trenches, and the degree to which this should be done using timber rather than other methods, had to be undertaken to the satisfaction of the engineer. The engineer was therefore given an unusually large degree of discretion in determining what temporary works would be adopted.

3.194 The court found that the contract gave the engineer the right to determine the method of working and therefore, provided that he acted honestly, which the court found he did, his stipulations as regards the temporary works did not amount to a variation or breach. The

129. (1878) 3 App Cas 1040.
130. The change was permitted as a concession rather than instructed as a variation: see Chapter 9, section B.
131. (1958) 5 BLR 34.

fact that the extent of temporary works the contractor carried out was more than it had anticipated did not represent a variation because the contractor's contractual obligation was to carry out the works, including temporary works to the extent that the engineer required. Had the contract specifically defined the obligation to timber to only 50 per cent of the trenches, then the greater level would have amounted to a variation.

3.195 This type of provision, which gives the contract administrator the discretion to determine the amount of temporary works required without this amounting to a variation, is quite unusual and it is important to recognise that the case turned on the specific clauses under review. Normally the contract administrator's powers extend simply to being able to flag to the contractor that its temporary works are inadequate because, for example, they are unsafe.

SECTION F: DESIGN RISK

3.196 Section C of this chapter considers the way in which a contractor may be obliged to undertake work that is additional to, or different from, that referred to in the technical documents forming the contract. This section considers how this need to change may arise because of the contractor's design obligations.

3.197 This section also considers the question whether additional information and requirements from an employer during the project should be treated as changes or whether they just represent further detail and particulars in relation to the contract design, and therefore are not changes at all.

The nature and extent of the contractor's design responsibility

3.198 Design and build contracts are many and varied and can place varying degrees of risk on the contractor in respect of its design work. There are two particular factors that will affect the contractor's risk. Firstly, the standard of responsibility stipulated, and secondly, the degree to which the contractor takes the risk in relation to design and data supplied by the employer. These factors are considered in turn below.

3.199 There are various standards of design responsibility that the contractor can sign up to.[132] The contractor may agree to carry out its design work to a specified standard of professionalism, such as 'reasonable skill and care'. This is the normal standard of care referred to in contracts for professionals such as engineers and architects. If such a provision is adopted, no warranty is given by the contractor as to the performance of the design itself. The designer is doing no more than agreeing that, when producing the design, it will exercise the specified standard of care. If it does exercise the required standard of professionalism when undertaking the design work, then it bears no responsibility should the design fail. In this sense, the standard of care provides no guarantee that the design will work.

132. Irrespective of the contractor's responsibility for the integrity of the design itself, a contractor will have an obligation to ensure that the design as described in the contract can be built. This is sometimes referred to as the buildability obligation and is reviewed in section E of this chapter.

3.200 The contract may instead warrant that the works will perform to a certain standard. This is a fundamentally different approach because, instead of the test relating to the standard of professionalism exercised by the designer, it relates to the performance of the works themselves. Such a performance-based test is preferable for an employer because it guarantees the design by reference to the completed product.

3.201 The most common performance-orientated standard used in construction contracts is to require that the works are fit for purpose. This can be an uncertain requirement if the purpose of the works is unclear. The contract can provide more certainty by defining what the purpose is, and what constitutes fitness. As with any contractual solution which involves greater prescription, there is more certainty if the requirements are defined in this way, but equally, the employer's position is only protected if they are defined clearly and accurately.

3.202 Rather than defining the purpose, the contract may go to the next level and just specify performance criteria that the works must achieve; for example, that a power plant achieves a specified output.[133] By defining performance with reference to specific criteria rather than vague notions of 'fitness' or 'suitability', the employer is better able to describe what must be delivered. On the other hand, it is crucially important that those objective criteria are accurately defined in the contract. If the performance criteria are not accurately defined, then an employer may need to fall back on such general tests as suitability.

3.203 Performance criteria can be linked to tests that must be passed in order to establish that the design requirements have been achieved.[134] Alternatively, the design standard and the passing of tests may amount to different and separate criteria, such that the contractor may have to pass both.

3.204 The other factor that will significantly influence the contractor's liability for design concerns the responsibility it takes for information provided in the contract.

3.205 As part of the design and build process, the employer will need to provide information as to what it wants. Those objectives are normally included within the contract and referred to as the employer's requirements. Those requirements will set out the criteria to be achieved, such as performance stipulations, or the description of the purpose to which the works will be used, or may set out an initial outline design.

3.206 The contractor will base its design, in part, on information that the employer has supplied within those employer's requirements. The question then arises whether the employer is responsible for inaccuracies in that information. Design and build contracts take varying approaches as to the allocation of risk and responsibility in relation to the accuracy of this information. This will affect the severity of the contractor's design responsibility.

133. Specified performance criteria may, of course, be linked with a fitness for purpose obligation, by defining in detail what the purposes of the works are.

134. If the passing of tests is treated under the contract as establishing that the design standard (e.g. fitness for purpose) has been achieved, then ensuring that the tests are properly and accurately defined and implemented is essential.

3.207 There are two main categories of information that may be provided by the employer and which the contractor may rely on in producing its design. Firstly, the outline or indicative design, which is provided by the employer at tender stage in order to give the contractor information as to what is required. The contractor will then develop this outline design during the tender process into a more detailed design to be included as its contract proposals. Secondly, the employer may provide information and data about the site that the contractor may rely upon in designing the works; for example, concerning ground conditions.

3.208 The degree to which design and build contracts shift responsibility for the accuracy of this information on to the contractor differ widely.

3.209 Certain contracts, such as the FIDIC Silver Book 1999, on one side of the spectrum, seek to ensure that the employer takes minimal responsibility by stating that the contractor has verified the accuracy of the information provided to it.[135] Other contracts stipulate that the employer takes responsibility for the information and design it has provided and on which the contractor has based its design.[136]

3.210 A compromise is to provide that the contractor may point out errors in the employer's design and data. The contract may then incorporate a mechanism to allow these errors to be corrected, with the contractor taking responsibility.[137]

3.211 The contractor's design responsibility for varied and extra work that is instructed by the employer during the course of the project is less straightforward. The contractor may be ordered to revise the works in such a way, and to such a design, that it would never have taken responsibility for had this been presented to it at tender stage. The question whether the contractor takes the same level design risk for new work as it would for the original contract scope work is considered at Chapter 4, section F.

135. Clause 5.1 provides that the contractor is deemed to have scrutinised the employer's requirements and is responsible for the accuracy of information in them (including design criteria and calculations). Whilst the employer is not responsible for errors, inaccuracies or incompleteness in respect of the data, these provisions are subject to overriding employer responsibility in respect of information provided which it is not possible for the contractor to verify.

136. See, for example, see the JCT Design and Build Contract 2011. Clause 2.1 states that the contractor shall 'complete the design' for the works. In *Co-operative Insurance Society* v. *Henry Boot Scotland Ltd* [2002] EWHC 1270 (TCC), this provision, under a previous JCT Design and Build Contract version, had been interpreted as meaning that the contractor had to examine the design as it was set out in the employer's requirements, and then take responsibility for it when it came to complete the design. This interpretation came as a surprise to many commentators and in the next edition an additional clause was added to clarify the position. Clause 2.11 of the 2011 contract states that the contractor is not responsible for the contents of the Employer's Requirements or for verifying the accuracy of information contained therein. See also clause GC10.1 of the ENAA form, under which the employer warrants to the contractor the 'correctness and exactitude' of information and data supplied.

137. See section H of this chapter.

Changes required because of inadequate design

3.212 If the design is inadequate and needs to be changed, then it will be necessary to consider who is responsible for it,[138] whether it is necessary for the employer to approve the change, and whether a variation should be instructed.

3.213 If the design failure is one for which the contractor is responsible, then it may be that the adjustment that is required does not constitute a variation. A design and build contract will often provide that, to the extent that the contractor's proposals do not achieve the specified design standard, such as the criteria in the employer's requirements, the contractor is required to undertake additional or changed works. The contractor will, therefore, be obliged to undertake work that is additional to, or different from, the works described in the specification and drawings, without this amounting to a variation.[139]

3.214 The contractor's obligations may, instead, be such that a change to the scope is required. It may have promised to deliver a specified product that fails to comply with the necessary design standard. For example, the contractor may have agreed to construct a roof to a particular design whilst also giving a fitness for purpose guarantee in respect of that work. If the roof leaks, then it will be in breach of its design obligation and will need to get the employer's consent to alter the roof design.[140] The change could be instructed as a variation. However, the employer may instead decide simply to allow the contractor to make the change as a concession.[141] This will avoid the possibility that the contractor can seek to claim payment for the variation to the scope.[142] However, if the contractor considers that the change was required because of a design failing for which it was not responsible, then the contractor may insist that a variation is instructed before agreeing to undertake the works.[143] If the employer refuses to agree to this, then there is a danger that there will be an impasse and the works will not progress, but if the contractor simply proceeds, then it risks not being paid for extra work even if it was not responsible for the variation.[144]

138. The design may fail but the contractor may not be liable despite having design responsibility – for example, because it has agreed to only a reasonable skill and care duty, which the contractor can be shown to have achieved. The employer will then be responsible for the design failing.

139. Section C discusses the contractor's obligation to undertake works that are additional to those described in the technical documents. See, in particular, *Davy Offshore* v. *Emerald Field Contracting Ltd* (1991) 55 BLR 1, as discussed at para. 3.58 of that section, which is an example of such a situation where the contractor's obligation to achieve the employer's requirements meant that it had to alter the work otherwise set down in the specification. The scope that the contractor had to undertake required it to depart from the description of the works in the specification if this was necessary in order to achieve the project objectives in the employer's requirements.

140. Whether the contract obligations operate in this way is a matter of contract interpretation. Because of the use of 'priority of documents' clauses, such an outcome is relatively uncommon. In this type of situation the contractor has effectively promised to provide a product that is impossible to supply. See section D of this chapter, which discusses this type of contractual arrangement and the cases *Greater Vancouver Water District* v. *North American Pipe & Steel Ltd* [2012] BCCA 337 and *Steel Co of Canada* v. *Willand Management* [1966] SCR 746, which illustrate this.

141. As to concessions, see Chapter 9, section B.

142. See Chapter 6 and the case *Simplex Concrete Piles Ltd* v. *The Mayor, Alderman and Councillors of the Metropolitan Borough of St Pancras* (1958) 14 BLR 80.

143. Assessing the reason why the change is required can be complex and controversial. See Chapter 6, section C.

144. See Chapter 2, sections B and C.

3.215 It can be the case that whilst the design is inadequate this does not affect the contractor's ability to build. For example, a roof may allow limited water ingress and, while this may not be ideal, there may be no reason why it cannot be constructed. In the absence of an instruction to the contrary, the contractor may simply proceed in accordance with the inadequate design. A build only contractor is not obliged to correct the employer's inadequate design if it is not instructed to, even though it may be clear that this will result in a patently inadequate end product.[145]

3.216 In certain circumstances the inadequacy of the design may be such that the works simply cannot proceed unless the design is changed. It may otherwise be physically impossible to construct the project or it may be unlawful to proceed, for example because of safety issues. The employer may be prepared to permit the contractor to depart from the contract scope as a concession.[146] However, this may be insufficient for the contractor because it will not be entitled to be paid unless a variation is formally instructed. If the contractor will not proceed without the instruction, then an impasse can arise on the project.[147] In such circumstances the employer may be under a duty to vary, so as to allow the contractor to proceed.[148]

3.217 The difficulty with the design may arise because of an inaccuracy with the site data contained in the employer's requirements.[149] If the employer has warranted the accuracy of such data, then it will be in breach. The employer may seek to correct this by varying the employer's requirements, by issuing revised and corrected data. If the employer does not formally correct the data, then the contractor's claim may be for breach of contract because of inaccurate site data or under a clause allowing additional payment as a result of unexpected site conditions.[150] If the employer's requirements are changed by a variation instruction, the contractor's right to payment under the valuation clause is likely to be similar to a claim arising from the employer's site data being inaccurate.

Instruction procedure and the identification of an appropriate solution

3.218 Under a design and build contract, the employer will typically instruct a change to the works by altering the employer's requirements.[151] The contractor will then be required to redesign the scope to align with the change to the project criteria.

145. There are provisos to this general principle. A build only contractor may nonetheless have obligations as to the satisfactory quality of the product supplied irrespective of the fact that the employer has specified it, see *Young & Marten Ltd* v. *McManus Childs* (1969) 1A.C. 454. Or, the contractor may be under an obligation to warn the employer that its design is inadequate in certain limited circumstances. Only relatively obvious design deficiencies will give rise to this obligation to warn. See, for example, *Equitable Debenture Assets Corporation Ltd* v. *Moss (William) Group Ltd* (1984) 2 Con LR 1 and *Edward Lindenberg* v. *Joe Canning* (1992) 62 BLR 147.

146. See Chapter 9, section B.

147. See Chapter 2, section C.

148. See Chapter 7, section B.

149. For example, the employer's requirements may include information about the location of underground services which proves inaccurate.

150. For example, see ICC Measurement Contract 2011, Clause 12, in relation to adverse physical conditions. See Chapter 9, section H.

151. The contract can provide that the employer is entitled to vary the works directly, rather than just the employer's requirements. See *Simplex Concrete Piles Ltd* v. *The Mayor, Alderman and Councillors of the Metropolitan Borough of St Pancras* (1958) 14 BLR 80 as an example of a contract which allowed direct changes to the works.

3.219 The alteration of the employer's requirements, as a way of instructing change, amounts to an approach fundamentally different from that adopted under a build-only contract where the employer directs a variation to the specified scope itself. It is an approach that maintains the division of responsibility between the parties, whereby the contractor designs by reference to project criteria defined by the employer. Such an approach may help to avoid a situation where the contractor can claim that it has no design responsibility for the additional or changed works on the basis that it did not design them, because the revised design was imposed by the employer.[152] As such, this may also help prevent situations arising in which it is unclear who has taken design responsibility for the various elements of the works.

3.220 Since a change to the employer's requirements will normally involve only an alteration to the project criteria, rather than a direct instruction to change the described works, it will not necessarily require the contractor to alter the design.[153] The original design may already fulfil the new criteria. For example, the employer's requirements may contain stipulated output criteria for the facility. Whilst the employer may increase the required outputs, the contractor's original design may have sufficient tolerance that it can achieve the more stringent criteria without having to be altered. In practice, this is unlikely to happen because the change to the employer's requirements will typically be instructed precisely because a change to the contractor's design is required.

3.221 The parties may disagree as to the appropriate solution which needs to be adopted in order to implement the employer's change to the performance criteria. The employer may consider that the contractor's solution is over-engineered and is therefore unnecessarily expensive and/or will cause unnecessary critical delay to the project. Ideally, the parties will resolve their disagreement as to the design solution that should be adopted, before it is implemented.

3.222 If agreement cannot be reached and the contractor implements its solution, then the employer may seek to ensure that the variation is valued by reference to its own, less expensive option. The correct valuation of the change that the employer has ordered will normally be judged by reference to the design solution that is appropriate in the circumstances. The contractor will not be entitled to be paid for the additional costs of an over-engineered design.

3.223 For these reasons it is typically the case that design and build contracts make much greater use of procedures that allow the employer to ask the contractor for revised design proposals,[154] or processes allowing the contractor to instigate value engineering changes.[155] This type of procedure operates such that the change and its implications are negotiated and agreed rather than being unilaterally instructed. For the employer, there is considerable benefit in having the scope of the variation negotiated in advance, with agreement between the parties on the changes to the programme and completion date, as well as all financial

152. See Chapter 4, section F, where the contractor's design responsibility for additional or changed work is considered in more detail.

153. As noted later in this section, whilst employer's requirements are intended to be drafted so as to define what the employer requires from the works, they are not always produced in accordance with this philosophy. An employer may be entitled under a design and build contract to instruct a change to the design directly, rather than just changing performance criteria or requirements.

154. See, for example, FIDIC Silver Book 1999, Clause 13.3.

155. See, for example, *ibid.*, Clause 13.2.

implications.[156] This is particularly the case where the change is instigated by altering performance criteria in the employer's requirements, because the impact on the design (and therefore cost and time) is more uncertain in comparison to changes directly to the work scope under a traditional contract.

Design development and approval of design details

3.224 The process of design development involves increasing levels of detail and particularisation. As the contractor develops the design in more detail, it will often need to obtain clarification from the employer as to what is required. The contractor may need greater particularisation from the employer as to what it requires. The project criteria as already set out in the employer's requirements will be further particularised. Such further details do not necessarily represent a change to the criteria as set out in the employer's requirements. They can simply represent clarification as to requirements. However, the divide between what amounts to further particularisation and what amounts to change can be a fine one.[157]

3.225 It may also be the case that the contract expressly contemplates that the employer will supply additional, or even changed details to be incorporated into the employer's requirements after project commencement. For example, the design process may be organised such that the employer will provide additional information in accordance with an agreed programme, and the contractor will develop the design to take this additional information into account. Clearly, this involves risk for the contractor because it may be signing up to a lump sum price in circumstances where the criteria that its design needs to fulfil are fluid.

3.226 These issues concerning design development and the employer's entitlement to make late changes to its requirements were considered by the Court of Appeal in *Skanska Construction UK Limited* v. *Egger (Barony) Limited (No. 2)*.[158] In this case the contractor's claim for payment was rejected, since the alleged changes to the employer's requirements were considered to be within the design development process.

3.227 Egger was a company that produced chipboard and other timber-based products and employed Skanska to build a factory for it in East Ayrshire. Egger's other contractors were to supply and install the specialist process plant for the factory. Skanska was to undertake design development, management and construction.

3.228 Skanska was required to complete the design for the works by reference to the employer's requirements. Clause 2(1) of the contract stated that it would carry out and complete the works '. . . and for that purpose shall carry out and complete the design for the works. . . to be used in the construction of the works so far as not described and stated in the Employer's Requirements or Contractor's Proposals'.

156. See Chapter 8, section D.
157. See *infra*, para. 3.235.
158. [2002] All ER (D) 271.

3.229 Clause 1.1.1 of the Employer's Requirements stated that:

> 'The Contractor is required to complete the design of the work outlined on the drawings listed below and described in the "scope of the works" in full accordance with the Employer's Requirements whether stated herein or by reference to other documents with the object of providing a new chipboard manufacturing facility, fully functional, complete with all described external works, services and utilities.'

3.230 The Employer's Requirements went on to state, at Clause 1.16.1, that:

> 'The Contractor will receive final process plant foundation drawings from the Employer no later than the dates set out below. . . Zone B 1st May 1997.'

3.231 Skanska claimed that the employer had made changes to the Employer's Requirements, and that this constituted a variation under the terms of Clause 12(1), which read:

> 'The term "change in the Employer's Requirements" or "change" means a change in the Employer's Requirements which makes necessary the alteration or modification of the design, quality or quantity of the works as described by or referred to in the Employer's Requirements or in the Contractor's Proposals, otherwise than such as may be reasonably necessary for the purposes of rectification pursuant to cl 7(4), including:
>
> (a) the addition, omission or substitution of any work;
>
> (b) the alteration of the kind of standard of any of the materials or goods to be used in the works.'

3.232 Therefore, whilst changes to the employer's requirements were said to constitute variations, the other provisions quoted above contemplated that the contractor would develop the design taking into account further information on drawings to be received at a later stage.

3.233 Skanska claimed that the contract did not require it to provide any steelwork for the process plant installed in the Resin Blender and Glue Kitchen areas. It claimed that the tender drawings on which its price was based did not make reference to this work. Subsequently, on 15 April 1997, the employer sent Skanska a revised site layout drawing which made clear that steelwork in the Resin Blender and Glue Kitchen areas would be required. Skanska claimed that this was a change to the employer's requirements and therefore a variation.

3.234 The question whether the 15 April 1997 site layout drawing amounted to a variation to the employer's requirements turned on two separate issues.

3.235 Firstly, the employer successfully argued at trial that the 15 April drawing did not amount to a change to the requirements for the work as provided on earlier drawings, but simply additional clarification. Skanska's tender had been based on a package of information that had included a drawing that the employer had provided on 5 March 1997. The trial judge had been satisfied that the 5 March drawing did show a need for some process steelwork in the Resin Blender and Glue Kitchen. He found that the 15 April revised layout drawing showed

additional detail but that this did not represent a change. After all, the contractor was under an obligation to develop the design based on the tender drawings. In this type of situation it is a question of determining whether the information that the employer has provided is sufficient to show the contractor what is required as part of its design development work. The contractor is agreeing to develop the design based on what may be a relatively general description of the works. When the employer adds to the employer's requirements at a later stage, then the particulars may simply amount to additional information which develops what was provided before. As such, this type of additional information does not constitute a change to the design and is not a variation under the contract. The Court of Appeal judgment concluded that on this type of point a great deal turns on a detailed analysis of the work and drawings. Lawrence Collins J stated:[159]

> 'I accept the submission for Egger that the trial judge in a case of this kind is uniquely well-placed to decide on which side of the line an instruction falls, and that it is implicit in the relevant section of the judgment that he was deciding that there had been no change.'

3.236 It is very difficult to lay down hard and fast rules as to the approach a tribunal may take on this type of issue concerning whether later details amount to further particularisation or a change to requirements. In certain situations where the analysis turns on technical details it may be appropriate to consider recourse to expert forensic evidence.

3.237 The second issue in the *Skanska Construction* case on which the entitlement to the variation turned was whether the employer's requirements should be interpreted as including the 15 April layout drawing.

3.238 The trial judge had found that this drawing formed part of the employer's requirements because Clause 1.16.1 had contemplated that 'final process plant foundation drawings' could be provided by the employer up until 1 May 1997. These drawings would provide details of the loadings required for the process plant to be installed in the Resin Blender and Glue Kitchen. This would then have an impact on steelwork design. The fact that the employer had warned Skanska, via Clause 1.16.1, that this loading information might not be provided until 1 May 1997, meant that the contractor should be treated as having taken the risk of any additional work required by such later details.

3.239 The employer was therefore at liberty to add to, and perfect, the employer's requirements up until that stage, and this 'was part and parcel of the risk that Skanska accepted'. The Court of Appeal supported and confirmed the trial judge's conclusion.

3.240 Many design and build contracts require the contractor to submit its designs to the employer for review or approval.[160] Such procedures normally allow the employer to point out to the contractor where the designs fall short of the employer's requirements, and to require adjustments. The employer's power to insist on alterations to drawings via this process is

159. *Ibid.* at para. 72.
160. See, for example, ICC Design and Construct Contract 2011, Clause 6(2).

limited to ensuring that the contractor has followed the contractual requirements in respect of the design that the contractor was, in any event, required to follow.

3.241 To the extent that the employer seeks to insist that the contractor changes the drawings, in a way that involves an alteration outside of the criteria set down in the employer's requirements, then this will amount to a variation.[161]

3.242 The employer may seek to insist on a change to the drawings, even though the contractor's drawing complies with the employer's requirements. The courts have found that an employer's instruction that restricts the contractor's options as to how it can build will constitute a variation.[162] In any event, many clauses of this type entitle the employer to insist that the contractor changes its drawings only where the contractor's proposed drawing does not comply with the employer's requirements. As such, the employer cannot limit the contractor's options by insisting that it adopts the employer's preferred solution.[163] The employer's ongoing requirements for more documents and design details, beyond those envisaged by such a provision, may be treated as a variation.[164]

Importance of correctly drafted employer's requirements

3.243 It is important that the technical schedules to a construction contract are prepared with a careful eye on how they operate in the context of the contract conditions. This is particularly so under a design and build contract because the contract conditions provide for a relatively sophisticated interplay between the different documents.

3.244 The operation of the technical schedules is relatively straightforward under a build-only contract. Under such a contract, the contractor has to follow the works description set out in the specification and drawings, subject to the possibility that it may be required to undertake additional work because of the contract risk allocation.

3.245 As we see in this section, under a design and build contract the relationship between the employer's requirements and the documents describing the work in more detail, such as the drawings and specification, is more complex. Such complexity introduces the risk that, if the technical documents are not properly prepared, the contract obligations will not operate as planned.

161. The employer's order to change drawings may amount to an instruction in accordance with the formal contract procedure rather than being an approval or comment on the contractor's designs. See Chapter 8, section B.

162. *English Industrial Estates* v. *Kier Construction* (1991) 56 BLR 93, QBD.

163. See, for example, the FIDIC Silver Book 1999 provisions, at Clause 5.2, which allows the employer to give notice of a necessary drawing change where the contractor's document '. . . fails. . . to comply with the Contract'.

164. For example, in the context of the Yellow Book 1999, the FIDIC guide to its contracts, in explaining Clause 5.2 (which allows the employer to comment on and require changes to drawings so as to comply with the Employer's Requirements), states: 'The penultimate paragraph of [the Yellow Book Clause] 5.2 empowers the Engineer to instruct further Contractor's Documents. If he requires further Contractor's Documents, and they are not within the scope of the Contractor's Documents which the Contractor is required to submit to the Engineer under the Contract, the instruction would usually constitute a Variation.'

3.246 For example, employer's requirements may be prepared for the tender process, setting out an indicative design. The successful contractor may identify problems with this outline design and propose a more effective solution. If the employer's requirements are incorporated into the contract unamended, issues may arise as to what the contract obliges the contractor to build. The contract is likely to state that the contractor is required to build in accordance with its proposals, but only to the extent that they are compliant with the employer's requirements. The contract may provide that, where there is a discrepancy, the employer's requirements take priority. This may mean that the contractor's obligation is to build by reference to the employer's original inadequate outline, rather than the contractor's solution as favoured by both parties.

3.247 As discussed earlier, the contractual risk allocation may be such that the employer retains responsibility for design information supplied in the employer's requirements. Under such contracts, the employer will reduce its risk significantly if it provides limited information, restricted to descriptions of what it wants the project to achieve, rather than detailed and developed design proposals.

SECTION G: DEEMED VARIATIONS

3.248 A deemed variation involves an adjustment to the work that the contractor is required to build under the terms of the contract. Rather than this change being instructed by the employer, the variation is deemed to have been instructed as a result of an event, or arising because of an inconsistency between documents. These two types of deemed variation are considered below.

Deemed variations triggered by an event

3.249 Deeming a variation to occur on the occurrence of a specified event is a means of placing the risk with the employer whilst circumventing the need for the employer to issue an instruction.

3.250 A typical risk to be treated in this way is the need for the design to be changed as a result of statutory regulation. For example, JCT Standard Form,[165] Clause 2.17.2, provides that where there is a change in the 'Statutory Requirements' after the 'Base Date' which necessitates a change to part of the work which is the contractor's responsibility, then 'such alteration or modification shall be treated as an instruction requiring a Variation of the Employer's Requirements'. Another example, under the same contract, arises where '. . . emergency compliance with the Statutory Requirements necessitates the Contractor supplying materials and/or executing work before receiving instructions'.[166]

3.251 Even though the employer has not instructed the change, the contract requires the contractor to instigate a suitable alteration to the design in order to ensure that the works comply

165. With Quantities Contrast 2011.
166. See Clause 2.18.1.

with the statutory change. The contractor will also be paid extra, and potentially get more time to undertake the works if that event occurs. In practice, therefore, the change amounts to a variation instructed by the employer without the need for the employer to issue an instruction.

3.252 The risk associated with such a change can be taken by the employer or the contractor. By treating the change required by the event as a deemed variation, the risk associated with it is placed on the employer, who pays for the change that is required. Because the variation is deemed instructed once the trigger event has occurred, this avoids the need for the employer to actually issue an instruction. Were an instruction necessary, and if the employer refused to issue it, then an impasse might occur. The contractor might refuse to undertake the work without an instruction since the change had not been approved, and therefore the contractor would have no entitlement to be paid.[167]

3.253 It may be that the parties disagree as to whether the trigger event has occurred or whether the event is the cause of the change that is required. Using the example of the statutory change referred to earlier, the parties may disagree as to the applicability of particular legislation in relation to their project, and whether it is necessary to vary the scope of work in order to comply with the law. Alternatively, it may be alleged that the contractor's design was inadequate anyway and would have had to be changed irrespective of the statutory development.

Deemed variations to resolve discrepancies

3.254 Contracts will sometimes treat work as a deemed variation as a way of dealing with a discrepancy between contract documents. This is principally a means of construing the scope of works, placing the risk of inconsistency on the employer.

3.255 This process of construing the various descriptions of the scope contained in the contract involves assessing what works the contractor has signed up to undertake. The contract may contain provisions to assist in its interpretation.[168]

3.256 Dealing with discrepancies by way of deemed variation is somewhat different from the usual process of interpreting the contract scope. This is because it results in changes to the scope of works from that which the contractor would otherwise be required to undertake for the contract price. The procedure is such that the deemed variation process changes the work and compensates the contractor for having to undertake work different from that which was tendered.

3.257 For example, under the JCT Standard Form Contract With Quantities there is a deemed variation in order to correct discrepancies between the scope of work shown on the drawings and that detailed in the bills of quantity.[169] This approach is taken because under this form of contract the employer has prepared the drawings, and is also responsible for preparing

167. Such impasses are discussed in Chapter 2, section C.
168. See section H of this chapter.
169. See Clause 2.14.

the quantities take-off from the drawings, which is then shown in the bills. The contractor prices the work by reference to the bill of quantities. Therefore, to the extent that the employer has not included work contained on the expected drawings in the bill of quantities, the contractor's price should not be deemed to include it.

3.258 Whilst the contractor's price includes only the work on the bill, the scheme that the employer wants the contractor to deliver is, of course, that shown on the drawings. This contract therefore provides that a variation is deemed to occur so that the product delivered is that shown on the drawings. An additional payment is due over and above the price in the bill, which otherwise records the contract price.

3.259 The approach of deeming variations may therefore be used where the adjustment to deal with a discrepancy between contract documents is not subject to the employer making a decision about what work it requires.[170] If there is a discrepancy between two technical descriptions, either one of which could be correct, then the employer will need to decide which of the two it prefers.[171] It is appropriate only where it is the employer that takes the risk of the discrepancy and it is necessary that the discrepancy is corrected.

SECTION H: CONTRACT PROCEDURES TO RESOLVE INCONSISTENCIES

3.260 If there are ambiguities in the description of the works, there will be uncertainty as to what the contractor should build. Provisions which allow the employer, or its contract administrator, to resolve discrepancies can be a quick and practical way of dealing with this problem.[172] This section considers some of the features of these provisions with reference to clauses in standard form contracts.

3.261 One issue that arises with such provisions is whether they give the employer, or its contract administrator, the authority to resolve any discrepancy between any two provisions, or whether the power is limited to resolving only those discrepancies that exist if the documents cannot be clearly construed by applying the usual principles of interpretation.

3.262 To take an example using the JCT Design and Build Contract 2011. Clause 2.13.1 provides that the contractor should give notice to the employer of any discrepancies it becomes aware of between and within the technical documents describing the scope of works. Where the discrepancy identified is within the contractor's proposals, then the employer may effectively choose between the two discrepant items, at no extra cost, under Clause 2.14.1:

170. For example, see JCT Design and Build Contract 2011, Clause 2.10.1, whereby a variation is deemed if the description of the site boundaries in the documents supplied by the employer contains an error.

171. This type of discrepancy is typically dealt with by the contractor pointing out the inconsistency and the employer making an election. See section H of this chapter.

172. There may be no inconsistency, because contradictions between contract documents may automatically result in variations being deemed to have been instructed under the contract. See section G of this chapter. The JCT suite of contracts, in particular, uses the concept of a deemed variation to resolve the problem of inconsistencies between technical documents in many instances; see Clauses 2.13–2.18 of the JCT Standard Building Contract 2011.

> 'Where the discrepancy or divergence to be notified under clause 2.13 is within the Contractor's Proposals, the Contractor shall notify the Employer of his proposed amendment to remove it and (subject to compliance with Statutory Requirements) the Employer shall decide between the discrepant items or otherwise may accept the Contractor's proposed amendment and the Contractor shall be obliged to comply with the decision or acceptance by the Employer without cost to the Employer.'

3.263 Contradictions regularly appear in specifications and drawings. Where differences arise, the usual rules of interpretation will be applied to determine what takes precedence. For example, suppose the contractor's proposals contain a specification for the plumbing of a house, referring to both copper and plastic pipes. The section of the specification that principally deals with the piping system to be installed comprehensively refers to plastic pipes. However, a separate section of the specification that deals with the locations and routing of the pipes in the house tangentially refers to copper on one occasion. Applying the principles of interpretation, it is clear that plastic pipes are intended to be used. However, strictly speaking, there is a discrepancy within the specification forming the contractor's proposals.

3.264 In considering this example of discrepancy in the context of Clause 2.14.1, it would seem entirely inappropriate if it allowed the employer to opt for copper as opposed to plastic pipes. The clause should perhaps be treated as applying only where there is a discrepancy that cannot be resolved via the normal application of the rules of interpretation.[173]

3.265 However, if Clause 2.14.1 applied only to discrepancies which the normal rules of interpretation could not resolve, the clause would apply in very few situations. Where there is a disagreement about interpretation, both parties may construe the provisions differently, but both will typically consider that the rules of interpretation can be used to resolve the apparent inconsistency, albeit to their advantage. If the dispute is referred to a tribunal, then it will typically resolve matters by applying the principles of contract interpretation, as discussed in section B of this chapter. This will not be the case where the discrepancy is such that the technical scope defines works which it will be physically impossible for the contractor to deliver, and so, arguably, this type of provision is intended to apply only in such situations.[174]

3.266 The process under Clause 2.14.1 is triggered when the contractor gives notice, which it is obliged to do whenever it becomes aware of a discrepancy. In the light of the above example, it can sometimes be unclear what type of discrepancy the contractor is obliged to report.

3.267 It is also important to consider the employer's discretion in making a decision under the clause. There is nothing in Clause 2.14.1 to suggest that the employer is required to choose between the discrepant items by applying the rules of contract interpretation. It appears to have an absolute discretion simply to make a choice.

3.268 If the employer is empowered to make an unfettered decision on any reported discrepancy, then it may be against the contractor's own interests to report differences within its own

173. See section B of this chapter.
174. See section D of this chapter which analyses contract provisions of this nature.

contractor's proposals. After all, this can only work against it. Whilst the contractor is under a positive obligation to report discrepancies, as discussed above, it is unclear what qualifies as a discrepancy under the clause.

3.269 The position is different in respect of other discrepancies that the contractor may report to the employer under these JCT provisions, since others result in a change for which the contractor is paid extra.

3.270 The following provision is from ICC Design and Construct Contract 2011, Clause 5(1):

> '(a) The several documents forming the Contract are to be taken as mutually explanatory of one another.
>
> (b) If in the light of the several documents forming the Contract there remain ambiguities or discrepancies between the Employer's Requirements and the Contractor's Submission the Employer's Requirements shall prevail.
>
> (c) (i) Any ambiguities or discrepancies within the Employer's Requirements shall be explained and adjusted by the Employer's Representative who shall thereupon issue to the Contractor appropriate instructions in writing.
>
> (ii) Should such instructions involve the Contractor in delay or disrupt his arrangements or methods of construction so as to cause him to incur cost beyond that reasonably to have been foreseen by an experienced contractor at the time of the award of the Contract then the Employer's Representative shall take such delay into account in determining any extension of time. . . and the Contractor shall. . . be paid in accordance with Clause 60 the amount of such cost as may be reasonable. . .
>
> (d) Any ambiguities or discrepancies within the Contractor's Submission shall be resolved at the Contractor's expense.'

3.271 Under Sub-clause (c)(i), the Employer's Representative is required to explain and adjust ambiguities and discrepancies within the Employer's Requirements. Contrary to the JCT provision discussed above, this clause does not appear to indicate that this is a power to be exercised by one party in its absolute discretion. If the Employer's Representative has to explain and adjust such ambiguities, there would seem to be no objective way of undertaking such an analysis unless it was in accordance with the usual rules of contract interpretation.[175] Taking the pipe material example above, the Employer's Representative would not be entitled to choose the copper pipe on the basis that it preferred it, because it should be seeking to conduct an objective process.[176]

3.272 The clause provides, under (c)(ii), that the contractor should be reimbursed for the cost of complying with instructions issued to deal with discrepancies within the Employer's

175. See section B of this chapter.

176. However, note that the exercise by the Employer's Representative of its functions under Clause 5 is not one of the provisions caught by the impartiality proviso under Clause 2(6) of the contract.

Requirements. Contrary to the JCT clause above, the contractor will be paid extra as a result of an instruction. However, it may be questioned as to how such an instruction would lead to the contractor actually experiencing delay or additional cost.

3.273 After all, if the discrepancy within the Employer's Requirements is resolved in accordance with the usual rules of contract interpretation, then the contractor's obligation to work in accordance with the Employer's Requirements will not have changed. The contractor's obligations will change, so as to justify time and money, only if the Employer's Representative asks the contractor to comply with a provision in the Requirements which it would not otherwise be bound to follow – using the above example, if the Employer's Representative stipulated that copper pipe be installed rather than plastic. But if the purpose of this clause is to require the Employer's Representative to objectively interpret the provisions, rather than make an election in its discretion, this situation would not arise.

3.274 The provision could be read as requiring the Employer's Representative to objectively interpret the contract, with the right to extra time and money applying only where the discrepancy in the Requirements is such that it obliges the contractor to build something that cannot be constructed.[177]

3.275 The FIDIC Yellow Book 1999 contains, at Clause 1.5, a priority of documents list for the purposes of interpretation, which states that, 'If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction to the Contractor'. For the same reasons discussed above in relation to the ICC contract provision, it would seem that the intention is for the engineer to deal with any discrepancy objectively, by applying principles of contract interpretation, taking into account the document prioritisation list set out in the clause.

3.276 Clause 5.1 of the FIDIC Yellow Book 1999 goes on to deal with the resolution of errors in the Employer's Requirements. As is the case with most design and build contracts, the contractor is required to design in accordance with the Employer's Requirements, which take precedence, in the event of discrepancy, over its own proposals for undertaking the works.[178] The contractor has an opportunity to identify errors in the Employer's Requirements at the start of the project:[179]

> '. . . the Contractor shall scrutinise the Employer's Requirements (including design criteria and calculations, if any). . .Within the [defined period immediately following commencement]. . . the Contractor shall give notice to the Engineer of any error, fault or other defect found in the Employer's Requirements. . .
>
> After receiving this notice, the Engineer shall determine whether Clause 13 [Variations and Adjustments] shall be applied, and shall give notice to the Contractor accordingly. If and to the extent that (taking account of cost and time) an experienced contractor

177. See section D of this chapter which discusses this type of provision.

178. See section F of this chapter, as regards the usual provisions for document priority in design and build contracts.

179. Clause 5.1, third and fourth paras.

exercising due care would have discovered the error, fault or other defect when examining the Site and the Employer's Requirements before submitting the Tender, the Time for Completion shall not be extended and the Contract Price shall not be adjusted.'

3.277 The error will therefore be corrected by the engineer and, depending on whether the contractor should have discovered it at tender stage, it may or may not be entitled to additional money and time.

3.278 It would seem that the errors referred to in Clause 5.1 do not include ambiguities, as these are covered by Clause 1.5. An error could potentially cover many different things. Because of the references to the contractor discovering the error, it seems most likely that such an error would involve information that can be objectively assessed as being incorrect, such as data associated with the site or design details which are defective. It would be difficult to describe mistakes in the employer's stipulations – as to the performance criteria that the facility is required to achieve – as being an error that is capable of being discovered. After all, the contractor does not know what criteria the employer wants the facility to achieve.

3.279 The employer has set down what it wants the product it is buying to achieve, and the contractor has tendered on that basis. If the employer has made an error in defining those criteria, then it would not seem appropriate for the employer to be able to redefine what it wants after the contract has been entered into.

3.280 If this provision is limited to errors which can be objectively identified, such as the accuracy or otherwise of site data, then the correction is easier to resolve than ambiguities of the type discussed in relation to the earlier JCT and ICC provisions. Equally, this type of clause is quite different from those dealing with ambiguities, because it lays down criteria to determine when a correction should be made, based on whether the contractor could reasonably be expected to have found it at tender stage.

SECTION I: CONTRACTS WITH ALTERNATIVE PRICING MODELS

3.281 This section reviews the different types of pricing mechanism that are used in construction contracts and how they affect the assessment of whether work is additional to the contract scope.

3.282 The simplest form of contract, from a pricing perspective, involves the payment of a lump sum in exchange for the contractor undertaking a defined set of works. Variations to that scope are typically calculated using a breakdown of the lump sum contained in the contract.[180]

180. Measurement contracts are also discussed in this book at: Chapter 11, section E dealing with valuation of variations under measurement contracts; and Chapter, 5 section E dealing with the degree to which an employer may omit work under a measurement contract.

3.283 A measurement contract[181] is similar to a lump sum in that they both involve an agreement for the carrying out of a defined scope of works, in respect of which the price has been fixed, or the rules for determining the price have been fixed.[182]

3.284 The price under a measurement contract is not finalised at the time the contract is entered into because the quantities of the works have not been finally measured. Instead, the parties agree prices and rates which are then used to calculate how much the contractor is entitled to, when the final quantities come to be measured, once the work is undertaken. The final quantities will inevitably differ from those predicted at the outset. Such a change is not a variation because the scope of the works has not been altered; it is merely a function of the detailed measurement of the quantities. This section considers in further detail the complexities of pricing under this type of contract, and the relationship between the measurement of quantities and variations.

3.285 Since both lump sum and measurement contracts involve an ascertained scope allied to a fixed price (or a mechanism for determining it), the approach to variations is much the same. If the employer wants extra or different work to be carried out, that is not described under the scope, then it will need to instruct a variation, and the contractor will be entitled to additional payment. In analysing what work the contractor has agreed to undertake in exchange for the price (and therefore what is extra), one needs to consider the contract definition of the works, what can be said to be implicitly included within that description, and the contract risk allocation.[183]

3.286 The contracts referred to above can be contrasted with those with no defined scope. Such a contract may simply contain a schedule of rates and unit prices, with an agreement that the contractor will undertake such work as directed during the project. Alternatively, the agreement may be that payment is calculated against costs incurred. Under such a cost reimbursable contract, the contractor is paid by reference to the cost it incurs in undertaking the works, plus a fee to cover its management and supervision costs, and profit.[184] With these contracts it is not necessary to finalise the definition of the required scope of works at the outset. Since the scope is not defined, the question of variations to a contract scope does not, strictly speaking, arise. After all, in order to have a variation, one needs to have a defined scope against which to assess changes. Having said this, such a contract may limit the nature and extent of the work that may be instructed under it and, in this sense, the characteristics of the works described in the contract may be relevant.[185]

181. Such a contract is also sometimes described as a remeasure, an approximate quantities or measure and value contract. Examples include the ICC Measurement Contract, the FIDIC Red Book 1999 and the JCT Approximate Quantities.

182. Subject to appropriate operation by the employer of its right to omit, the contractor is entitled to undertake all the works. See *Tancred Arrol & Co* v. *Steel Co of Scotland Ltd* (1890) LR 15 App Cas 125, discussed further at Chapter 5, section E, para. 5.187.

183. See section C of this chapter, which considers the degree to which the contractor may be obliged to undertake works not expressly referred to in the technical documents in exchange for the contract price, as a result of contract risk allocation.

184. For example, NEC3 Contract, Option E.

185. The employer may be limited to instructing the contractor to undertake work of the type that the contract envisages and for which rates are included in the contract. See Chapter 5, which discusses the power to vary and the extent to which the employer may be constrained in terms of the type of work it can instruct as an extra, by reference

The remeasurement of quantities contrasted with variations

3.287 Under a measurement contract, the quantities of work undertaken are calculated and the contractor is paid in accordance with the final amount of work actually undertaken. Suppose, for example, that a contractor is hired to build a railway line involving the construction of cuttings and embankments by blasting and excavation. The contract may describe the works in detailed drawings and specifications. Such a project will often be let using a measurement contract, under which the contractor is entitled to be paid for the excavation using an agreed set of rates, showing the price against volume excavated. Whilst the nature and extent of the works is described on the specification and drawings, and therefore this would be said to be a fixed scope of work, the actual quantities are dependent on final measurement.

3.288 Such contracts will typically incorporate a bill of quantities showing estimated quantities, with the contractor pricing a rate against each item. The contract may instead contain a schedule of rates with no, or limited, information as to the likely quantities.

3.289 The bill or schedule of rates that is incorporated into the contract will therefore contain the agreed contract rates which will be used for pricing the remeasure;[186] and if provisional quantities are provided, an estimated total contract sum. That total estimated contract sum can be compared to those provided by the other contractors at tender stage in order to assess competitiveness, although the final sum due for the measured work will be subject to the remeasurement process.[187]

3.290 Ultimately, whether a contract is a simple lump sum with a bill of quantities showing a price breakdown,[188] or a measurement contract where the bill contains estimated quantities and therefore an estimated total price, is a matter of contract interpretation. If the agreement is interpreted as a simple lump sum, then what would be a provisional price in a measurement contract, and therefore subject to adjustment on the ascertainment of final quantities, becomes an all-inclusive price.[189] A measurement contract provides less price certainty for

to the original scope. Such a contract may also stipulate that the contractor is instructed to undertake a minimum turnover of work. For example, a term contract for road maintenance may be structured in this manner.

186. The rates will normally also be used to price variations. See Chapter 11.

187. Such measurement contracts arose out of traditional lump sum contracts, where the employer provided a bill of quantities which the contractor would price. However, each tendering contractor would have to undertake its own take-off from the drawings in order to calculate the quantities, against which it would set rates, in order to determine its tender contract price. Such a process involves significant duplication of effort by all the tendering contractors. The practice therefore arose whereby the employer would undertake the take-off of quantities from the drawings, and include these in the bill, for each contractor to price, using its own rates. Understandably, contractors did not want to take the risk that the employer's take-off might be incorrect and so a measurement contract arrangement evolved, whereby the employer took this risk.

188. A simple lump sum contract will typically also contain a bill of quantities. This can then be used for valuing variations. See Chapter 11.

189. Contrast, for example, *Kimberley* v. *Dick* [1871] LR 13 Eq 1, where the court found the contract, with a bill of quantities, was a lump sum contract; and *Patman and Fotheringham Ltd* v. *Pilditch* (1904) *Hudson's Building Contracts*, 4th Edn, Vol. 2, p. 368, where the contract was found to be subject to remeasurement. It is generally recognised that the courts in the nineteenth century were slow to recognise and properly understand the commercial basis of the measurement form of agreement.

an employer and therefore the courts will often err towards finding that there is a lump sum contract if the contract wording is unclear.[190]

3.291 Whilst under a measurement contract the quantities of work will change from those originally estimated, this does not amount to a variation of the works.[191]

3.292 Variations can be made but these involve a change to the scope from that described in the contract, whilst the change in measured quantities derives from a reassessment of the amount of the work described in the scope. To continue the earlier example of a railway constructed with cuttings and embankments, the change from the estimated volume of rock excavation in the bill to the actual quantity is not a variation but the result of the remeasure. However, suppose the employer decides that it wants to extend the length of the railway line, so that another five miles of blasting and excavation is required. This extra work will be a variation as it represents a change to the scope of works.

3.293 With the example of the railway, the distinction between the original scope and the extra work is clearly delineated. This will not always be the case. Whether the work is part of the original scope and should be measured under bill rates or is a variation for which new rates have to be applied can be finely balanced. The distinction is illustrated by the Court of Appeal case of *Holland Dredging (UK) Limited* v. *The Dredging and Construction Co Ltd and Ors*.[192] DCC hired Holland under an FCEC form of subcontract[193] to undertake subsea pipe-laying work. The work involved excavating a trench and temporarily dumping the dredged material close by, before laying the pipe and backfilling using the originally dredged material. It was acknowledged by those involved that the process of subsea excavation would inevitably result in the dissipation of some of the dredged material, and therefore more material would need to be found to perform the backfill. The contract envisaged that the extra backfill would come from the seabed area, which the contractor was entitled to access. This work was described in the contract and payment was to be on a measured basis, with agreed rates for the different elements of work. There was insufficient subsea material to undertake the backfilling and so instructions were given to instead import land-quarried stone to complete the operation. This work was not contemplated by the contract and the bill did not include

190. See *Worksop Tarmacadam Co Ltd* v. *Hannaby* and Ors (1995) 66 Con LR 105. The case concerned a small-scale house development. The contractor provided a tender price by way of letter, with a very short set of bespoke terms and conditions on the back, including one that read 'All work will be measured on completion'. The house owner had understood he had been given an all-inclusive lump sum for the work. The contractor hit unforeseen hard rock in undertaking the works and sought additional money on the basis that it was entitled to remeasure and claim extra. The Court of Appeal, in rejecting the claim, emphasised that the terms did not clearly provide for remeasurement, as they could have done.

191. See, for example, ICC Measurement Contract 2011, Clause 51(2), which states that all variations shall be ordered in writing, and Clause 51(5), which states that no such order is required for an increase or decrease in quantity where that is the result of the provisional quantities in the bill changing. Clauses 55 and 56 then deal with quantities and measurement. See *Arcos Industries* v. *Electricity Commission of New South Wales (Australia)* (1973) 12 BLR 65, in which the Court of Appeal of New South Wales analysed the measurement contract which the dispute related to, and found that a reduction in quantities was not the same as an 'omission' under the variations clause. See also *Grinaker Construction Ltd* v. *Transvaal Provincial Administration (South Africa)* (1981) 20 BLR 30.

192. (1987) 37 BLR 1.

193. This was the standard form subcontract designed to be used in conjunction with the ICE main contract, which is now the ICC form of contract.

rates for it. This work was therefore treated as a variation to the contract.[194] The quantities of backfilling that were undertaken using the quarry stone were treated as variations, and were to be paid as such, rather than being paid as extra quantities via the remeasure process.

Assessment of whether work is included in the rates

3.294 The description of the scope of works in the technical documents (such as the drawings and specification) sets out the works that the contractor is required to undertake. The bill of quantities, or schedule of rates, however, may not include all the work that is required to be undertaken in order to complete the described scope.

3.295 Whether a unit rate in a bill includes for a particular piece of work will often turn on the precise description of the unit item. A bill cannot go into inordinate detail as to the precise extent of work that needs to be undertaken in relation to each item listed. Equally, it is efficient for the description of bill items to be consistent from project to project. With these aims in mind, standard methods of measurement have been developed which contracts make reference to, with the requirement that they govern the assessment and interpretation of the items in the bill.[195] Such documents set out an itemised classification system, describing the work which is included in each particular item. All tendering contractors then know the extent of work that they need to price for under an item.

3.296 Disagreements as to what is included in the unit rate should be reduced by ensuring that pricing is undertaken by reference to a standard method of measurement. However, there may still be uncertainties and the description of the works in the contract may influence the interpretation. The House of Lords case *AE Farr Ltd* v. *Ministry of Transport*[196] illustrates this type of dispute. The contractor had been employed under the ICE Measurement Contract to construct the Hanger Lane underpass on the A40, at Ealing in London. This involved extensive excavation work. The method of measuring the volume of the excavation that was included in the bill included only the area to be excavated, and stated that 'any additional excavation which may be required for working space etc. may be paid for under separate items. . . the volume of the excavated material shall be the volume of the material in the ground before being excavated'. The engineer approved the contractor's programme showing its plan to undertake additional excavation outside of the main excavation area, so that it had working space. The contractor successfully claimed payment for the working space that it excavated as an extra. This was despite the contract stating that the rates were to cover all necessary work associated with the item. The contractor persuaded the court

194. The contract provided that variations could be issued to correct errors in the descriptions in the bills and this change was treated as such.

195. For example, the ICC Measurement Contract 2011 adopts the Civil Engineering Standard Method of Measurement Third Edition 1991, approved by the ICE and FCEC, whilst the JCT 2011 suite defines the method as being the Standard Method of Measurement of Building Works, 7th Edn, produced by RICS and the Construction Federation. FIDIC states that the method to be used will be 'in accordance with' the bill of quantities, presumably meaning that the bill will either expressly specify the method or it will be clear from the face of the document which method has been adopted (Red Book, Clause 12.2).

196. (1965) 5 BLR 94.

that the reference to additional excavation being 'paid for under separate items' constituted a promise that the quantities for the working space would be paid for separately.

3.297 In assessing whether the rates and prices provided by the contractor include certain work described in the technical scope documents, it will be necessary to consider the provisions of the contract. Typically there will be a provision in a contract that the rates and prices include all work identified in the scope, but also a provision that the bills have been produced in accordance with the standard method. Where there is an item missing from the bill which relates to work described in the scope, then there is a conflict between provisions. For example, suppose under a pipe-laying contract the standard measure requires that three items should be listed and priced: excavation, pipe installation and backfilling. All this work may be required of the contractor and described in the scope but the bill may not include an item for pipe installation. The contractor is required to price the bill in accordance with the standard method but conversely is supposed to ensure that its rates and prices include for all described work.

3.298 To avoid the uncertainty contracts often provide for this eventuality. Clause 55(2) of ICC Measurement Contract 2011 states:[197]

> 'No error in description in the Bill of Quantities or omission therefrom shall vitiate the Contract nor release the Contractor from the carrying out of the whole or any part of the works according to the Drawings and Specification or from any of his obligations or liabilities under the Contract. Any such error or omission shall be corrected by the engineer and the value of the work actually carried out shall be ascertained in accordance with Clause 52(3) or (4). Provided that there shall be no rectification of any errors or omissions or wrong estimates in the descriptions rates and prices inserted by the Contractor in the Bill of Quantities.'

3.299 Clauses 52(3) and (4) are the variations clauses, which are to be operated in order to allow the error or omission to be adjusted. Clause 57 requires the bill to be prepared in accordance with a stipulated standard civil engineering method. Therefore, if an item is missing from a bill in error, by reference to the provisions of the method of measurement, then this will be an error or omission, the adjustment of which is to be priced as a variation.[198]

3.300 Such measurement disputes can often turn on the rate to be applied. The work may fall to be measured but the rates may not cover the conditions in which the contract scope work needs to be undertaken. Depending on the terms of the contract, the work may fall to be priced under the rate applying most closely to the conditions. However, the contract may allow for an uplift. *Re Walton-on-the Naze UDC*[199] concerned the construction of a sewage outlet pipe,

197. In particular, note the middle sentence from this clause. The errors in pricing referred to in the final sentence would seem to be designed to cover the issue as regards the sanctity of rates, as discussed later in this section.

198. The FIDIC Red Book 1999 clause dealing with measurement states: 'For each item of work, the appropriate rate or price for the item shall be the rate or price specified for such item in the Contract or, if there is no such item, specified or similar work.' In the context of the clause the reference to 'no such item' appears to relate to such a missing item (of the type discussed above) and not variations, which fall to be dealt with under later provisions in the contract.

199. (1905) *Hudson's Building Contracts*, 4th Edn, Vol. 2, p. 376.

discharging into the sea. The bill contained rates for onshore work but not for work which was underwater at certain times ('tide work'), even though it was all shown on the drawings. The court found that the contractor was entitled to be paid for the tide work at higher rates than onshore work, on the basis that it was entitled to a fair valuation where there were no applicable rates.[200]

3.301 Certain contracts also provide for the situation where there are items in the bill which the contractor has failed to price. For example, Clause 12.3 of the FIDIC MDB Contract 2010 states:

> 'Any item of work included in the Bill of Quantities for which no rate or price was specified shall be considered as included in other rates and prices in the Bill of Quantities and will not be paid for separately.'

Fixed scope with flexible categorisation of work types

3.302 One of the benefits of a measurement contract is that different rates can be applied to different categories of work, in circumstances where at the outset of the project the amount of work that will fall into each category is unknown.

3.303 This approach can be explained by reference to a tunnelling contract example.[201] At the outset of the project the parties may have only a general understanding as to the different types of rock the tunnel route will pass through. However, depending on the rock conditions, different standards of tunnel lining will be required. Where the rock structure is weak, extensive tunnel lining will be required, but where it is stronger less lining will be needed. The types of rock conditions will be categorised in the contract, along with the scope of works (including lining) that are required for each. A different rate will be applicable to each of the different rock conditions to reflect the different lining works that are required. As the work progresses, the quantity of work in relation to each rock condition is recorded, and the contractor is paid at the appropriate rate multiplied by the actual quantities under each rock category.[202]

3.304 The contract bill for such a project may set out estimated quantities for the amount of tunnelling under each of the categories of rock condition. However, depending on the particular

200. *J. Crosby & Sons Ltd* v. *Portland Urban District Council* (1967) 5 BLR 121 involved a contractor undertaking pipe-laying work. The contract contained rates for laying pipes at a depth of less than five metres but the contractor was also required to install pipes at a greater depth (in accordance with what was shown on the drawings) and sought an adjustment of the rate. Clause 52(2) allowed rates to be adjusted by the engineer if there was a significant discrepancy between estimated and actual quantities. (See later in this section as regards these clauses generally.) The judge relied on this provision to adjust the sub five metre rate upwards. This was clearly not a correct application of the clause.

201. See *Mitsui Construction Co Ltd* v. *The Attorney General of Hong Kong* (1986) 33 BLR 1, which related to a tunnelling contract with this type of pricing arrangement. Issues concerning this case are considered further *infra*, para. 11.166.

202. The question as to which of the different categories of rock condition applies and therefore which type of tunnel lining work is necessary, can be contentious. It will be necessary for such a contract to have a clear set of rules for determining the category of rock conditions. The employer can, of course, override the contract categorisation and require, for example, that the tunnel lining works normally needed only for rock type 'X' is used even though the conditions experienced are rock type 'Y'. This might amount to a variation.

circumstances, this assessment of the quantities per category may be little more than an educated guess. As a result, such an approach may lead to significant differences between estimated and actual quantities for certain categories.[203]

3.305 This type of approach, whereby the scope is fixed but the extent of the work that falls against each of the various work categories is subject to final measurement (dependent on the actual rock conditions experienced), is an efficient pricing mechanism where site conditions are uncertain.[204]

3.306 If the work that needs to be undertaken is not covered by any of the rock conditions described, it will be necessary to consider whether a variation needs to be instructed under the contract, whether the contractor should proceed without it, and the pricing of such work without applicable rates.[205]

Sanctity of rates and changes in quantities

3.307 The contractor's rates in the bill or schedule will be used to calculate entitlement based on actual quantities. These rates are treated as sacrosanct even if it is apparent that a particular rate is significantly different from market and cost, and was included by the contractor in error.[206]

3.308 An error with the rate is a particular problem or advantage for one of the parties if the actual quantities are significantly greater than the estimated.

3.309 There are a number of reasons why the final quantities under a measurement contract may be significantly different from the original estimated quantities. The nature of the work to be undertaken may be uncertain, or the take-off exercise may have been carried out carelessly. Most measurement contracts provide that where there is a significant change in quantities there is an opportunity to change the rates in calculating entitlement. This is not treated as a variation because it does not arise from of a change in the scope of work. It is a mechanism to allow the rates to be changed to compensate the contractor in circumstances where the employer has failed to accurately estimate the quantities.[207]

203. This, in turn, may lead to claims for uplifts on rates as a result of such differentials. See below for further discussion later in this section, and Chapter 11, section E, and the case *Mitsui Construction Co Ltd* v. *The Attorney General of Hong Kong* (1986) 33 BLR 1.

204. See Chapter 2, section C as to the problems that can otherwise arise.

205. A great deal will turn on the wording of the contract in question. The work may well represent a variation in that whilst the excavation is along the route contemplated, the difference in conditions requires a form of tunnel lining that is different from that contemplated by the contract. As with any change to the scope, the contractor should not undertake such work unless permitted by the employer (see Chapter 2, section A). In terms of the pricing of such work, the issues discussed previously in this section concerning omitted items may be of relevance: see *Re Walton-on-the Naze UDC* (1905) *Hudson's Building Contracts*, 4th Edn, Vol. 2, p. 376.

206. See *Henry Boot Construction Ltd* v. *Alstom Combined Cycles Ltd* [2000] BLR 247. It is highly unlikely that rectification will be available. See Chapter 11, section 2, for a more detailed discussion regarding sanctity of contract rates and the reasoning behind this approach.

207. See Chapter 11, section E, where this issue is discussed further.

This opportunity to change the rates because of a significant differential in quantities will not justify a change to an inaccurately priced bill rate. A change to the rate is justified only because the change in quantities in itself justifies an alteration to the rate. **3.310**

Provisional sums

Provisional sums are sometimes included in the build-up to a lump sum in a contract. The manner in which a provisional sum is treated is ultimately dependent on the express terms of the contract.[208] Normally, the term is used to mean items of work which are not fully designed or scoped at the time the contract is let. The contract sum breakdown will include the provisional sum item, describing the work in very broad terms, and an estimated figure (supplied by the employer) to denote how much the work might cost. This ensures that the full contract sum figure includes for this element of work, albeit only an estimate. **3.311**

During the course of the project the employer will provide the contractor with the finalised design details for the provisional sum item. The provisional price will be omitted and the work priced in accordance with the contract rules. **3.312**

Whilst the contractor is not bound by the provisional figure, the agreed contract period may be taken to include the time the contractor needs to undertake the provisional sum works, such that the contractor cannot claim to be entitled to more time (and associated costs) if the work takes longer than it envisaged.[209] **3.313**

A provisional sum item is therefore part of the scope of works and, as a result, the employer may not omit it simply in order to instruct a different contractor to undertake the same package.[210] It is an item which the parties know will be subject to change during the project, as the design for the works is developed, and the work properly detailed. **3.314**

SECTION J: CONTRACTS FOR SERVICES

A construction contract will often be a contract for not only the supply of goods but also the undertaking of services. Whilst the contractor will be required to provide the defined permanent works, being the goods it supplies, it will often also be required to undertake services under its contract. For example, it may be required to undertake performance-testing **3.315**

208. See *Midland Expressway Limited* v. *Carillion Construction Limited and Others* [2006] EWCA Civ 936, May LJ: '. . . the term "provisional sum" is close to a term of art but its precise meaning and effect depends on the terms of the individual contract'.

209. The position depends on the contract provisions. However, as an example, under the JCT suite the bill of quantities is deemed to be prepared in accordance with the Standard Method of Measurement (SMM7), which provides that the contractor is taken to have made due allowance for 'programming, planning and pricing Preliminaries' in respect of defined (as opposed to undefined) provisional sums. In order to be defined, certain particulars must have been provided in respect of the work, such as the nature of the work, how and where it will be fixed to the building, and quantities to indicate the scope. See SMM7, General Rules, para. 10.

210. See *Amec Building Ltd* v. *Cadmus Investment* (1996) 51 Con LR 105, discussed further in Chapter 5, section E.

procedures and to supply results to the employer or to provide reports and programmes to the employer on a regular basis.[211]

3.316 A lump sum contract involves a fixed price for defined works. Those works can be goods or services, or a combination of the two. In determining whether a change has been made to the scope of works under a lump sum construction contract it is necessary to consider whether the employer has instructed a change to the goods and services that the contract requires. Some instructed changes may be described as changes to the services that the contractor is required to provide under the contract, rather than a change to the final permanent works. For example, the employer may instruct the contractor to increase the extent or number of reports it is required to provide under the contract. Or the employer may instruct the contractor to operate its cranes to provide lifting support to one of the employer's other contractors on site. It will often be the case that a variation involves the contractor supplying both altered goods and services, and the distinction will be of no practical relevance.

3.317 A participant in the construction process may be employed under a contract to supply only services. This will be typical of a consultant, such as an architect or engineer. It may also be the case with the contractor which is employed on a construction management contract, under which its role is simply to manage the employer's trade contractors.

3.318 Whilst parties that are employed on services only contracts may be paid a lump sum in return for a defined scope of work, such a lump sum arrangement is less common than it is under a contract for goods. Contracts for services often, as an alternative, involve payment on a time charge basis whereby the service provider invoices by reference to the time spent by individuals, against fixed rates, be they hourly, daily or weekly.

3.319 Under this type of reimbursable time charge arrangement, the scope of works may be quite loosely defined. There is less need for an accurately defined scope at the outset under this arrangement because the service supplier will be paid for whatever work is instructed. It is not necessary to determine whether a certain item of work falls within the defined scope because there is no lump sum price. There is therefore no fixed scope against which a variation can be assessed. The scope of works can potentially be relevant if the services provider seeks to allege that the work being instructed is not of a type contemplated by the contract and therefore it is entitled to refuse to undertake it, or is entitled to an uplift on the pre-agreed rates.[212]

3.320 A contract for services may, alternatively, be agreed on the basis of a percentage fee which is determined by reference to the final project cost. This is essentially a lump sum contact for

211. The temporary works undertaken with the aim of achieving the permanent works may not properly be considered part of the works under the contract, but rather the work that the contractor needs to undertake in order to deliver the defined works. It is a matter of contract interpretation as to which category such work as report writing, referred to above, falls into. It may be a service which is part of the scope of works that are necessary to achieve the defined scope. See *Strachan & Henshaw Ltd* v. *Stein Industrie (UK) Ltd (No. 2)* (1997) 87 BLR 52, discussed *supra*, in section E of this chapter.

212. See Chapter 5.

defined services, albeit that, because it is based on a percentage of the project cost, there is a built-in mechanism for adjustment.

3.321 With both pure lump sum contracts and percentage fee agreements it is very important that the scope of works is accurately defined. Being able to determine whether the services provider is required to undertake certain works as part of its fee agreement, or whether those works are extra, and therefore not covered by the agreed fee, will depend on a clear definition of the scope.

3.322 Construction contracts for goods and services are typically drafted in contemplation of changes to the scope of works. They normally contain information and provisions which allow the parties to ascertain whether there have been changes to the scope and how changes will be dealt with. Such contracts will normally contain extensive information to define the scope of works as well as clauses to deal with instructing and valuing changes.

3.323 In comparison, contracts for the provision of services will typically have much less information to define the scope of the works that are required to be undertaken or procedures to deal with changes. However, such provisions are important whenever a party undertakes a fixed scope of work for a defined fee, whether pure lump sum or percentage-based.

3.324 A services provider may agree to undertake a scope of work for a lump sum in the context of certain expectations as to the extent of work that will be required. Most commonly, a simple lump sum agreement may be agreed with the provider assuming that the project will be of a certain size and value, and will be completed within a certain time scale. If the service provider's price is based on these assumptions, then it is essential that the parties' contract makes this clear and provides for price increases if there are time and cost overruns.[213]

3.325 It is necessary to consider both the type of express term that may be incorporated in contracts for services that may relied upon to justify an increase in the price, and implied terms if no express provisions exist.

Express terms

3.326 Consultants' appointments will normally provide that a lump sum fee (whether simple or percentage-based) may be adjusted in two principal ways. Firstly, provisions to allow an adjustment to the fee where the conditions or timescales for carrying out the original scope of works have changed. Secondly, provisions to allow the instruction of additional services that are extra to the original scope.

3.327 In terms of changes to the conditions under which the services will be undertaken, the RICS Standard Form of Consultant's Appointment[214] provides at clause 9.11 that the fee will be adjusted if:

213. Whilst a lump sum contract based on a percentage fee avoids this problem to some extent, it will not entirely, since the project may be delayed, but without an increase in project value to recompense the services provider.

214. 2008 edition.

'. . . the performance of the Basic Services is materially delayed and/or disrupted as a result of a change in the scope, size, complexity or duration of the Project or for any other cause outside the Consultant's reasonable control'.

3.328 This adjustment is not available if the delay or disruption is caused by the consultant itself.[215] It is necessary for the consultant to give notice as soon as reasonably practicable and to provide a written estimate of the proposed fee adjustment and the effect on the programme.[216] The appointment places the onus on the parties to agree the adjustment of the fee, but if this is not possible then it is to be based on the time charges appended to the agreement.[217]

3.329 The RICS Standard Form Appointment also contains, at Clause 10, a provision dealing with additional work that may be instructed. The consultant is required to inform its client as soon as possible where this may occur. Again, written estimates of the additional fees are required and the onus is on the parties to agree the fee, but there is a mechanism for resolving entitlement in the absence of agreement.

3.330 The FIDIC Consultancy Agreement (the White Book) 2006 provides that if the client impedes or delays the consultant's services, such that the cost, scope or duration of those services is increased, then the consultant will be entitled to additional money and time.[218]

3.331 Where circumstances arise for which neither party is responsible, but are such that it would be 'irresponsible or impossible' for the consultant to perform its services, then the consultant must serve a notice.[219] This may, in turn, lead to a temporary suspension of the consultant's work, an extended period for undertaking the services, and financial compensation.[220]

3.332 The FIDIC agreement also contains provisions to cover the instruction and payment for a change to the original scope of services.[221]

3.333 Under the RIBA Standard Appointment[222] the consultant is entitled to have its fee adjusted where material changes are made to the scope of its services, or material changes are made to the cost or timetable for the overall project.[223]

3.334 Under a separate provision, the consultant is entitled to additional fees where, for reasons beyond its 'reasonable control', it 'incurs extra work or loss and expense' for which it would

215. Clause 9.13.
216. Clause 9.12. The agreement also requires the consultant to notify its client if the doubling of the project in terms of time and money means that it will need to undertake additional services. See Clause 10.1.
217. See Clause 9.12, which refers to Part D of Schedule 2 of the RICS Appointment (Rates for Additional Services).
218. Clause 4.4.
219. Clause 4.5.
220. Clause 4.8.
221. Clause 4.3.
222. See the Standard Conditions of Appointment for an Architect, 2012 revision.
223. Clause 5.8.1(a). If the fee is calculated on a percentage of the project it will, of course, increase automatically in any event.

not otherwise be paid.[224] The clause goes on to give examples of circumstances which would trigger additional entitlement under this provision, including the varying of work already commenced and delay or disruption of the consultant's services.

3.335 The RIBA appointment also provides that the scope of services and fee can be adjusted by agreement.[225]

3.336 Under the standard ACE Appointment,[226] the consultant is entitled to be paid for additional work it has to undertake which is required for various reasons, including client changes to the project, and delay to the provision of its services.[227]

Implied terms

3.337 In *Gilbert & Partners* v. *Knight*[228] a surveyor agreed to prepare drawings and to procure, organise and supervise works for the refurbishment of a house. The cost of the works was predicted to be £600 and the firm's fee was agreed at £30. Mrs Knight, the house owner, ordered additional work during the course of the project and the final value of the works was £2,283. The firm supervised the additional work and said nothing at the time about charging an uplifted fee. At the end of the project the firm raised an invoice for an additional £105.

3.338 The firm argued that it was implied that it would be entitled to charge Mrs Knight extra for supervising the additional works. The Court of Appeal rejected the surveyor's claim on the basis that there was a clear lump sum agreement to provide the services for £30 and that if this was going to be altered there would have to be express agreement. Davies LJ stated:[229]

> 'In this case the cardinal point is that there had been this previous agreement to do some work for a lump sum of £30, and I for myself cannot see that there is any necessary implication that, when the work was going to be extended, or increased, in the absence of any express mention of it the defendant should be liable to make any further payment to the Plaintiffs.'

3.339 The court also considered whether it could be said that the original contract came to an end part way through the project, and the firm was entitled to be paid for supervising the additional work under a new contract or on a *quantum meruit* basis.[230] This was rejected due to the fact that the original contract had not been brought to an end. The court held, '. . . if it is a case of hardship to them or to her, it is they who should suffer because it is they after all who are the professionals and she is not'.[231]

224. Clause 5.9.
225. Clause 5.8.1(b).
226. ACE Agreement 1: Design 2009 Edition.
227. Clause F5.8. This expressly includes any work which subsequently becomes redundant.
228. [1968] 2 All ER 248.
229. *Ibid.* at 251.
230. Claims in restitution are discussed at Chapter 9, section G.
231. [1968] 2 All ER 248 at 251.

3.340 It can be the case that the contract is interpreted as one whereby it is implied that the fee will be uplifted if the scope of the project increases, even though this is not expressly provided for in the agreement. The case *Sir Lindsay Parkinson & Co Ltd* v. *Commissioners of His Majesty's Works and Public Buildings*[232] is an example of such an arrangement.

3.341 Parkinson, the contractor, entered into a building contract to construct an ordnance factory for £3.5 million, which was due to be completed in January 1939. The employer subsequently decided that the factory needed to be completed earlier, which led to the parties agreeing a deed of variation altering the contract.

3.342 The revised agreement provided that the contractor would implement acceleration measures which would entail considerable uneconomic working. The contractor would instead be paid for its work on a cost-plus basis and in addition would receive a fee of £150,000–£300,000 for managing the work, to be assessed at the end of the project. The arrangement under which Parkinson was working was therefore akin to a construction management contract where the contractor's fee for managing the work represented its profit recovery.

3.343 At the time the deed of variation was agreed, it was anticipated that the total cost of the work would be £5 million, for which the contractor would be reimbursed. This was calculated as: £3.5 million for the original contract works, an extra £1 million in costs arising from the acceleration which would entail uneconomic working, and £500,000 for variations which the employer was entitled to instruct under the original contract provisions. The evidence at trial was that the band for the fee was calculated at 3–6 per cent of this anticipated total cost of £5 million.

3.344 In practice, significantly more additional work was instructed and the final cost of the work, net of any fee, was approximately £6.7 million. The employer paid the contractor £300,000 in respect of the fee, being the maximum entitlement under the contract.

3.345 The contractor argued that the commercial basis for reimbursement under the deed of variation assumed that the work would comprise £5 million and that the fee had been calculated on that basis. Once it became clear to the contractor, part way through the project, that the scope was increasing, it demanded that its capped fee should be increased. The contractor threatened to suspend work unless its fee was increased, but was persuaded by the employer to continue on the basis that its claim for additional remuneration would be referred to arbitration later.[233]

3.346 The Court of Appeal was concerned that if the employer was entitled to instruct as much additional work as it wanted, but the contractor's fee remained limited to the £300,000 maximum, then this could lead to considerable unfairness. Asquith LJ stated:[234]

232. [1950] 1 All ER 208.
233. The litigation arose out of a case stated by the arbitrator.
234. [1950] 1 All ER 208 at 255.

> 'They could require him to erect a series of buildings on the site, pull them down, and put them up again, with or without alterations, as often, and for as long, as they chose. . .
>
> . . . the result, as indicated above, is that after £300,000 profit has been earned by the contractor, he can be compelled to labour like the Danaids without reward or limit, on any further "extras" which the Commissioners may elect to extract from him "till the last syllable of recorded time".'

3.347 Singleton LJ observed that there 'must be a limit' or else it would lead to 'manifest absurdity and injustice'.

3.348 The Court of Appeal concluded that a term should be implied to the effect that the employer was not entitled to order work materially in excess of the £5 million because this had been the basis of the revised agreement effected by the deed of variation. For work carried out in excess of this £5 million limit, a fee should be paid based on 'reasonable remuneration'.

3.349 The *Parkinson* case was followed by the Supreme Court of Canada in the 1973 case of *Cana Construction Co Ltd* v. *The Queen.*[235] The government body employer had asked for contractors to tender for a contract to build a new postal terminal. Mail-handling equipment was to be installed within the new building under what would become, in effect, a nominated subcontract. The tendering contractors were asked to give a price for the building work. In relation to the installation of the mail-handling equipment they were asked to quote for overheads, expenses, supervision and profit. The contractors were told that the mail-handling work would cost $1.15 million, whilst in practice it cost $2 million. The court quoted heavily from the judgment in *Parkinson* and then, in respect of its own case, concluded:[236]

> 'Applying this same method of interpretation to the present case, I have come to the conclusion that when the parties entered into the original contract then it was on the basis that the appellants would be required to enter into a subcontract for the installation of the mechanical handling equipment at a cost of about $1,150,000 and that therefore their bid should include overhead, supervision and profit for that amount. As it turned out, the appellant was required to enter into a sub-contract for an amount of over $2,000,000 and therefore the overhead, supervision and profit on that larger amount was not within the contemplation of either party.'

3.350 Despite being followed in *Cana Construction*, it seems that *Parkinson* should be treated with a certain amount of caution. In *McAlpine Humberoak Ltd* v. *McDermott International Inc (No. 1)*[237] the Court of Appeal pointed out that the court in *Parkinson* had relied on the case of *Bush* v. *Whitehaven Trustees*,[238] which had since been overruled, and described the *Parkinson* decision as 'a special one on its facts'.

235. (1973) 21 BLR 12.
236. *Ibid.* at 26.
237. (1992) 58 BLR 1.
238. (1888) *Hudson's Building Contracts*, 4th Edn, Vol. 2, p. 130.

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CHAPTER FOUR

CONTRACTOR'S OBLIGATIONS IN RESPECT OF THE WORKS

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SECTION A: INTRODUCTION

This chapter considers three aspects of a contractor's obligation to build the works: firstly, the contractor's obligation to build the work as described in the original contract scope and the implications if it fails to do so; secondly, the contractor's obligation to build or alter the works in accordance with variations that have been validly instructed under the contract; and thirdly, the contractor's workmanship and design obligations in respect of the additional work that has been instructed. **4.1**

Obligation to construct the contract scope

The contractor is obliged to construct the project in accordance with the defined contract scope, unless and until the employer permits a change.[1] The contractor may not depart from the required scope without permission, even to construct works which would be considered to be an improvement.[2] It will certainly not be entitled to be paid extra for unapproved enhancements.[3] **4.2**

Change may be instructed, agreed on an ad hoc basis, or permitted by the employer as a concession.[4] Unless and until the contract scope is validly varied, the contractor is both obliged and entitled to build in accordance with the contract scope.[5] **4.3**

1. Chapter 2, section B.
2. A party to a contract cannot substitute for the agreed performance something different, even though that substitute may be at least as good as, or even better than, what it had promised to provide. See *Chitty*, 21-004; *Forman & C. Proprietary Limited* v. *The Ship 'Liddesdale'* [1900] AC 190; *L. Sutro & Co and Heilbut, Symons & Co, Re* [1917] 1 KB 348; *Arcos Ltd* v. *E. A. Ronaasen & Son* [1933] AC 470. This is the case even with contracts providing an alternative means of performance. For example, in a contract involving a 'business' option, where the agreement specifies a single primary obligation to be performed one way but with the option for the other party to have it performed in an alternative way. When this alternative means of performance is solely for the advantage of the option holder, then the choice is entirely his. He is not bound to allow contract performance to be provided in a different way even though the primary means can no longer be achieved. See *Chitty*, 21-008. *Libyan Arab Foreign Bank* v. *Bankers Trust* [1989] QB 728.
3. See *supra*, para. 2.9.
4. See Chapter 9, section C as regards ad hoc agreements to vary; for concessions, see Chapter 9, section B.
5. If the employer permits the change as a concession, the contractor is entitled to change the works but is not obliged to. As to the contractor's entitlement to undertake the works, the employer will typically have a limited right

4.4 The contractor's obligation to build what is described in the contract may require it to rebuild work that is damaged during the course of the project, if it has taken that risk under the contract. In *Jackson* v. *Eastbourne*[6] the contractor was employed to build a sea wall, but part way through construction it was damaged in a storm and needed rebuilding. This was a contractor risk, and therefore the rework required was not a variation but simply the undertaking of the contract scope.[7] The employer is under no obligation to issue variation instructions in relation to the work that is required to be carried out as part of the contract scope.

4.5 If the contractor does not build in accordance with the scope, this will amount to a breach.[8] The implications of the breach and the extent and nature of the employer's remedies are complex because of the particular characteristics of construction contracts in comparison to contracts for the sale of moveable goods.

4.6 The product supplied under a construction contract is fixed to the land, and so if it is not in accordance with the contract specification it cannot be rejected and returned to the seller as a contract for chattels. As a result, questions of performance and rejection are more complex.

4.7 The work undertaken on a construction project will normally be very complex and involve a significant number of component parts. It is often inevitable that adjustments to the described works will be required because of supply problems or because changes to the design are necessary. Indeed, it may be necessary to make these changes in order to proceed with, and complete, the project.[9] It may be the case that the contractor implements unapproved changes to the scope, and while the overall final product may be perfectly satisfactory it may not be strictly in accordance with the described scope.

4.8 The law needs to perform a difficult balancing act in dealing with a contractor's non-conforming work. On the one hand it will seem unduly harsh and uncommercial to punish a contractor for minor departures from the scope which have no real impact on the final product; on the other hand, the employer has a legitimate expectation that it will receive what was stipulated in the contract.

4.9 Section B considers the employer's remedies during the course of a project where a contractor instigates unapproved changes. One implication may be that the contractor is not entitled to be paid the contract price, and this is considered in section C. The question whether the contractor is entitled to a completion certificate in these circumstances, at the end of the project, is discussed in section D. Section E considers how damages may be assessed where the contractor delivers a project containing non-conforming work.

to omit works, and may also be entitled to appoint parallel contractors to undertake additional works on the same project: see Chapter 5, section E.

6. (1886) *Hudson's Building Contracts*, 4th Edn, p. 81; 10th Edn, Vol. 2, pp. 270, 356.

7. See also *Charon (Finchley)* v. *Singer Sewing Machine Co* (1968) 112 So Jo 536, which involved a sewing machine factory that was damaged by vandals towards the end of the project and required rework. The risk of the damage was borne by the contractor, so the work was not a variation.

8. Chapter 3 considers whether work is within or outside the scope.

9. See Chapter 2, sections A and C.

Contractor's obligation to build validly instructed variations

4.10 A variation clause will normally require the contractor to build in accordance with a valid instruction. A change will be valid only if the correct procedure for instructing the variation has been followed[10] and it falls within the type of alteration that may be ordered under the contract.[11] But, if the variation has been validly instructed, the contractor will be in breach if it fails to undertake the work.

4.11 However, a contractor can only implement a variation if the employer supplies proper details of what it requires. The employer is under an obligation to provide design details and approvals in respect of all works, including of course the original contract scope. The same obligation will apply in respect of extra work. The contractor will need such information in order to develop the design, produce detailed working drawings and procure materials.

4.12 The contract may set down a schedule or timetable in relation to the original contract work, stipulating when the employer must provide the necessary details. In the absence of this, the employer will normally be treated as being under an obligation to provide details within a reasonable period of time.[12] In *Neodox Ltd* v. *The Mayor, Aldermen and Burgesses of the Borough of Swinton and Pendlebury BC*[13] the court stated that the employer (or its representative) 'is to have a time to provide them which is reasonable having regard to the point of view of him and his staff and the point of view of the [employer], as well as the point of view of the contractors'.[14]

4.13 The employer's duty to provide design details in relation to varied work was analysed in *Alfred McAlpine & Son (Pty) Ltd* v. *Transvaal Provincial Administration.*[15] The Supreme Court of South Africa considered that, in the absence of express provisions as to when additional details should be provided, the employer was under an implied duty to 'deliver to the contractor drawings and instructions reasonably required to execute the variation or the work as varied and this must be done within a reasonable time'.[16]

4.14 The longer the delay in the employer providing such details, the more likely it is that this will critically delay the project and therefore entitle the contractor to an extension of time.[17]

The contractor's obligations in respect of additional work

4.15 The final section of this chapter concerns the contractor's workmanship and design responsibilities in relation to additional work. A contractor will agree certain standards of care under the construction contract. For example, the contractor may agree to a fitness for purpose

10. See Chapter 8.
11. See Chapter 5.
12. An employer will typically be entitled to instruct variations up until completion. See Chapter 5, section D.
13. (1958) 5 BLR 34.
14. *Ibid.* at 42.
15. [1974] 3 SALR 506.
16. *Ibid.* at 536.
17. See Chapter 12, section A.

obligation in relation to the works. However, if new work is instructed part way through the project, the contractor may be reluctant to carry the same level of responsibility. After all, the nature of the new work that the employer wants may involve quite different risks. Section F considers the contractor's standard of responsibility for additional work and whether it has a right to refuse to undertake extra work if it is uncomfortable about the risks involved.

SECTION B: COMPLIANCE WITH SCOPE

4.16 A construction contract will typically require the contractor to 'carry out and complete' the described works. This is often described as a dual obligation. The contractor is obliged not only to complete and handover the described works at the completion date, but also to carry out the works in accordance with the contract description during the currency of the project. The contractor's compliance with this obligation to build the defined works is therefore not something that can only be tested at completion. Compliance can be assessed throughout the course of the project, because the contractor has a duty to 'carry out' the works in accordance with the defined scope.

4.17 The employer can put pressure on the contractor to build in accordance with the scope via the monthly certificates. However, other than this financial pressure, the employer may have limited options under the contract to apply sanctions against the contractor to influence the way it is building the project. If the employer considers that the contractor is deviating from the scope, then it may be able to exercise its remedies under the contract. For example, it may be able to give notice and then bring in a new contractor to undertake the necessary work. In extreme circumstances it may be able to terminate.

4.18 On a day-to-day basis departures from the scope are inevitable and work will need to be corrected. Indeed, construction contracts positively contemplate that during the course of construction the work will from time to time deviate temporarily from the defined works. After all, most contracts envisage procedures for the notification of defects and even contemplate completion being awarded subject to minor defects.

4.19 This feature of construction practice was expressed in the concept of 'temporary disconformity' as expressed by the dissenting speech of Lord Diplock in the case *Kaye* v. *Hosier*.[18] The concept was summarised in Lord Diplock's judgment as follows:[19]

> 'Upon a legalistic analysis it might be argued that temporary disconformity of any part of the works with the requirements of the contract even though remedied before the end of the agreed construction period constituted a breach of contract for which nominal damages would be recoverable. I do not think that makes business sense. Provided that the contractor puts it right timeously I do not think that the parties intended that any temporary disconformity should of itself amount to a breach of contract by the contractor.'

18. *P & M Kaye Ltd* v. *Hosier & Dickinson Ltd* [1972] 1 WLR 146.
19. *Ibid.* at 165.

4.20 Such a doctrine appears sensible when considering whether an employer should be able to terminate a contract because of minor discrepancies by a contractor, which can be corrected. However, an employer will often need to take action against a contractor that is failing to build in accordance with the scope. It would seem both unrealistic and unfair if an employer had no sanctions against a contractor in such a situation. The approach taken by the courts to this doctrine has therefore been largely dependent on the facts of the case in question.

4.21 Whilst this chapter is concerned with the nature and extent of the contractor's obligation to put right the works as they proceed, many of the reported cases deal with quite different factual circumstances. For example, in *Lintest Builders Ltd* v. *Roberts*[20] the contractor terminated for non-payment of certificates by the employer and then sued for monies due. The employer sought to deduct sums to reflect nonconformities with the work. In this context the court allowed those deductions and rejected the contractor's argument that no deductions could be made because of the doctrine of temporary disconformity.

4.22 Of more relevance in the context of this discussion are the cases that deal with the employer's right to terminate because of the contractor's nonconforming work.

4.23 *Rice (t/a Garden Guardian)* v. *Great Yarmouth BC*[21] concerned a horticultural contractor that had been employed under a four-year contract for the provision of leisure management and grounds maintenance services. Rice took on the role of maintaining sports pitches, playgrounds and parks, and was required to plant summer flower beds. The contract gave the employer the right to terminate for 'a breach of any of its obligations under the Contract'. The council issued multiple default notices before ultimately terminating. One notice required Rice to complete the summer flower beds within five days. Others related to failures to renovate certain sports pitches in time for the start of the season.

4.24 The case turned on whether the council had been entitled to terminate. The Court of Appeal, holding that a right to terminate had not arisen, found that the termination clause should be interpreted in a common sense way, so as to limit the right to terminate to circumstances where Rice had repudiated. Hale LJ quoted from the following passage from the first instance judgment, indicating that it was necessary to consider whether the contractor's failures could be considered repudiatory:[22]

> 'In the context of a contract intended to last for four years, involving substantial investment or at least substantial undertaking of financial obligations by one party and involving a myriad of obligations of differing importance and varying frequency, I have no hesitation in holding that the common sense interpretation should be imposed upon the strict words of the contract and that a repudiatory breach or an accumulation of breaches that as a whole can properly be described as repudiatory are a precondition to termination pursuant to clause 23.2.1.'

20. (1980) 13 BLR 38.
21. [2003] TCLR 1.
22. *Ibid.* at para. 18.

4.25 The Court of Appeal judgment went on to consider what might constitute repudiation and referred to the following further passage from the first instance judgment:[23]

> 'Cumulative breaches that justify an inference that the contractor would continue to deliver a substandard performance in relation to substantial portions of the contract could, in my judgment, be assessed as repudiatory. In short such breaches would show that the contractor was not up to the job. Likewise, breaches that evinced an intention by the contractor to render a continuing substandard performance in respect of a defined and significant part of the works could be repudiatory. . . Thirdly, breaches of such significance as to be individually repudiatory, being substantial in themselves and not truly compensated for by contractual remedies, likewise could justify the termination of the contract.'

4.26 In *EU Asia Engineering* v. *Wing Hong Construction*[24] the Hong Kong High Court considered a dispute between a main contractor and subcontractor. The nonconforming work in this case was the honeycombing in concrete poured by the subcontractor. Kaplan J considered this to be a straightforward application of Lord Diplock's principle:[25]

> 'Honeycombing is a frequent occurrence. I accept that it has to be put right. It has to be put right before finishes are applied to the walls. I am quite satisfied that if there was any honeycombing, [the contractor] would have made it good in the normal course of the work. To suggest that it could give rise either to termination or to an allegation that it prevented a floor from being completed is quite unreal. . .
>
> Such defects are common place and will in the normal course of events be remedied before finishes are applied. In my judgment, these defects come within Lord Diplock's. . . observations.'

4.27 In the New Zealand Court of Appeal case of *Adkin* v. *Brown*[26] the employer had terminated the contract on the basis of the contractor's defective works. The question was therefore whether the contractor was in breach such as to justify the termination. As a finding of fact the trial judge determined that the defects of which the employer complained could still have been remedied by the contractor. The Appeal Court was of the view that there will be situations where the defects in question cannot be categorised as a temporary disconformity, in which case this will give the employer the right to terminate. However, on the facts in this case, the court found that the concept applied because the defects could be remedied and for a relatively small sum.

4.28 Contracts will typically contain a two-stage approach to remedies in relation to noncompliant work. The employer will normally have the right to serve a notice specifying defective work and giving the contractor a period of time in which to correct it. The contractor is given a period of time to correct the defect before the employer can exercise the second stage of the procedure. If the contractor has failed to remedy, then the employer may be able either

23. *Ibid.* at para. 30.
24. [1991] HKEC 72.
25. *Ibid.* at 8–9.
26. [2002] NZCA 59.

to bring a new contractor on to site to undertake the necessary work to correct the defect, or to terminate.[27] Therefore, if a contractor departs from the scope without permission, for example by using lower quality materials than specified, the employer may be able to serve notice and instigate these remedies. However, whether it has grounds to terminate needs to be considered in the context of the case law considered in this section.

SECTION C: ENTITLEMENT TO BE PAID FOR NONCONFORMING WORK

4.29 The contractor will not normally be entitled to be paid for a change unless it has been approved by the employer. However, the contractor's departure from the scope may not only prevent its recovering the cost of the change itself, it may also prevent the contractor from being paid for the whole, or a section, of the works. This is because a contractor that undertakes an unapproved change has not carried out the works in accordance with the contract. The whole, or an element, of the contract price may only become due on satisfactory completion of the work, in strict compliance with the contract scope. If the contractor has not undertaken the work in accordance with its contract obligations, there will have been a complete failure of consideration. This section considers these issues.

4.30 Under a contract the price typically becomes due for payment upon the completion of an obligation. Entire performance of that obligation may be a condition precedent to payment.

4.31 A contract itself can be an 'entire contract', in which case the whole of the works will need to be completed before the contractor is entitled to be paid the price.[28] However, entire contracts are now very rare in the construction industry, because contracts will almost always provide for interim payments for work undertaken.[29] The application of the 'entire contract' principle is therefore more likely to be relevant in determining whether a milestone or other interim stage payment is due.[30]

4.32 The entire contract principle can create unfairness in a construction context, because the seller's product is attached to the buyer's land before it is completed. A contractor may fail to complete the whole of the works because of minor discrepancies. Under a traditional contract for moveable goods the buyer would be able to reject the product and return it. But under a construction contract the product remains on the land even if the buyer purports to reject it. Under the entire contract principle, the buyer may therefore retain the benefit of the product even though the contractor remains unpaid.[31]

27. For example, see FIDIC Red Book 1999, Clauses 7.6 and 11.4, and JCT Design and Build Contract 2011, Clauses 3.13 and 8.4.

28. See *Appleby* v. *Myers* (1866–67) LR 2 CP 651. A contractor was not entitled to any part of the contract sum, even though it had performed a significant proportion of the work. The contract was an entire contract and therefore the contract sum became due for payment only on completion of all the works.

29. Even if the contract does not expressly provide for interim payments, an implied right under statute will arise in respect of all qualifying construction contracts by reason of Housing Grants, Construction and Regeneration Act 1996, s. 109.

30. For example, see *Multiplex Construction (UK) Limited* v *Cleveland Bridge UK Limited & Others* [2008] EWHC 2220, discussed below, where a monthly payment was not due because of this principle.

31. The fact that the employer has use of the incomplete works does not mean that he can be taken to have accepted them. However, where it is impossible in practical terms for the employer to reject goods on its land, the

4.33 The courts have developed the concept of substantial performance to recognise that, provided a contractor has largely completed the works, it should be entitled to payment under an entire contract. The Court of Appeal case *Hoenig* v. *Isaacs*[32] is a good example of the application of the doctrine of substantial completion. A contractor had constructed furniture in a flat under an entire contract. The court found that the employer could not avoid making any payment whatsoever on the basis of minor defects. Denning J stated:[33]

> 'It was a lump sum contract, but that does not mean that entire performance was a condition precedent to payment. When a contract provides for a specific sum to be paid on completion of specified work, the courts lean against a construction of the contract which would deprive the contractor of any payment at all simply because there are some defects or omissions.'

4.34 Where substantial completion has been achieved, the contractor will be entitled to the contract sum minus the cost of repair:[34]

> 'What the plaintiff is entitled to recover is the price agreed upon in the specification, subject to a deduction; and the measure of that deduction is the sum which it would take to alter the work, so as to make it correspond with the specification.'

4.35 There will, however, be situations where the contractor's work is so defective that substantial completion cannot be deemed to have occurred. In those circumstances, under an entire contract, the contractor will not be entitled to be paid the price.

4.36 In *Bolton* v. *Mahadeva*[35] the contractor had installed a domestic heating and hot water system in the defendant's house for a fixed price lump sum of £560. There were numerous defects and the defendant refused to pay on the basis that consideration for the contract had wholly failed. The system installed did not heat adequately and gave out fumes. It would have cost £174 to remedy the defects.

4.37 The Court of Appeal held that, having regard to the character of the defects and the cost of rectification, the contract was not substantially performed and the contractor was not entitled to recover anything. In relation to the value of the defects in comparison to the contract sum, Cairns LJ said:[36]

> 'The main question in the case is whether the defects in workmanship found by the judge to be such as to cost £174 to repair – that is, between one third and one quarter of the contract price – were of such a character and amount that the plaintiff could not be

courts may make a finding of acceptance, thus making the employer liable to pay. See *Sumpter* v. *Hedges* [1898] 1 QB 873 as regards materials. See also *Tannenbaum Meadows Ltd* v. *Wright-Winston Ltd* (1965) 49 DLR (2d) 386.

32. [1952] 2 All ER 176.
33. *Ibid.* at 180.
34. *Thornton* v. *Place* (1832) 1 M & Rob. 218 at 219. Passage cited by Ridley J in *Dakin* v. *Lee* [1916] 1 KB 566 at 571. See also *Hoenig* v. *Isaacs* [1952] 2 All ER 176 at 181.
35. [1972] 1 WLR 1009.
36. *Ibid.* at 1011.

said to have substantially performed his contract. That is, in my view, clearly the legal principle which has to be applied to cases of this kind.'

Cairns LJ went on to state:[37] **4.38**

'The contract was a contract to install a central heating system. If a central heating system when installed is such that it does not heat the house adequately and is such, further, that fumes are given out, so as to make living rooms uncomfortable, and if the putting right of those defects is not something which can be done by some slight amendment of the system, then I think that the contract is not substantially performed.'

The above passages indicate that, in making an assessment as to whether substantial completion been achieved, it will be necessary to take account of the cost of the defects as a proportion of the contract sum. In addition, it will be necessary to consider whether the nature of the defects is such that the completed works cannot be said to represent the scope that the contractor promised to build. Sachs LJ in the same case stated that:[38] **4.39**

'It is not merely that so very much of the work was shoddy, but it is the general ineffectiveness of it for its primary purpose that leads me to that conclusion.'

These cases considered whether extensive defective work is such that substantial completion cannot be said to have been achieved, and therefore payment of the contract price is not due. The same principle applies where the work undertaken by the contractor is not in accordance with the contract design. **4.40**

In a modern commercial context an entire contract will be very uncommon. Subcontract packages for the supply and installation of equipment may be entire contracts. But the principle is most likely to be relevant to the completion of stages of work, milestones or monthly payments. **4.41**

The principles of entire contracts were applied to instalment payments in *Multiplex Construction (UK) Limited* v. *Cleveland Bridge UK Limited & Others*.[39] The case related to the Wembley Stadium steelwork subcontract package. The contract provided for payment to be made monthly. Cleveland Bridge, the subcontractor, repudiated the contract before the next interim payment certificate was due to be issued. Multiplex therefore never became obliged to issue the certificate. The subcontractor claimed for interim sums associated with works carried out between the previous interim certificate and the date of repudiation. The claim was rejected by Jackson J at first instance, on the basis that the subcontractor was not entitled to part payment for the work undertaken in that month, because each instalment had to be fully earned before payment was due.[40] Whilst the decision was appealed, that appeal did not extend to this point.[41] **4.42**

37. *Ibid.* at 1014.
38. *Ibid.* at 1015. See also *Eshelby* v. *Federated European Bank Ltd* [1932] KB 423.
39. [2008] EWHC 2220 (TCC).
40. *Ibid.* at paras. 1084–1085.
41. *Cleveland Bridge Ltd, Cleveland Bridge Dormon Land Engineering Ltd* v. *Multiplex Construction (UK) Ltd* [2010] EWCA Civ 139 at para. 89.

4.43 If a contractor does not follow the contract scope and undertakes nonconforming work, it may not achieve the step that is required to trigger a milestone or periodic payment. The entitlement to be paid in such circumstances will depend on the valuation rules of the particular contract and the degree to which they require unconditional completion of the milestone or element of work as a trigger to payment.

SECTION D: COMPLETION CERTIFICATES

4.44 A contractor's departure from the defined scope may go unnoticed during the course of a project, with this only being spotted at completion. The departure may instead be a live issue during the project, but with the parties unable to agree on the correct course of action.[42] Either way, at the end of the project it will be necessary to consider whether the contractor is entitled to a completion certificate and the departure from the scope will then have to be addressed.

4.45 The contractor will often be entitled to a completion certificate under the contract, despite minor departures from the scope. This will depend on the provisions of the contract as regards completion of the works.

4.46 The contract may oblige the contract administrator to issue a completion certificate but with specified minor defects being separately listed, with a requirement for the contractor to remedy them within a specified period.[43]

4.47 A minor departure from the contract scope may not therefore be sufficient to prevent completion being certified. The contractor may still need to correct the work afterwards or account to the employer in damages.[44]

4.48 Since construction contracts normally provide that the contractor is entitled to a completion certificate despite minor defects, the question whether the defect is minor may be crucial. Some contracts contain wording to indicate how such a test should be applied. For example, a taking-over certificate under the FIDIC Red Book 1999 is issued when the works are completed '. . . in accordance with the Contract. . . except for any minor outstanding work and defects which will not substantially affect the use of the Works. . . for their intended purpose'.[45]

4.49 The concept that completion should be assessed by reference to whether the employer can use the works as intended, as envisaged by the FIDIC Red Book 1999 test, is mirrored by

42. As discussed in section C of this chapter, it may be that the contractor's departure from the scope may not amount to a repudiatory breach or a breach justifying termination by the employer.

43. For example, under Clause 10.1 of the FIDIC Red Book 1999, the engineer is obliged to issue a taking-over certificate when the works or a section thereof is complete except for 'minor outstanding work and defects which will not substantially affect the use of the Works or Section for their intended purpose'. By Clause 11.1 of the FIDIC Red Book 1999, the contractor is then required to complete those outstanding works within such reasonable time as instructed by the engineer. By Clause 11.4 of the FIDIC Red Book 1999, if the contractor fails to remedy such defects within a reasonable time the employer may employ others to do so at the contractor's expense.

44. See section E of this chapter concerning the extent of the employer's liability for damages for nonconforming work.

45. Clause 10.1 of the FIDIC Red Book 1999.

cases commenting upon other forms of contract. The Court of Appeal case *Westminster Corporation* v. *J Jarvis & Sons*[46] considered the completion provisions in the RIBA Standard Form Contract 1963, which referred to the works needing to be 'practically completed'. Salmon LJ stated:[47]

> 'I take these words to mean completion for all practical purposes, that is to say, for the purpose of allowing the employer to take possession of the works and use them as intended. If completion in clause 21 meant completion down to the last detail, however trivial and unimportant, then clause 22 would be a penalty clause and as such unenforceable.'

4.50 The contractor's departure from the contract scope may be such that it makes no difference to the employer's use and enjoyment of the works, or indeed the value of completed facility. On the other hand, the nature of such a departure may not be 'minor'.

4.51 For example, in the US case of *Jacobs & Youngs* v. *Kent*,[48] which concerned the construction of a house, the contractor installed a type of pipe different from that specified in the contract. The contract called for a specific type of wrought iron pipe manufactured in Reading (USA). The contractor unintentionally used a different type of pipe in some parts of the house which, although identical to 'Reading' pipes in all respects as to material, market value, dimensions, specification and performance, did not come from Reading. The departure from scope was identified only at the end of the project and the cost of replacement was disproportionately high. The contractor therefore refused the architect's order to replace the noncompliant pipes. The Appellate Division of the Supreme Court in New York refused to order specific performance. The court said that compensation by damages would be nominal, because the contractor had substantially performed the contract. It went on to say that rectification would be disproportionate. The owner had shown no intention to rectify and had suffered no loss as a result of the contractor's innocent mistake.

4.52 This case is an example of the not uncommon situation where a contractor departs from the scope without permission, but the change causes little or no detriment to the employer in terms of the utility or value of the completed works. The contractor's right to a completion certificate depends on the wording of the completion certificate provisions in the contract and the extent to which this type of defect can be treated as minor. Certainly, the test in the *Westminster Corporation* case, which considered whether the defect affected utility, would indicate that this type of nonconforming work may be treated as minor even though, as in the *Jacobs* case, the offending material was used extensively on the project.

4.53 Section C of this chapter considers the concept of substantial performance, which was developed to deal with the question whether an employer could refuse to pay for works containing defects under an entire contract. In that context, the courts have similarly been reluctant to

46. [1969] 1 WLR 1448.
47. *Ibid*. at 1458.
48. (1919) 187 AD 100.

allow a situation to arise whereby minor defects prevent the contractor from being paid for valuable work, in respect of which the employer has received the benefit.

4.54 The courts will typically incline towards an approach whereby the employer is compensated in damages or by being required to pay a reduced sum. The complex question then arises as to how damages should be calculated so as to compensate the employer for a departure from the contract scope, which may be significant, albeit with limited impact on the value or utility of the completed works. It will almost certainly be the case that, in this situation, specific performance of the contract will not be ordered by the courts so as to require a contractor to alter noncompliant work at the project completion stage.[49]

4.55 The contractor may have departed from the scope because it was impossible to construct. An employer may be under an obligation to agree a variation in these circumstances,[50] in which case the employer may not be entitled to refuse a completion certificate or to refuse to pay the final instalment.[51]

4.56 This is not to say that an employer is powerless to prevent a contractor departing from the scope without permission. Since such a departure is an unapproved change, the employer will often be entitled to give notice to the contractor under the contract in respect of such defective work, as a precursor to possible termination.[52] However, if the employer does not pick up on the noncompliant work during the project, it may have limited opportunities to insist that it be rectified at completion, especially where the cost of doing so is out of proportion to the detrimental effect on the works. In any event, the employer's failure to challenge the contractor in respect of the noncompliant work may amount to waiver of its right to insist on compliance.[53]

SECTION E: DAMAGES FOR NONCONFORMING WORK

4.57 If a contractor has departed from the contract scope without approval, then the employer's only remedy may be financial.

4.58 The different ways in which damages can be assessed need to be considered in the context of the characteristics of the noncompliant work with which this book is primarily concerned. Of primary interest is the situation where a contractor has implemented a change to the scope without the employer having instructed a variation.

49. The court has discretion to award specific performance and will not award it in respect of a contract for services or where its continuous supervision would be required in order to enforce the order. Performance of a construction contract of any consequence will require regular decisions on matters of judgment, which would require ongoing supervision if the court were to order specific performance. The court has therefore declared itself unable to enforce orders for specific performance of construction contracts, and has generally refused to order it. See *Munro* v. *Wyvenhoe* etc. Ry (1865) 12 LT 655.

50. See Chapter 7.

51. A party cannot take advantage of its own wrong: see para. 7.92.

52. See section B of this chapter. In addition, since such a change is not an instructed variation the contractor will typically not be entitled to money or time, albeit this may be of little consequence if the contractor is reducing the quality of the design, for example by using lower quality materials.

53. *Acme Investments Ltd* v. *York Structural Steel Ltd* (1974) 9 NBR 699: see para. 9.38.

This will be a defect in the sense of there being noncompliant work, but it will often be the case that the completed works are of good quality. However, the substituted materials or changed design may not be what the employer wanted. The utility and value of the facility may not have suffered at all as a result of the departure from scope. **4.59**

In some situations there may also be the added complication that the contractor has departed from the contract scope because that defined scope could not be built.[54] It would therefore have been impossible to deliver the works as described in the contract. **4.60**

The employer's remedy may simply be to deduct from the price paid the part of the contract sum that related to the work that it had not properly completed. The contractor has no right to be paid for work it has not completed. However, this may not be an adequate remedy for the employer because the loss it has suffered as a result of the noncompliant work may be greater. The employer may therefore look to recover damages to compensate it for the contractor's breach. **4.61**

Damages are intended to compensate a party for the loss suffered as a result of the breach. Where a contractor has not undertaken construction works properly and in accordance with the contract, there are three ways in which that loss may be calculated: **4.62**

- the cost of rectifying the works so that they are in accordance with the contract scope;
- diminution in the value of the employer's property, based on a comparison of the value of what the contractor should have provided against what was actually provided;
- the employer's loss of amenity, being the loss the employer will suffer in terms of utilisation of the facility as delivered by the contractor.

Comparison of the different approaches to the assessment of damages

The cost of rectification is generally regarded by the courts as the default measure of damages:[55] **4.63**

> 'What the plaintiff is entitled to recover is the price agreed upon in the specification, subject to a deduction; and the measure of that deduction is the sum which it would take to alter the work, so as to make it correspond with the specification.'

An employer is generally entitled to the cost of rectification, because it is only by restoring the works to the condition specified in the contract that the employer's expectations under the contract can be entirely fulfilled. This principle was summarised by Oliver J in *Radford* v. *De Froberville*:[56]

> 'If he (the building Owner) contracts for the supply of that which he thinks serves his interests – be they commercial, aesthetic or merely eccentric – then if that which

54. See Chapter 3, section D.
55. *Thornton* v. *Place* (1832) 1 M & Rob 218 at 219. Passage cited by Ridley J in *Dakin* v. *Lee* [1916] 1 KB 566 at 571. See also *East Ham Corporation* v. *Bernard Sunley & Sons Ltd* [1965] WLR 1096.
56. [1977] 1 WLR 1262 at 1270.

> is contracted for is not supplied by the other contracting party I do not see why, in principle, he should not be compensated by being provided with the cost of supplying it through someone else or in a different way, subject to the proviso, of course, that he is seeking compensation for a genuine loss and not merely using a technical breach to secure an uncovenanted profit. However where the contractual objective has been achieved to a substantial extent the position may be very different.'

4.64 This passage also refers to the problems associated with awarding damages assessed on the basis of the cost of rectification. If it appears that rectification is unnecessary and it would be unreasonable for the employer to carry it out, then the courts will be reluctant to award damages on this basis. The courts will generally look to cost of rectification and decide whether this is disproportionate to the benefit to the employer of rectification. In doing so, the court will consider factors including the nature and extent of the nonconformance, any effect on market value and the reasonableness of the intention to rectify. If, based on these factors, the cost of rectification is disproportionate to the benefit, the court will look to other measures of damages.

4.65 Proportionality was the deciding factor for the court in *Ruxley Electronics and Construction Ltd* v. *Forsyth*.[57] In that case, a contractor had built a swimming pool a few inches shallower than specified in the contract. The employer's claim for damages, calculated on the basis of the cost of rectification, was rejected by the House of Lords on the basis that it would have been wholly disproportionate to demolish and rebuild a swimming pool in order to increase its depth by such a small amount. The evidence was that the pool, as constructed, fulfilled all the requirements of the owner and so there was no need for rectification.[58]

4.66 The cost of rectification cannot be used as the measure of damages where rectification is not possible. This issue may arise in circumstances where the contractor departs from the contract scope without approval because it was not possible to build in accordance with that design.[59] *Livingstone* v. *Rawyards Coal Co*[60] considered the measure of damages payable to a landowner from under whose land the defendant, without permission and without paying a royalty, had extracted coal, which was sold for profit. It was not possible to replace the coal or to otherwise shore up the ground to provide support to the land above, as the coal had done. It was therefore not possible to calculate the cost of rectification as a measure of damages.[61]

4.687 If damages based on the cost of rectification are not appropriate, because rectification is either disproportionate or not possible (as illustrated by the cases above), then the court must consider the alternatives: loss of amenity or diminution in the value of the asset.

4.68 The House of Lords in *Ruxley* found that, where the cost of rectification is not appropriate, damages should be assessed on the basis of diminution in value. However, since there was

57. [1996] AC 344.

58. The court in *Ruxley* also considered the relevance of the employer's subjective intentions as to rectification of the works. The court found that it was irrelevant whether or not the employer actually intended to rectify the works after damages were awarded. The issue is whether it would be objectively reasonable to insist on rectification in light of the benefits to the employer, which is again a question of proportionality.

59. See Chapter 2, section C.

60. (1879–80) LR App Cas 25.

61. As discussed below, the court awarded damages based on the royalty payable for the coal.

no diminution in value in *Ruxley*, the court found that, in such cases where the object of the contact was to afford pleasure, damages could be awarded on the basis of loss of amenity.

4.69 How loss of amenity should be calculated is not entirely clear and the judgment in *Ruxley* does not set down any clear guidelines. In a construction context loss of amenity is likely to be driven by the loss of income generating potential. For example, if nonconforming work means that a process plant fails to achieve the specified output levels, then damages for loss of amenity may be calculated by reference to the reduced income over the design life of the facility.

4.70 In the context of most commercial construction projects an assessment of damages based on loss of amenity is likely to give a similar result to diminution in value. After all, the reduced capital value of a facility is likely to be driven predominantly by the loss of amenity. Taking the process plant example, the reduced value of the facility will be driven by reduced income over its design life.

4.71 The assessment of diminution in value or loss of amenity is typically not easily established by reference to reduced output levels and a lower income stream. The calculation of the diminution in value is often problematic. If building works have used lower quality materials, it will often be difficult to establish that the property has a lower market value as a result. For example in *Ruxley* it was found that the house, in the grounds of which the fated swimming pool had been built, could not be said to have a lower market value because the pool was a few inches shallower.

4.72 In other cases the courts have focused on what has been described as the diminution in value of the works undertaken rather than the diminution of capital value of the asset itself. In *G.W. Atkins (Ilkeston) Limited* v. *Kenneth N. Scott*[62] the court considered the assessment of damages for defective tiling works in a house, which was not so defective as to justify replacement. Sir David Cairns stated:

> '. . . it is not the diminution in value of the freehold, but the diminution in the value of the work which is given as the measure. In many cases diminution in value of the work will be equal to diminution in the value of the building. As we have seen, the latter has been treated as the appropriate measure in some cases. But the former is more appropriate in a case where the defective work is small in comparison to the value of the house as whole, where sale of the house is not in prospect, where reinstatement would be unreasonable, and where the damage really suffered is, to use the language of paragraph (c) on page 589 of *Hudson*, that the amenity value is adversely affected.'

4.73 The Court of Appeal in *G.W. Atkins* approved the county court's assessment of damages for diminution in value, which was based on diminution in value of the tiling works, rather than the house. The court found that it was appropriate to make such a valuation by reference to an allowance for poor quality workmanship and materials, rather than the difference in the resale value of the finished works as a result of the defects.

62. [1980] 7 Const LJ 215.

4.74 In *Waterdance Ltd* v. *Kingston Marine Services Ltd*[63] the court considered that the cost of repair is prima facie evidence of the diminution of value, irrespective of whether repairs are undertaken.

SECTION F: STANDARD OF RESPONSIBILITY FOR ADDITIONAL WORKS

4.75 A construction contract will place various responsibilities on a contractor in respect of the work it performs. The contractor will be under an obligation to use good quality materials and to undertake the work in a workmanlike manner. It is likely that the contractor will take the risk of being able to build the described permanent works, irrespective of the difficulties associated with the method of building. This is typically called the buildability obligation.[64] The contractor may also have design responsibilities in respect of the work and may have given express warranties as to the long-term performance of the work.[65]

4.76 The application of the normal contractual obligations of workmanship and design in relation to additional work is a matter of contract interpretation. It will typically be the case that the contract treats those obligations as applying to additional work in the same way as they do to the original contract scope. The agreement will set out the nature and extent of the contractor's obligations in respect of the contract scope, but that scope will be defined as incorporating the work that is carried out pursuant to instructed variations.[66] The varied work undertaken by the contractor forms part of the contract scope, in respect of which the contractor's usual obligations and warranties for workmanship and design also apply.

4.77 In certain circumstances this can seem to be an unsatisfactory approach to the allocation of responsibility for additional work. When the contractor tenders for a project it can assess the risks associated with that work. Variations may radically alter the risk profile, to the extent that the contractor would never have agreed to those risks at the outset. However, if a contract was to provide that the contractor had no responsibilities for additional work, the contractor would have no incentive to undertake it properly. In addition, it could be said that the contractor knows at the outset of a project that variations may be instructed and will be aware that under the contract it takes responsibility for that extra work. However, the potential risks associated with such work will be practically impossible to price because the contractor does not know what may be instructed.

63. [2014] EWHC 224 (TCC). See paragraph 18 of the judgment.
64. See Chapter 3, section E.
65. See Chapter 3, section F.
66. Contracts typically define the works under the contract as amounting to the originally defined scope as amended by the employer in accordance with the contract. Unapproved changes will therefore fall outside this definition and are arguably not work that is subject to the contractor's build and design responsibilities. However, in such circumstances, since the undertaking of such work amounts to a breach, the contractor will be responsible for defects with such work in any event.

Design responsibility for varied work

4.78 Variations instructed by the employer may affect the design risk for which the contractor has taken responsibility. This may occur because the employer orders new work, which in itself may be uncontroversial, but has the effect of undermining the integrity or sufficiency of the original design.

4.79 A distinction should, firstly, be made between variations which amount to 'more of the same' and variations which involve a change to the design itself. If the contractor is simply providing more of what it has already agreed to provide on a design and build basis, then it will remain liable for design in respect of the extras ordered by the employer. This does not involve a change to the contractor's warranted design. However, changes to the volume of work that the contractor is supplying can have an impact on the integrity of the design, in which case those 'more of the same' variations will be treated as effectively amounting to changes to the design. For example, the design integrity of an electrical system may be jeopardised if additional loads are added. Each additional load may be considered as a 'more of the same' variation but, taken together, the performance criteria for the electrical system may, as a result, have been transformed into something quite different.

4.80 More controversial will be changes to the works which potentially undermine the integrity of the design.

4.81 Under a design and build contract the contractor will usually have design responsibility for the additional works. Variations under design and build contracts are normally triggered by the employer instructing an alteration of the employer's requirements, such that the contractor is required to redesign based on revised information and criteria.[67] As such, the contractor is free to work out how it will alter the design to achieve the new requirements. Whilst this control may allow the contractor to find a solution which does not burden it with an undue design risk, this will not necessarily be possible. It may, for example, be the case that the employer's new criteria are practically impossible to achieve unless a risky design is adopted.

4.82 Alternatively, the employer may be entitled to directly instruct a change to the permanent works, rather than just altering the employer's requirements or performance criteria.[68] If the employer is responsible for the design information and site data that it has provided as part of the contract, then it seems likely that it will also be taken to be responsible for the equivalent information given in respect of later variations.[69] However, the contract may not expressly place such a risk on the employer.

4.83 Irrespective of how the variation is instructed under a design and build contract, the alteration may require the contractor to undertake works which carry a level of design risk which it would have refused at tender stage.

67. See paras. 3.128–3.223.

68. See *Simplex Concrete Piles Ltd* v. *The Mayor, Alderman and Councillors of the Metropolitan Borough of St Pancras* (1958) 14 BLR 80, discussed *infra* at Chapter 6, section B as an example of such an instruction.

69. See paras. 3.207–3.211, which discuss the way that under certain design and build contracts the employer takes responsibility for the design information and site data which it supplies as part of the employer's requirements.

4.84 In the light of the apparent unfairness of the contractor being made responsible for design in relation to additional work, this section considers the contractor's right to refuse to undertake extra work in such instances, as well as whether its duties in relation to that work may be limited.

The contractor's right to refuse to undertake a variation

4.85 The contractor may be entitled to refuse to undertake the instructed variation. Chapter 5 of this book considers in detail the employer's power to vary, and the limits that may be placed on its ability to instruct a change.

4.86 The contract may contain express restrictions on the power to vary, on which a contractor may be able to rely in these circumstances.[70] The contract may contain restrictions on the type of additional work that can be altered, for example because a product that is needed as part of the additional work is not available,[71] or because the change raises safety concerns.[72]

4.87 Most design and build contracts also incorporate procedures whereby the contractor is consulted on design changes, to take account of the problems associated with contractor's design responsibility for new work. Those provisions will not always entitle the contractor to block changes. The JCT Design and Build Contract 2011 contract puts the onus on the employer to obtain the contractor's consent to any change which requires a design alteration, which the contractor cannot unreasonably withhold or delay.[73] The ICC Design and Construct Contract 2011 contract states that the Employer's Representative has power to alter the Employer's Requirements 'after consultation with the Contractor's Representative'.[74] The contract does not, however, give the contractor an express right to object.

4.88 The FIDIC design and build contracts place the obligation on the contractor, giving it the right to serve a notice, with supporting particulars, if it wants to refuse to undertake the instructed change. The various FIDIC contracts set out different grounds on which an objection can be based. All the FIDIC contracts that incorporate design risk allow the contractor to make an objection if the variation will reduce the 'suitability' of the works or will have an 'adverse impact' on the achievement of the contractual performance guarantees.[75] Having raised the objection the employer can then cancel, confirm or vary the instruction. Where the contractor's right to object to a change, or the employer's right to insist on one, turns on the 'reasonableness' of the parties' respective positions, it will be necessary to consider the impact of the variation on the contractor's design risk. If the change to the works is such that it significantly increases the contractor's risk profile for design, it may well be

70. See, for example, the ENAA Model Form International Contract 2010, discussed at para. 5.54.
71. For example, see FIDIC Silver Book 1999, Clause 13.1 (i).
72. For example, see JCT Design and Build Contract 2011, Clause 3.9.4.
73. JCT Design and Build Contract 2011, Clause 3.9.1.
74. ICC Design and Construct Contract 2011, Clause 51(1).
75. An additional ground for objection in the FIDIC Gold Book 2008 arises where the variation 'will have an adverse effect on the provision of the Operation Service under the Contract'. The Gold Book is the contract in the FIDIC suite that is intended for use when the contractor is not only designing and building the works, but also operating the facility for a period of time afterwards. All the FIDIC design and build contracts also allow the contractor to raise an objection if it cannot readily obtain the 'goods' required for the variation.

treated as being unreasonable, especially if the nature of the change could not have been foreseen. In these circumstances, one solution may be to agree a revised risk allocation for the design of the changed works.

4.89 In the absence of express provisions, the contractor may be able to rely on implied restrictions on the employer's power to vary. Where the instruction would require the contractor to undertake work of a type not contemplated by the contract, the contractor may be entitled to refuse to carry it out.[76] The courts have also implied restrictions, under other types of commercial agreement, on the extent to which a unilateral power to vary a contract can be exercised.[77] Such implied limits on the power to vary may restrict an employer from ordering changes where the extra work required places on the contractor liabilities which are not contemplated by the contract.

4.90 If the contractor is entitled to refuse to implement a variation, it may still agree to undertake it, but may rely on its right to refuse in order to negotiate a limit to its liability in respect of the changed work.

4.91 In situations where the contractor agrees to proceed with the varied work, it may well bear the same obligations in respect of that work as it would in respect of the original contract scope. The cases discussed below indicate that this is the approach that will be adopted.

Liability if the contractor proceeds with the variation

4.92 In *Hall* v. *Burke*,[78] the seller had been employed to build machines for cutting marble, in respect of which it had given a fitness for purpose guarantee. The buyer ordered certain variations to be made to the machines, which the seller implemented. Having been installed, the machines regularly broke down and the buyer claimed damages on the basis that they were not fit for purpose. The seller defended the claim, saying that, since the buyer had insisted on variations to what the seller had originally promised to deliver, the seller no longer had a fitness for purpose obligation in respect of the goods.

4.93 The Court of Appeal distinguished between two types of contractual arrangement for construction: where, as in this case, the contractor agrees to build a machine and it agrees that the machine will achieve a particular purpose; or a contract where the works are defined according to 'a plan' or specification, were there is no design responsibility. The Court of Appeal went on to state:[79]

> '. . . when the manufacturer was to make a machine fit for a particular purpose, and it was left to his skill to make it, even though the customer ordered alterations, the manufacturer had a right to refuse to make those alterations, as he was responsible for the machine under the contract. If the customer were then to insist on them, the contract

76. See *Thorn* v. *London Corporation* (1876) 1 App Cas 120, discussed *infra*, paras. 5.23–5.25.
77. See, for example, *Paragon Finance* v. *Nash* [2001] EWCA Civ 1466 at para. 5.28.
78. (1886) 3 TLR 165.
79. *Ibid*.

> would be altered, and the machine would be made according to a given plan. But if, on the alterations being suggested, the manufacturer adopted them, he could not at the same time say that the contract was altered. . .'

4.94 The court's conclusion seems to be that, where a contractor has a fitness for purpose obligation in respect of works, and the employer's variations will endanger the integrity of that design, the contractor can refuse to implement the changes. If the contractor agrees to implement them, it cannot then seek to argue that its duty in respect of design is lower than stipulated in the contract. However, if the contractor refuses, but the employer insists on the changes, the contractor's obligation is transformed into one 'according to a given plan'. This phase in the language of the judgment means a contract for works strictly in accordance with the employer's specification with no contractor design.

4.95 There are a number of aspects to the case which need to be taken into account in considering the above passage, and its relevance in the context of modern construction contracts. The contract was based on a simple exchange of letters and it would appear that the employer did not have the unilateral power to order variations. Therefore, the contractor would have been entitled to refuse any changes – which, indeed, the passage above seems to reflect. The rationale of the case therefore seems to be that, in circumstances where, despite the contractor's initial refusal, it later agrees to undertake the change, the parties should be taken as having agreed that the change is implemented on the understanding that the contractor will no longer be responsible for design.

4.96 In *Amoco (UK) Exploration Co* v. *Telephone Cables Ltd*[80] the contractor, TCL, was found liable for breach of a contractual warranty for defects in respect of works that the employer varied.

4.97 The contractor had been employed by Amoco to install a fibre optic telecommunications cable, designed to link two oil production platforms in the North Sea. Because of hydrodynamic forces and other hazards, such as anchor wires, the cable had to be carefully protected.

4.98 In the areas close to the platform the contractor had planned to bury the cable in a trench to be dug using a machine called the Eureka. The trench was then to be covered with concrete mattresses – hexagonal concrete blocks linked together by flexible couplings.

4.99 The employer then decided to change the route for the cable, such that it would now pass close to floating accommodation units, called flotels, used by the workers on the platforms. Those flotels were anchored with wires close to the platforms, and the cable would therefore require further protection from the wires. In addition, it transpired that the Eureka would not be available to undertake the trenching.

4.100 As a result of these two developments the parties agreed a change to the planned method of undertaking the works close to the platforms. It was proposed that a hard polyurethane clad-

80. [2002] EWHC 2534 (Comm).

ding product called uraduct would be used instead to provide protection. It was suggested that rocks would then be dumped on top of the cladding to provide additional protection. However, the employer effectively vetoed this additional form of protection because the rock dump could only have been implemented had the flotels been temporarily relocated, and this would have resulted in disruption to work on the platforms. The agreed change was instructed under the contract and was referred to as CVN1. Langley J stated:[81]

> 'CVN1 was a jointly arrived at solution to a problem with two causes: the lack of Eureka and Amoco's strong desire. . . for all necessary work to be done with the flotels alongside the platforms.'

4.101 Shortly after the work was undertaken there were heavy storms, the uraduct protection failed and the fibre optic cable was damaged, resulting in over £1 million of repair costs. Article 5 of the contract contained a defects warranty, under which the contractor promised that its work would be free from defects for two years.

4.102 The judge found that the warranty under article 5 had not been varied as a result of CVN1. It still applied despite the fact that the works were varied:[82]

> 'The contract was not varied in any significant respect. CVN 1 alone could qualify as such. But it refers to "completing" the platform approaches with the flotels on station. The obligations upon TCL were not referred to let alone varied. . . TCL remained under obligations to provide a system free from defects and suitable for its purpose and to repair it at its own cost if defects became apparent within 24 months. . ."

4.103 The judgment records that Counsel for the employer acknowledged that 'if Amoco had instructed TCL not to complete its design or interfered with TCL's performance of the agreement then TCL might have defences to the claim'.[83] Counsel for the contractor had submitted that this is what had occurred, although the judge indicated that he preferred the employer's submission.

4.104 On one view it could it could be said that the employer interfered with the contractor's work by instructing a variation. However, since the employer is entitled to instruct a variation, this may not be considered to amount to interference. As the earlier quoted passage from this judgment indicates, the variation was agreed between the parties as a jointly prepared solution. In this sense, the approach may be considered similar to the approach of the court in *Hall* v. *Burke*,[84] whereby by the contractor's decision to comply, without protest, with a proposed change, meant that it accepted the standard of liability set out in the contract in relation to the varied works.

4.105 The reason why the variation is required may be perceived as relevant in such situations. If the variation is required because of an event for which the contractor is responsible, it would

81. [2002] EWHC 2534 (Comm) at para. 36.
82. *Ibid.* at para. 52.
83. *Ibid.*
84. (1886) 3 TLR 165.

seem highly likely that the contractor would take the usual contract standard of risk. In this case the judge indicated that there were two reasons for the change, one of which was the employer's responsibility and the other belonging to the contractor.

Contractor's buildability obligations in relation to varied work

4.106 In the absence of express provisions to the contrary, a contractor will take the risk of being able to build the described permanent works, irrespective of the difficulties associated with the method of building. This is typically called the buildability obligation and is discussed in detail at Chapter 3, section F.

4.107 At the point in time when the contractor is deciding whether to tender for a new piece of work, it makes an assessment of the difficulties of building the project, and prices the risks accordingly. It has no such opportunity with newly instructed work.

4.108 Standard form contracts do not typically indicate that a contractor's liability in respect of varied work is different from that for the original contract scope. The difficulty in constructing may simply lead to additional costs, which may be compensated under the valuation rules. However, the additional cost may not be compensated or it may simply be impossible to undertake the new work.

4.109 Where the additional work in question is the same as, or similar to, that in the original scope, it seems unlikely that the contractor would be able to refuse to undertake the additional work, or claim that it owes a lesser responsibility in respect of it. Such variations, which are effectively 'more of the same', are likely to be treated in the same way as the contract scope work.

4.110 A different approach may be taken in respect of additional work which is not the same as that in the original scope. The contractor may be entitled to refuse to undertake it. The contract may contain an express right for the contractor to refuse to undertake extras if, for example, it has safety concerns or if the change will affect the contractor's performance guarantees.[85] The contractor may equally be able to rely on implied restrictions on the employer's power to instruct additional work.[86]

4.111 There is some case law to support the proposition that the contractor may seek to refuse to undertake additional work where this will unreasonably saddle it with a build obligation. In *Slowey* v. *Lodder*[87] a contractor was undertaking work to construct a tunnel. The employer instructed a variation which required the contractor to increase the thickness of brick used in the tunnel construction. As a result the tunnel collapsed part way through construction, causing the contractor to incur additional costs, for which it claimed in subsequent litigation.

85. See Chapter 5, section B.
86. See paras. 5.19–5.34.
87. (1900) 20 NZLR 321.

4.112 The employer defended the claim on the basis of the established *Thorn*[88] rationale, that no implied warranty was given as to the buildability of the works using the thicker bricks, and that the contractor therefore effectively agreed that it would perform the works, albeit they were instructed as a variation. The New Zealand Court of Appeal agreed with the employer's analysis. It expressed the view that, if the additional work could be treated as being outside the contract entirely, the position would have been different. The contractor would then have been entitled to refuse to carry out such works. However, the contractor proceeded with the varied work without complaint. It was therefore precluded from subsequently denying that it did not have the same degree of responsibility for that new work as would have attached to the original contract work. The contractor's claim for the costs it incurred as a result of the collapse was therefore rejected.

4.113 In practice, a contractor faced with this type situation should consider obtaining the employer's agreement that, if it proceeds with additional or varied work of a type outside the original scope, its obligations will be more limited; in particular, that it will not owe the same buildability obligations, to the extent that these may arise.

88. *Thorn* v. *London Corporation* (1876) 1 App Cas 120.

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CHAPTER FIVE

POWER TO VARY

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SECTION A: INTRODUCTION

5.1 Obligations under a contract cannot be varied unilaterally unless the contract provides for this. If a seller has agreed to supply a particular product, the buyer can normally only change that product by agreement. If the contract is to be varied, then the same requirements regarding mutual agreement and consideration apply, as they would in relation to entering into a new contract.[1] Varying the scope of works under a construction contract involves changing the obligations of the contractor and this is no different, in principle, from varying any provision of the contract.[2] An employer therefore has no implied unilateral right to vary the works.[3]

5.2 If an employer were individually to negotiate each change to the scope, this would be very time-consuming and put it in a weak commercial position. Most construction contracts therefore give the employer the right to vary the scope. Such a power to unilaterally vary the obligations of the parties under a contract is relatively uncommon in other commercial contexts.[4] Since the parties have pre-agreed as part of the contract that the employer may

1. See Chapter 9, section C dealing with such requirements in the context of a consensual variation to the contract scope.

2. The fact that the description of the product to be supplied under a construction contract is normally contained in technical appendices to the agreement does not mean that this does not represent a contractual obligation. Contracts for the supply of less complex and sophisticated goods will typically describe them in the main body of the agreement. See also Sean Wilkin and Karim Ghaly, *The Law of Waiver, Variation and Estoppel*, 3rd Edn (2012, Oxford University Press), para. 19-04. See discussion of this issue in the context of third-party rights in section F of this chapter.

3. *SWI Ltd* v. *P&I Data Services Ltd* [2007] EWCA Civ 663; [2007] BLR 430; SWI tendered for and subsequently entered into two subcontracts with P&I. In the course of both subcontracts P&I: (i) requested that SWI carry out further works; and (ii) omit certain works. The net effect was that SWI had carried out less work than tendered for. P&I paid SWI the value of works carried out, rather than the subcontract sum. In finding that SWI was entitled to the full subcontract sum, the Court of Appeal held that there was no implied term entitling P&I, unilaterally, to vary the contract by reducing the work to be done. Waller LJ stated at para. 18 of his judgment: '. . . without some term allowing for variations under a fixed price contract to perform works, the paying party is not entitled to vary the contract. . .'.

4. Whilst a unilateral power to vary is uncommon under other types of contract, such provisions are sometimes used. See *Chitty*, para. 22-039. In *May* & *Butcher Ltd* v. *The King* [1934] 2 KB 17 one party to a contract for the sale of goods was entitled to operate a price escalation clause. In *Paragon Finance* v. *Nash* [2001] EWCA Civ 1466; [2002] 1 WLR 685 a lender had the unilateral power to vary the interest rate. However, the courts may imply limitations on the operation of such a unilateral power to vary which may otherwise be unfettered. See discussion later in this section.

change the scope, there is no need for them to both consent to each individual change, as would be the case with a normal variation to a contract.[5]

5.3 The employer's right to vary derives from the contract and therefore it must be exercised in accordance with the express restrictions and procedures set out in the contract. This section also discusses the way in which implied terms may restrict the power to vary the works.

5.4 Generally speaking, the power to vary the works under a construction contract is drawn very widely.[6] It is of considerable benefit to the employer to have no, or limited, restrictions on its right to vary. If unexpected problems arise on a project the employer will want as much flexibility as possible to vary the works so as to achieve its objectives. This power will often allow the employer not just to change the permanent works, but also many other aspects of the conditions on site and how the works are undertaken.

5.5 To take some examples from standard form contracts to illustrate this: JCT Standard Building Contract 2011, Clause 5.1, provides:

> '5.1 The term "Variation" means:
>
> .1 the alteration or the modification of the design, quality or quantity of the Works including:
>
> .1 the addition, omission or substitution of any work;
>
> .2 the alteration of the kind or standard of any of the materials or goods to be used in the Works;
>
> .3 the removal from the site of any work executed or Site Materials other than work, materials or goods which are not in accordance with this Contract;
>
> .2 the imposition by the Employer of any obligations or restrictions in regard to the matters set out in this clause 5.1.2 or the addition to or alteration or omission of any such obligations or restrictions so imposed or imposed by the Employer in the Contract Bills or in the Employer's Requirements in regard to:
>
> .1 access to the site or use of any specific parts of the site;
>
> .2 limitations of working space;
>
> .3 limitations of working hours; or
>
> .4 the execution or completion of the work in any specific order.'

5. A consensual variation, as opposed to a unilaterally ordered one under a variations mechanism to a contract, will require mutual agreement and consideration. With a unilateral variation, the parties have agreed that the employer may alter their contract obligations provided it does so in accordance with the contract provisions. In terms of consideration, as part of the mutual promises underlying the contract the employer negotiated its power to vary, so further consideration when the variation is instructed is not strictly speaking required albeit the contract will typically entitle the contractor to extra money.

6. This may be compared, for example, to shipbuilding contracts where the buyer has much less power to instigate changes during the course of construction. The buyer can normally ask for changes to be made but the contractor will typically have complete discretion as to whether it chooses to implement them. For a construction contract containing more extensive restrictions on what can be ordered see ENAA 2010 Contract, Clause 39.1, discussed further *infra*, para. 5.54.

ICC Measurement Contract 2011, Clause 51, describes the scope of variations as follows: **5.6**

> '. . . variations may include additions omissions substitutions alterations changes in quality form character kind position dimension level or line and changes in any specified sequence method or timing of construction required by the Contract and may be ordered during the Defects Correction Period.'

FIDIC Red Book 1999, Clause 13.1, includes the following description: **5.7**

> 'Each Variation may include:
>
> (a) changes to the quantities of any item of work included in the Contract (however, such changes do not necessarily constitute a Variation),
>
> (b) changes to the quality and other characteristics of any item of work,
>
> (c) changes to the levels, positions and/or dimensions of any part of the Works,
>
> (d) omission of any work unless it is to be carried out by others,
>
> (e) any additional work, Plant, Materials or services necessary for the Permanent Works, including any associated Tests on Completion, boreholes and other testing and exploratory work, or
>
> (f) changes to the sequence or timing of the execution of the Works.'

These standard form provisions illustrate that the variations that an employer can make go beyond alterations to what is built. They also include the power to change how the works are built by allowing changes to the 'specified sequence method or timing of construction'. They can also allow the employer to make changes to the working environment by empowering changes to be made to the 'access to the site', 'limitations of working space' or 'limitations of working hours'. **5.8**

Whether the contract empowers the employer to alter how the works are undertaken, or the site environment, will depend on the contractual risk allocation and the degree to which the contractor takes responsibility for the construction method. The contract scope of works may describe the permanent works that the contractor has to deliver but place no restrictions on how the works are required to be built.[7] If so, the contract will not normally provide that those aspects of the works can be changed. After all, an employer will have no need to instruct a variation to a feature of the works which is the contractor's responsibility or risk anyway. Understandably, the employer does not want to open itself up to the charge that it has, for example, changed the sequence of work when the choice of sequence was always up to contractor and its responsibility to determine.[8] **5.9**

7. See Chapter 3, section E.

8. Where the employer has the power to alter aspects of the working conditions via a different power in the contract, an instruction to change will not amount to a variation. See *Kitsons Sheet Metal Ltd* v. *Matthew Hall Mechanical & Electrical Engineers Ltd* (1989) 47 BLR 82, in which a main contractor was in any event entitled to alter a subcontractor's working sequence such that the instruction so directing it did not constitute a variation. See Chapter 3, section C.

5.10 The variations clause may state that the contractor is entitled to refuse to undertake certain changes under certain conditions. Such refusal may be judged on whether it is 'reasonable' or may turn on the contractor being able to establish specific concerns, such as an inability to procure the relevant materials, or safety issues.[9] Such objections may require the contractor to give notice within a specified period of the variation being instructed.

5.11 The right to object may vary depending on the type of change instructed. For example, the right to object under the JCT Standard Building Contract 2011 applies only in respect of those variations under Clause 5.1.2, which concern site conditions, and not in relation to those under Clause 5.1.1, which relate to changes to the work itself.[10]

5.12 The contract may provide that the employer, or its representative, must exercise the power to vary in accordance with certain aims. For example, Clause 51(1)(b) of the ICC Measurement Contract 2011 states that the engineer 'may order any variation that for any other reason shall in his opinion be desirable for the completion and/or improved functioning of the Works'.[11] Such a provision sets some limit on the employer's power, albeit a requirement that the variation needs to be desirable for completion or improved functioning is very wide. It will constrain the employer's ability to order works that are outside the parameters of the original project design.

5.13 The contract may contain other provisions, in addition to the variations clause, that allow the employer the alter the work. These provisions will typically allow a change to the way the works are undertaken rather than alterations to the permanent works themselves. For example, the employer may be entitled under the contract to alter the contractor's sequence of working under contractual powers that are separate from the mechanism for the instruction of variations.[12] The contract may also allow the contract administrator to direct the contractor as to how the temporary works are undertaken.[13] This type of clause will often allow the employer to alter the way that the works are undertaken but without the contractor being entitled to additional money and time in return.[14] Alternatively, such clauses may state that the employer can request changes but with a requirement that the contractor agrees to them, with the details of the change and compensation due open to

9. Examples: a 'reasonable objection' is the test under JCT Standard Building Contract 2011, Clause 3.10.1. An inability to procure the 'Goods' required for the variation is a reason for objection under FIDIC Red Book 1999, Clause 13.1. The FIDIC Silver Book 1999 allows the contractor to object where the variation will reduce the safety or suitability of the works, or will have an adverse effect on the Performance Guarantees (Clause 13.1).

10. See JCT Standard Building Contract 2011, Clause 3.10.

11. The ICC Measurement Contract 2011 also puts an obligation on the engineer to instruct variations in certain circumstances. Clause 51(1)(a) states that the engineer 'shall order any variation to any part of the Works that is in his opinion necessary for the completion of the Works'. See Chapter 7 concerning the duty to vary arising as a result of this clause.

12. This is much more common under subcontracts where a contractor may be able to rearrange the sequence of timing of subcontract trades under what are often referred to as 'beck and call' arrangements. See *supra*, paras. 3.114–3.118, for a discussion of *Kitsons Sheet Metal Ltd* v. *Matthew Hall Mechanical & Electrical Engineers Ltd* (1989) 47 BLR 82 which illustrates how this may operate.

13. See *supra*, paras. 3.191–3.195, and the case *Neodox Ltd* v. *The Mayor, Aldermen and Burgesses of the Borough of Swinton and Pendlebury BC* (1958) 5 BLR 34 which illustrates this.

14. Compare to provisions that allow compensation for changes that become necessary as a result of specified risks: see Chapter 9, section H.

negotiation.[15] This is particularly the case with contract provisions for acceleration instructions.[16] If a contract allows for variation instructions, and also contains such an alternative clause that allows the employer to direct changes under specific circumstances, then the question may arise as to which clause the change has been directed under. This will be particularly relevant if the alternative provision allows the employer to vary at no cost but the contractor would be entitled to money and time under the variations mechanism.[17]

5.14 Certain contract provisions allow for changes to the works in the context of particular events, such as the discovery of unforeseen ground conditions. These will often contemplate variation instructions being issued in these circumstances. Compensation may be due under such provisions even in the absence of instructions.[18]

Characteristics of varied work

5.15 A variation will have a number of characteristics. The contract may limit the right to vary the works by reference to these characteristics:

- the type of work that can be instructed: see section B;
- the volume or extent of the varied work that can be instructed: see section C;
- the point in time when variations can be instructed: see section D;
- the omission of work from the contract scope: see section E.

5.16 The later sections of this chapter consider the limitations that contracts typically contain in respect of these characteristics. This introductory section comments on general issues that are relevant to all of the characteristics. Section E, as well as considering limitations on the employer's right to omit work from the contractor's scope, also considers the extent of the employer's obligation to allow the incumbent contractor to undertake additional work on the project.

5.17 Where the contract contains express limits in relation to one of the characteristics listed above, such as a cap on the volume of extra work that may be instructed, then the employer will not be entitled to order a change in excess of that cap. It may seek to instruct the variation anyway and the contractor may waive its right to refuse the change and carry out the work anyway. Such constraints are also important in the context of the contract administrator's authority to vary the works. The contract administrator only has authority to vary the works in accordance with the provisions of the contract and so an instruction to vary that

15. A provision that does no more than allow the contract administrator to propose a change but requires the contractor's agreement is little more than a formal arrangement that allows a consensual variation to be agreed. The advantage is that it avoids the problems arising from the contract administrator not having authority: see Chapter 8, section C.

16. See, for example, ICC Measurement Contract 2011, Clause 46(3), which states: 'If the contractor is requested by the employer or the engineer to complete the works or any section within a revised time being less than the time or extended time for completion prescribed by clauses 43 and 44 as appropriate and the contractor agrees to do so then any special terms and conditions of payment shall be agreed between the contractor and the employer before any such action is taken.'

17. This issue is illustrated by *Kitsons Sheet Metal Ltd* v. *Matthew Hall Mechanical & Electrical Engineers Ltd* (1989) 47 BLR 82, reviewed *supra*, paras. 3.114–3.118.

18. For example, unexpected ground conditions clauses. See Chapter 9, section H.

goes beyond those contractual limits is not authorised. Whilst the contractor will be entitled to refuse to carry out work beyond these limits, its objection will often arise out of a concern that it will not be properly paid for such additional work. It is therefore often necessary to consider such constraints in the context of the valuation rules for variations.[19]

5.18 It should be remembered that these limitations apply to variations that are instructed under the contract mechanism. The employer and contractor may agree to vary the works outside of the contract procedure, in which case these contractual limitations will not apply.[20]

Implied limits on the power to vary

5.19 Because variations clauses are normally very widely drafted, contracts will often contain no express restrictions in respect of some of these characteristics, in particular the volume and type of extra work. This can prove problematic for the contractor, and it may have to seek to rely on implied restrictions on the right to vary, if the employer seeks to order what it considers to be unreasonable changes.

5.20 Even where the contract contains a broad power to vary, of the type illustrated by the clauses set out at paragraphs 5.5–5.7 above, the courts have found that there are implied limits on this right.

5.21 The reasoning that has been adopted is that a 'variation' means a change to the works that the contract describes, and not the building of something quite different, and that any such change is therefore constrained by the scope of the project envisaged by the contract.

5.22 This is a difficult concept to articulate and define since, clearly, a variation will extend to works that are, by definition, different from the original scope. To apply such a limitation it is necessary to identify a broad project outline that is contemplated by the contract, which limits the nature and extent of variations which may be instructed. The courts certainly recognise such an implied limitation, but determining whether a proposed variation offends the rule, in marginal cases, is difficult to assess because of the lack of clear judicial rules and precedent.

5.23 The following passage from the judgment of Lord Cairns in *Thorn* v. *London Corporation* is referred to regularly in this context, albeit the comments are *obiter*:[21]

> '. . . either the additional and varied work which was thus occasioned is the kind of additional and varied work contemplated by the contract, or it is not. If it is the kind of additional or varied work contemplated by the contract, he must be paid for it, and will be paid for it, according to the prices regulated by the contract. If, on the other hand,

19. These issues concerning the right to refuse to undertake work, the contract administrator's authority to instruct, and compensation via the valuation rules are explored in further detail later in this section.

20. See Chapter 9, which discusses the various ways in which the scope may be changed outside of the contract procedure; for example, by consensual variation or by the additional works being undertaken under a collateral contract.

21. (1876) 1 App Cas 120 at 127–128. The background to the case is discussed further *supra*, in Chapter 3, section E.

> it was additional or varied work, so peculiar, so unexpected, and so different from what any person reckoned or calculated upon, that it is not within the contract at all; then, it appears to me, one of two courses might have been opened to him; he might have said: I entirely refuse to go on with the contract – *Non haec in foedera veni*:[22] I never intended to construct this work upon this new and expected footing. Or he might have said, I will go on with this, but this is not the kind of extra work contemplated by the contract, and if I do it, I must be paid a quantum meruit for it.'

5.24 As regards the point made in the final sentence of this passage concerning the options open to a contractor faced with an instruction, this issue is commented upon later in this section.[23]

5.25 Importantly, the above passage indicates that a contract will contemplate that a certain kind of additional and varied work may be instructed under the contract. But, this may be distinguished from work that is 'so peculiar, so unexpected, and so different' that the contractor may refuse to carry it out.

5.26 The idea that there is a general implied limitation on the nature of variations that may be instructed may be applied in a number of contexts: it could limit the type of extra work that the employer can request;[24] it may also constitute an implied restriction on the volume of variations.[25]

5.27 The courts have often sought to ensure that a unilateral power to vary is not used in a manner, and to a degree, which was not contemplated by the parties. In the context of a case concerning the omission of work, HHJ Humphrey Lloyd stated that a variation can be ordered only 'for a purpose for which the power to vary was intended'.[26]

5.28 Where a unilateral power to vary has been included in contracts in other commercial, but non-construction contexts, the courts have also implied restrictions on the exercise of the power. In *Paragon Finance* v. *Nash*,[27] loans were made under agreements which allowed the finance company unilaterally to vary the interest rate charged. The Court of Appeal found that despite the contract including a wide express power to vary the interest charged, an implied term to restrict the power was required to 'give effect to the reasonable expectations of the parties'.[28] If no such implied term was imposed, then, as the court recognised, the finance company would have been completely free to specify interest rates at an exorbitant level. Therefore, the discretion to operate the power to vary the rates 'should not be exercised dishonestly, for an improper purpose, capriciously or arbitrarily'.[29] The rationale of

22. It was not this that I promised to do.
23. See paras. 5.35–5.43.
24. See section B of this chapter. The passage from *Thorn* was relied upon successfully, for example, in *Blue Circle Industries Plc* v. *Holland Dredging Co* (1987) 37 BLR 40 in respect of the type of additional work that could be instructed.
25. See section C of this chapter.
26. *Abbey Developments Ltd* v. *PP Brickwork Ltd* [2003] EWHC 1987 (TCC); (2003) CILL 2033 at para. 50. See section E of this chapter, which considers this case in further detail.
27. [2001] EWCA Civ 1466; [2002] 1 WLR 685.
28. *Ibid*. at para. 42.
29. *Ibid*. at paras. 30–32.

this case was discussed, and followed, in *Esso* v. *Addison*,[30] which involved proceedings by Esso against several petrol station licensees. Under the licence agreements Esso was entitled to adjust various margins, allowances and fees imposed on the licensees. The court found that it was implied that Esso could not exercise its powers under the contract so as to make it commercially impossible for the licensee to operate the service station.[31] Similar implied limits on the power to exercise a unilateral right to vary have also been found to exist in the context of employment contracts.[32]

5.29 The implied constraints placed on the exercise of a unilateral right to vary in both *Paragon Finance* and *Esso* were considered necessary because of the commercial power one party would otherwise be able to exercise. Such situations are less likely to arise under construction contracts as they typically entitle the contractor to be paid for variations. Indeed, if the employer wants to instruct changes which involve work that is significantly different from that envisaged under the contract, then it will normally have to pay an uplift.

5.30 Most standard construction contracts provide that where the characteristics of the additional work (as listed above at paragraph 5.15) are similar to the original contract work, then the rates or prices which the employer pays are the same. However, if the additional work displays characteristics which are dissimilar, then the rates are adjusted. Therefore, if the work is of a different type, then the contract rates are adjusted so that the contractor is compensated fairly for the extra work, in line with the cost of undertaking it. Furthermore, if there is a significant volume of additional work, then the rates may also be adjusted.[33]

5.31 Therefore the principal complaint a contractor is likely to make in relation to the characteristics of the extra work – that the extras are creating a financial burden – is often neutralised by the contract valuation provisions. However, this will not always be the case. The contract rates for the additional work may be such that the contractor is compensated at less than cost and the contract may not be sufficiently flexible to allow a suitable adjustment. In these circumstances, it may be that the rationale of *Paragon Finance* could be relied on, although there is no precedent in a construction contract context.

5.32 In the US a contractor may rely on the concept of 'cardinal change' if an employer seeks to instruct variations that are not in keeping with what was contemplated by the

30. [2003] EWHC 1730 (Comm).

31. *Ibid*. at paras. 135–136 and 145–149.

32. *Wandsworth London Borough Council* v. *D'Silva* [1998] IRLR 193. An employment contract allowed for the variation of its terms and conditions. It was found that unilaterally changing the period of absence that would trigger a mandatory assessment by a medical practitioner from 12 months to 6 months was permitted. Lord Woolf MR stated that 'The general position is that contracts of employment can only be varied by agreement'. Whilst recognising that a contract may allow one party the right unilaterally to vary the contract, he stated that 'clear language is required to reserve to one party an unusual power of this sort. In addition the court is unlikely to favour an interpretation which does more than enable a party to vary contractual provisions with which that party is required to comply'. *Newbold* v. *Leicester City Council* [1999] ICR 1182 involved the unilateral alteration of employee benefits. Auld LJ made reference to the above passage in the *Wandsworth LBC* case, and stated: 'There are a number of obstacles to the council's suggested unilateral variation. . . such a provision, if it is to enable unilateral variation of a contract, requires utmost clarity.'

33. See Chapter 11, section B.

parties.[34] If the contractor can establish a cardinal change, then it may be entitled either to refuse to undertake the works or to receive additional payment for undertaking that additional work. It is said to apply when the changed works that are required to be constructed are not 'essentially the same work as the parties bargained for when the contract was awarded',[35] such as to justify a price adjustment to cover the increased project cost and time. The theory has been supported by a number of leading US judgments, albeit the courts have typically gone on to find that, on the facts of the particular case being considered, the contractor had not established that the work in question was sufficiently different to amount to a cardinal change and therefore entitle the contractor to an uplift.[36] One exception is *Luria Brothers & Company Inc* v. *United States*.[37] The employer had provided the contractor with plans and drawings for the construction of a large airplane hanger. The ground conditions encountered were different from those predicted, such that extensive changes to the foundations were required. The nature of the work changed so radically that the contractor was able to establish that a cardinal change had taken place.

5.33 Under English law, such a change to the design of foundations, in these circumstances, would need to be instructed by the employer and compensation assessed in accordance with the contract valuation provisions. If it was a change of a type that the employer was not empowered to instruct, then the contractor could refuse to undertake it.[38] However, if the contractor did agree to undertake the works on the basis of a variation instruction, it will normally have waived its right to refuse and the work would be valued as a contract variation.[39] The English courts have been very reluctant to allow a contractor to bypass the contractual procedures for ordering and compensating changes, so as to reassess its entitlement via an effective remeasure of the whole of the work undertaken.[40]

5.34 The difficulty with the application of the cardinal change theory is the uncertainty as to when it will apply. It has been said that there is 'no exact formula for deciding when a change is unauthorised by the contract and therefore a breach of it'.[41] In many ways the

34. The concept of cardinal changes arose in the US in relation to government contracts. Cardinal changes led to a claim for breach of contract, rather than claims under the contract. The distinction was of some procedural significance. As a breach, rather than a claim under the contract, such claims prior to the Contract Disputes Act 1978 had to be taken to the Court of Claims, rather than to the various boards of contract appeals. A similar procedural distinction is also relevant to the US concept of Constructive Change.

35. *Air-a-Plane Corporation* v. *United States* (1969) 408 F 2d 1030 at para. 7.

36. *Laburnum Construction Corporation* v. *United States* (1963) 325 F 2d 451. The case concerned a contract for the installation of approximately 10,000 feet of high-pressure steam line at a US Naval Base. The work took almost 50 per cent longer than the contract period to complete. The court decided that the changes made in this case did not fundamentally alter the nature of the bargain between the parties.

J.D. Hedin Construction Company v. *United States* (1965) 347 F 2d 235. The case concerned a hospital construction project. The 504-day contract period was extended to 1,408 days, and there were 33 major change orders. The Court of Claims found that there had been no cardinal change.

37. (1966) 369 F 2d 701.

38. For example, if it fell within the test in *Thorn* v. *London Corporation* (1876) 1 App Cas 120 of being completely unexpected and different work. See discussion later in this section in relation to the contractor's remedies.

39. See discussion later in this section in relation to the contractor's remedies.

40. See section C of this chapter and the discussion in relation to *McAlpine Humberoak Ltd* v. *McDermott International Inc (No. 1)* (1992) 58 BLR 1.

41. *Laburnum Construction Corporation* v. *United States* (1963) 325 F 2d 451 at para. 30.

concept is very similar to that outlined in *Thorn* v. *London Corporation*,[42] discussed above. Any such theory suffers from the same difficulty in defining, with any certainty, the parameters of contemplated change. As discussed previously in the context of *Thorn*, variations provisions by their nature allow change. It is therefore difficult to pinpoint what degree of change the contract does contemplate, and therefore what variations fall outside of the contractual power.

Contractor's refusal to undertake works and right to additional payment

5.35 If the employer seeks to instruct work that it is not empowered to instruct, then the contractor can refuse to undertake it.[43]

5.36 The contract may be clear as to whether the employer is entitled to instruct the change, for example where the limitation relates to an express contract provision such as a cap on the amount of work that may be carried out. However, the contractor's refusal to undertake work will be contentious when there is uncertainty as to whether the change is beyond that which the employer has the power to instruct. Such uncertainty will in particular arise when the contractor relies on very general implied limitations.[44]

5.37 If the employer disagrees with the contractor's assessment of the express and/or implied contractual limits, then the contractor's refusal to undertake the change may lead to the employer terminating the contract. Indeed, if the proposed change needs to be undertaken in order to allow the project to proceed, then the employer may consider that it has no choice but to take this step. The uncertainty of the law in relation to implied limits on variations can lead to a situation where the parties may have to take steps which involve significant risk. After all, a decision as to whose analysis of the contract obligation is correct may only be made by a tribunal at a much later stage.[45]

5.38 The contractor may refuse to undertake the works for a variety of reasons. It may be concerned about the risks associated with the changed work,[46] or the additional work may extend its time on the project in circumstances where it wants to move its resources on to a different

42. (1876) 1 App Cas 120

43. As the passage from *Thorn* (quoted earlier at para. 5.23) states, if the work instructed is beyond the limits contemplated, the contractor has two options. It can 'refuse to go on with the contract' or it can say to the employer, 'I will go on with this, but this is not the kind of extra work contemplated by the contract, and if I do it, I must be paid a quantum meruit for it.'

44. See earlier discussion at paras. 5.22–5.26 in relation to *Thorn* and vague limits on the power to direct changes where the contractor's right to refuse to undertake the extra work depends on establishing that it is 'so peculiar, so unexpected, and so different' from that contemplated by the contract.

45. One possible solution, which reduces the parties' risks, is for them to agree that the works proceed on the basis that the contractor is compensated at a uplifted rate if it subsequently establishes that it is correct in its assessment. The parties could alternatively seek a determination from an interim fast-track tribunal, such as an adjudicator or Dispute Resolution Board. This type of situation can be compared to that which sometimes arises when the employer does not issue an instruction because it considers that the contractor is obliged to undertake a change to the design anyway. See Chapter 2, section D, where this is discussed.

46. See Chapter 4, section F. The contractor may have a reasonable risk of objection in these circumstances. See section B of this chapter.

job. Typically, however, the objection will be because it is not going to be adequately compensated for the new work.[47]

5.39 As discussed previously in this section, contract valuation provisions are normally very flexible and they will typically allow work that is different from that contemplated by the contract to be paid with an uplift. The contractor will normally be compensated for work that is different in nature to the original contract work or, where there are significant increases in volume, or where the work is undertaken in a different environment.[48] If the contract does not contain such provisions, or they do not allow for a sufficiently generous uplift, then the contractor may refuse to carry out the work as a means of negotiating an uplift.

5.40 If the contractor undertakes work instructed under the contract but which is beyond the contractual limits, it seems likely that the contractor will be treated as having waived any possible right to have the work treated as anything other than a normal contract variation. If the contractor wants an uplift, it should seek to negotiate it at the time the change is instructed. Otherwise, it will have undertaken the varied work on the basis of an instruction issued under the variation clause, and the contractor can expect it be valued in accordance with the contractual rules.[49]

5.41 There are cases where the courts have found that the contractor is entitled to be paid at rates that are different from those that would apply to contract variations. However, this has arisen in circumstances where the contractor has put the employer on notice that it considers that the change is not a contract variation and therefore it has not waived its right to have the work valued outside the normal contract rules.[50]

5.42 If the change is ordered by the employer in a manner that is not in accordance with the contract mechanism, then it is likely to be treated as an agreed alteration to the scope but not a contract variation. For example, it may be a consensual variation or a concession by the employer to allow the contractor to depart from the contract works. In these circumstances, the contract limitations do not apply. The contractor may then be entitled to have the work valued on a different basis from the contract variation rates.[51] This type of change will need to be approved by the employer as the contract administrator will not have authority to alter the works, other than via the formal variations mechanism.[52]

47. As the previously quoted passage from *Thorn* states, if the work is beyond the contractual limits and the contractor proceeds, it will want to be paid a *quantum meruit* for the work, i.e. a fair and reasonable payment for the undertaking.

48. See Chapter 11, section B.

49. *Alfred McApline & Son (Pty) Ltd* v. *Transvaal Provincial Administration* [1974] 3 SALR 506.

50. See *Costain Civil Engineering Ltd* v. *Zanen Dredging and Contracting Company Ltd* (1996) 85 BLR 77, discussed further in section B of this chapter. The nature of the subcontractor's work was such that it was found not to fall to be instructed as a variation under its contract. The subcontractor had raised the point at the time with the main contractor, and the court found that it fell to be valued on a *quantum meruit* basis.

51. See also *Russell* v. *Viscount Sa Da Bandeira* (1862) 143 ER 59, where the contractor established that certain work undertaken outside the main contract period should be treated as having been undertaken under a collateral contract and therefore valued on a reasonable basis. In that situation, the work had not been authorised by means of written instructions as required under the contract variation mechanism.

52. See Chapter 8, section C.

5.43 The contractor's waiver of the right to object to a variation is problematic where the complaint relates to an increase in the volume of work. In such circumstances, the change to the nature of the project will often be gradual. Each individual change may be relatively insignificant and it is their incremental impact that alters the work into something quite different from what the parties anticipated. The contractor may have acquiesced to the changes being introduced without complaint, and it is therefore difficult to specify a point in time when it can be said that the contractor was asked to undertake a wholly different project.[53]

Employer's refusal to accept unauthorised work

5.44 The contract administrator acts as the agent of the employer when it instructs variations under the contract. As any agent, it can only act within the limits of its authority. The contract administrator's authority will typically be constrained by the limits on the power to vary under the contract.[54]

5.45 If, for example, the contract contains a cap on the value of variations that may be instructed, then the contract administrator only has authority to instruct up to the level of that cap. The employer, as the contract administrator's principal, has only given authority for the contract administrator to instruct changes up to this level. The contractor is on notice as to this limit on the contract administrator's authority via the express terms of the contract.

5.46 The employer will not be bound by acts of the contract administrator that stray outside its actual and/or ostensible authority. Where the contractor has implemented such unauthorised changes, then the employer can insist that the nonconforming work is taken down.[55] Equally, the employer will not be liable to pay for unauthorised changes.

5.47 The employer may choose to ratify variations that have been made without authority. The contractor may seek to claim that, despite the contract administrator's lack of authority to instruct a particular change, the employer has acted such as to consent to the variations. For example, the employer may have waived the breach or permitted the change as a concession.[56]

5.48 In certain circumstances, the contractor may be able to establish that the employer has not only consented to the change but is also liable to pay for it: the employer may have agreed to the alteration of the works by way of a consensual variation to the contract or may have

53. See section C of this chapter dealing with the volume of change, and the case *McAlpine Humberoak Ltd* v. *McDermott International Inc (No. 1)* (1992) 58 BLR 1.

54. The employer will be bound by the actions of the contract administrator if the contract administrator acts with ostensible or actual authority. Ostensible authority will be governed by the power to vary under the contract. It is unlikely that the employer will give the contract administrator actual authority that is wider than the powers under the contract. The scope of the contract administrator's authority is therefore likely to depend on the limitations contained in the contract. See Chapter 8, section C for a more detailed discussion regarding the contract administrator's role as agent.

55. Subject to the possibility that, if the noncompliant work is identified only at a later stage, this remedy may not be available: see Chapter 4, section D.

56. See Chapter 9, section B, regarding such concessions generally.

waived the necessity for the work to be instructed.[57] Alternatively, the work may have been undertaken under a collateral contract or payment may be due on a restitutionary basis.[58]

Third-party constraints

5.49 This chapter looks primarily at the limitations placed on the variations that may be instructed under a contract and the contractor's resulting right to refuse to undertake such changes or its right to an uplift on the rates for the same reason.

5.50 The employer may instead be constrained from varying the works because of the rights of a third party, such as a future occupier. This is discussed further in section F.

SECTION B: TYPE AND METHOD OF WORK

5.51 Contracts typically contain a very wide power to vary with very few express restrictions on the type of extra work that an employer may instruct. This is because, if the planned design needs to be changed, then the employer will want a wide discretion as to the revised solution to be implemented. The employer will not want to be faced with an uncooperative contractor claiming that the new work does not fall within the scope of permitted changes.

5.52 On the other hand, a contractor will not, at the outset of a project, expect to undertake work that is radically different from the type of work it originally signed up to.[59] The contractor may not have the expertise and resources within its organisation to undertake work that is not within its normal line of business. Equally, however, the employer will have no desire to instruct a contractor to undertake work for which it does not have the requisite expertise. Where the project is of such a size that the main contractor is essentially managing specialist subcontractors, this becomes less of an issue. However, even in this situation, it will still need to manage the process, and will require internal resources to procure and oversee such work, which it may not have immediately to hand.

5.53 The contractor may also be resistant to undertaking a type of work different from that which it had originally signed up to, via a variation, because of the risks that the new work brings. The contractor may have design or buildability obligations in relation to the new work. Or, it may be concerned about its long-term maintenance obligation in respect of the new work.[60]

5.54 Whilst express restrictions on the type of work that can be instructed are relatively uncommon, they do exist in certain contracts. For example, the ENAA Model Form International Contract 2010 states that the employer can instruct a variation:

57. Consensual variations: see Chapter 9, section C. Waiver of compliance with formalities: see Chapter 9, section D.

58. Collateral contracts: see Chapter 9, section F. Restitutionary claims for payment: see Chapter 9, section G.

59. It may be the case that the contractor wants to insist on its right to undertake varied works, even where these are of a type different from those within the original scope. See *Simplex Floor Finishing Appliance Co Ltd* v. *Duranceau* [1941] 4 DLR 260, reviewed further in section E of this chapter.

60. See Chapter 4, section F.

'. . . provided that it falls within the general scope of the Works and does not constitute unrelated work and that it is technically practicable, taking into account both the state of advancement of the Works and the technical compatibility of the change, modification, addition or deletion with the nature of the Works as specified in the Contract'.

5.55 Contracts sometimes contain provisos which a contractor may be able to rely upon to avoid undertaking works of a type which it will struggle to resource. For example, all FIDIC forms allow a contractor to object to a variation if it '. . . cannot readily obtain the Goods required for the Variation'.[61]

5.56 Design and build contracts will often give the contractor the right to refuse to undertake variations where the revised design leads to its taking unacceptable risk.[62] Contracts will also typically allow a contractor to refuse to implement a change where the revision involves safety risks.[63] Whilst contracts contain such specific provisos, general restrictions limiting the work to the type described in the original scope do not normally feature.

5.57 Irrespective of express limits on the type of work that may be instructed, the variations clause will allow changes to the original project, although this will not extend to allowing entirely different work to be ordered under the contract. The power to vary is not normally interpreted as extending to a right to instruct works entirely different from those described and therefore different from those contemplated by the parties. Indeed, the contract may expressly empower the employer to instruct change only for the purpose of completing the project.[64]

5.58 In order to achieve the scheme originally described by the contract, new solutions may need to be adopted which change the type of works required. For example, suppose a contractor has been employed under a roads construction contract. The development requires pedestrian transit points across the road in various locations. The design had originally envisaged underpasses but the employer finds that the ground conditions are such that it wants to change the requirement for underpasses to footbridges at certain road-crossing points. On one view the employer is simply varying the works since it remains a road development project with pedestrian crossing points. On the other hand, the contractor may not have the necessary skilled resource available to it within its organisation to undertake this work. The contractor may say that this work was not of the type that the parties had contemplated and is therefore outside the general scope of the project.

5.59 Whether the work in question is a variation of the works defined by the contract, or amounts to something entirely different, is a question of degree. The assessment will be influenced by

61. Clause 13.1.

62. For example, FIDIC Silver Book 1999, Clause 13.1 allows the contractor the right to object to variations if they will have 'an adverse impact on the achievement of the Performance Guarantees'. See Chapter 4, section F, concerning design risk in relation to varied work.

63. For example, FIDIC Silver Book 1999, Clause 13.1 allows the contractor the right to object to variations if they will have an adverse impact on the safety of the works.

64. For example, as discussed in section A of this chapter, the wording of ICC Measurement Contract 2011, Clause 51(1) only allows the engineer to order variations which are desirable for completion or improved functioning of the works.

the language of the contract clause itself. Most standard form contracts describe variations as amounting to any change to the works. The ICC Measurement Contract 2011 contains more constraining provisions than most, in allowing the engineer under that contract to order changes only when they are desirable for completion or the improved functioning of the works.[65]

5.60 The judgment of Lord Cairns in the House of Lords case of *Thorn* v. *London Corporation*[66] is often cited in this context. Lord Cairns made a distinction between additional or varied work that was contemplated by the contract, and work that was not. He described the second category as being '. . . additional or varied work, so peculiar, so unexpected, and so different from what any person reckoned or calculated upon, that it is not within the contract at all. . .'.[67] He went on to say that the contractor could refuse to undertake such work, despite its being instructed by the employer, on the basis that it was not of a type contemplated by the contract.[68]

5.61 The passage set out above, from the judgment of Lord Cairns in *Thorn*, was successfully relied upon in *Blue Circle Industries plc* v. *Holland Dredging Company (UK) Ltd*[69] to establish that certain additional work was outside the contract scope and therefore could not be ordered under the variations clause.

5.62 However, the decision needs to be considered in context, as the case did not relate to a dispute about whether the employer could instruct the additional work under the clause. Instead, the point was raised in relation to the operation of the arbitration clause under the contract, in an action to stay court proceedings.

5.63 Blue Circle had employed Holland Dredging to carry out dredging works at Lough Larne in Ireland under an amended ICE 5th form of contract. The contractual method statement anticipated that the dredged material would be deposited within Lough Larne. However, this method of disposing of the dredged material proved to be unacceptable for a number of reasons and an alternative had to be found. In ongoing discussions between the parties it was agreed that Holland Dredging would instead use the dredged material to create a kidney-shaped island, which would be used as a bird sanctuary.

5.64 The contractor's work in building this island proved unsuccessful and Blue Circle sought to commence legal proceedings against it. The contract for the dredging work contained an arbitration clause and Holland Dredging sought to stay the court proceedings on the basis that it could insist that any dispute under the contract should instead be referred to arbitration.

65. See section A of this chapter which briefly reviews the language of a number of standard forms.
66. (1876) 1 App Cas 120.
67. *Ibid.* at 127.
68. The full passage from which this quotation emanates is quoted in section A of this chapter, where the case is referred to further. This issue, in relation to the varied work being outside what was contemplated by the parties, was *obiter*.
69. (1987) 37 BLR 40.

5.65 Blue Circle argued that the island work had been undertaken pursuant to a separate ad hoc contract, rather than under the contract for the dredging work and, as such, was not subject to the arbitration clause. Holland's position was that the island work was undertaken as a variation under Clause 51 to the ICE dredging contract. The question that the court posed for itself was:[70]

> 'Could the employer have ordered the work required by it against the wishes of the contractor as a variation under clause 51? If the answer is "No" – then the agreement under which such work is carried out cannot constitute a variation but must be a separate agreement.'

5.66 Of key importance was the nature of the island work in comparison to the original contract work scope. The court described the new island construction work as '. . . something far removed from the ordinary deposition of silt into the lough'.[71] Once the deposition of silt into the lough proved unacceptable, an alternative solution needed to be found for depositing the material. The court's view was that:[72]

> 'The only alternatives were dumping at sea or the creation of an artificial bund with the formation of an island. Either of these two solutions was wholly outside the scope of the original dredging contract and therefore, had Holland not been willing, they could not, in my judgment, have been obliged to accept the work as a variation.'

5.67 As a consequence, the court considered that the island work must have been undertaken under a separate contract, rather than as a variation under the dredging contract. Therefore, Blue Circle was entitled to litigate.

5.68 Whilst the court's conclusion was that the two alternatives of dumping the material at sea and constructing an island were outside the contract scope, such that they could not be instructed as variations, they did not give any wider guidance as to what particular criteria the courts should consider in making such an assessment.[73]

5.69 The difficulty with the application of a rule limiting the type of work that can be instructed, is that a variations clause envisages work being instructed that is beyond the original scope anyway. Valuation clauses normally expressly provide for the pricing of variations that are outside the 'character' of the work forming the original scope, thus justifying an uplift on the contract rates.[74] Indeed, it seems likely that the existence of a provision which allows the

70. *Ibid*. at 52.
71. *Ibid*. at 46.
72. *Ibid*. at 52.
73. See also *Goodyear* v. *Weymouth and Melcombe Regis Corpn* (1865) 35 LJCP 12. The contractor built a market house in Weymouth and during the course of the works was instructed to construct, in addition, a pump and drains. The nature of the contract was that the engineer was required to value extras under the contract and there was a very limited opportunity for the contractor to object to the engineer's assessment of the sum due. The contractor sought to argue that the pump and drains were not extras that fell to be determined under the contract (so as to avoid the engineer's assessment) because the work was completely different from the original scope. Erle CJ (at 17) rejected the contractor's argument and concluded that '. . . the pump and the drains, . . . were clearly connected with the works contracted for, and were extras or additions to it'.
74. See Chapter 11, section B for discussion about variations involving work of a different character from that in the original scope, such that the original bill rates are not appropriate.

contractor to be compensated for its additional costs of undertaking types of work different from that contemplated, will be taken into account by a tribunal in determining whether the employer is empowered to vary the works. After all, such a provision indicates that the parties contemplated that work of a different type could be instructed.

5.70 In order to apply the rule envisaged by *Thorn* v. *London Corporation*,[75] it is necessary to identify a scope of works that is wider than the original scope but beyond which the employer cannot instruct.

5.71 This is easier to apply in the context of a subcontract. In *Costain Civil Engineering Ltd* v. *Zanen Dredging and Contracting Company Ltd*[76] the court identified this wider 'scope' limiting the type of variation, by reference to the scope of the main contract.

5.72 Costain and Tarmac were acting in joint venture as main contractor constructing the A55 Conwy Bypass and river crossing. The joint venture, as contractor, was employed by the Welsh Office under an ICE 5th form of contract. Zanen was the subcontractor, employed to undertake dredging operations under the ICE Blue Form of subcontract.

5.73 As part of the works, reinforced concrete tunnel sections were to be cast in a dry basin known as the casting basin. The contractor's contract initially provided that, once the work for which the casting basin had been created was completed, one of three alternatives would be carried out, the default position being that it would be backfilled and reinstated. However, the Welsh Office subsequently decided that it did not want to implement any of the three alternatives specified in the contract. Instead it would build a marina using the casting basin.

5.74 The contractor and the Welsh Office entered into a supplemental agreement which provided that the contractor would undertake works to the casting basin such as to transform it into a marina rather than backfilling and reinstating. The contractor, in turn, instructed Zanen to undertake the work to the casting basin in connection with the proposed marina. Zanen performed the works, but stated at the time that it did not accept that they fell to be paid as a variation under the normal subcontract provisions.

5.75 The court found, as had the arbitrator, that the works undertaken by Zanen were outside the subcontract. The determining factor for the court was the fact that the additional marina work was not part of the works under the main contract but rather was work under a separate supplemental agreement. The court made the following comment as regards Zanen's obligations to undertake a particular element of works:[77]

> 'The variations clause of a sub-contract cannot oblige the sub-contractor to carry out works which are not part of the Joint Venture's obligations under the main contract. The obligations of the sub-contract are fixed to the obligations of the main

75. (1876) 1 App Cas 120.
76. (1996) 85 BLR 77.
77. *Ibid*. at 91.

contract. The sub-contractor has rights and obligations dependent on the main contract and valuations under the main contract and rights to benefit received under the main contract.'

5.76 It must be said that in some circumstances this could be seen as a rather inflexible approach which does not recognise commercial realities. After all, it is quite easy to envisage situations where the supplier of materials and equipment initially employed by a main contractor under one project could be asked to supply materials and equipment for an adjoining project. It would be surprising if this was treated as being outside a variations provision.

Method of undertaking work

5.77 As discussed in the introductory section to this chapter, a construction contract may allow the employer to vary not only the type of work carried out, but also the way in which works are undertaken.[78]

5.78 The contract may allow the employer to order a change to the sequence or timing of the works, such that it can effectively require acceleration of an element of the works. However, such provisions will not normally allow the employer to require the contractor to complete the works, or any defined section of them, in advance of the contract completion date or sectional completion date.[79]

5.79 The power to change the way the works are undertaken is normally much more limited than the power to change the work itself. There will typically be a greater opportunity for the contractor to resist changes to the method of works.[80] Many of the express provisions allowing a contractor to refuse to undertake changes under standard form contracts relate to variations as to how the work is undertaken.[81]

5.80 The works described in the contract may not include aspects of how they are undertaken. As a result, the employer may not be entitled to change those aspects of the method of working. For example, in *Strachan & Henshaw Ltd* v. *Stein Industrie (UK) Ltd (No. 2)*,[82] the contractor's site cabins were moved, which it claimed was a variation entitling it to additional payment. The Court of Appeal found that since the works, as defined under the contract, included 'work to be done by the Contractor under the Contract'[83] this did not encompass the arrangements by which it brought its labour to the workplace. The moving of the site cabins could not therefore amount to a variation.[84]

78. See Chapter 3, section E generally as regards the contractor's obligations in respect of the contractual method of working, such as obligations where the instructed method proves impossible to follow.
79. It depends, of course, on the provisions of the unilateral power to vary, but the right to alter the completion date or a sectional completion date would need to be expressly provided for.
80. See JCT Standard Form Contact 2011, Clause 3.10.
81. For example, for relating to safety concerns. See FIDIC Silver Book 1999, Clause 13.1.
82. (1997) 87 BLR 52.
83. *Ibid*. at 67.
84. This case is discussed further in Chapter 3, section E.

5.81 The contract may provide for the contractor to have complete discretion over the method of undertaking the works, in which case the employer is unlikely to have the right to vary the working method. Indeed, the employer will typically not wish to interfere in the working methods if the contractor has responsibility.

5.82 The employer may possess the right to instruct the contractor to change the way the work is undertaken under other contract provisions, such that a variation is not required. For example, a main contractor may have the right to alter a subcontractor's programme such that this alteration is not treated as a change to the sequence under the variations mechanism.[85] Equally, an employer may be entitled to direct the contractor as to the nature and extent of temporary works it uses without this amounting to a variation instruction.[86]

SECTION C: VOLUME OF WORK

5.83 A variations clause will normally give the employer very wide powers to vary and will rarely set express limits on the amount of extra work that can be instructed.

5.84 Restrictions on the amount of extra work that can be instructed may pose difficulties for an employer. Whilst the employer will not want lots of variations, as this will often be symptomatic of a failed project, it will also want the freedom to change the works if this proves necessary, without constraints.

5.85 Whilst a contractor will normally be delighted to undertake extra work, it may be resistant in certain circumstances, especially if the rates for the additional work are inadequate.

5.86 It may also be the case that a contractor's complaint about significant changes on a project is, in practice, a complaint about the amount of delay and disruption those changes have caused. The delay may mean that the contractor cannot get its resources off the site even though they are urgently needed elsewhere, and the contract may not compensate it for these additional costs. Alternatively, the impact may simply be disruptive. The employer may instruct a large number of low-value changes which cause disruption to the contractor's work, without giving significant recompense in terms of the direct value of the additional work. Whether or not this is the case depends on the contract valuation rules and the degree to which they allow for compensation for the time involved in processing changes or for the disruption the changes may cause.[87]

5.87 The contractor may want to refuse additional work because it does not have the resources available to deal with it. For example, this may be due to a lack of suitably qualified staff in its organisation which the contractor needs to manage the extra work. Alternatively, it may

85. See *Kitsons Sheet Metal Ltd* v. *Matthew Hall Mechanical & Electrical Engineers Ltd* (1989) 47 BLR 82, discussed further in Chapter 3, section E.

86. See *Neodox Ltd* v. *The Mayor, Aldermen and Burgesses of the Borough of Swinton and Pendlebury BC* (1958) 5 BLR 34, discussed further in Chapter 3, section E.

87. See discussion below in relation to *McAlpine Humberoak Ltd* v. *McDermott International Inc (No. 1)* (1992) 58 BLR 1, where the contractor's complaint concerned the disruptive effect of a large quantity of variations.

be because the extra work requires significant additional materials which it cannot procure, or cannot procure at economic rates.

5.88 The certification and valuation procedures for variations will often mean that the contractor is not paid for additional work for a period of time after it is undertaken. As such, variations will often prove to be a greater strain on cash flow, compared to the original contract work. Again, this may be a reason behind a contractor wishing to limit the amount of extra work it is obliged to undertake.[88]

5.89 Whilst provisions limiting variations are relatively uncommon, it is quite typical for contracts to contain provisions that give uplifts on the rates to reflect the increase in costs arising from a large volume of changes.

Express contract provisions to limit change

5.90 There are, therefore, various different ways in which the increase in the volume of work can be problematic for a contractor. Certain standard form contracts seek to address some of these concerns.

5.91 The MF/1 Form of contract sets a cap on variations at 15 per cent of the contract value.[89] This contract is intended for use on projects involving the supply and erection of electrical and mechanical plant. As such, the cap seems intended to limit the contractor's obligation to supply further plant, which may be difficult to procure at short notice.

5.92 Using a percentage cap is a crude way of limiting the volume of variations. If the concern relates to the possible difficulties that the contractor may have in procuring materials, then the approach taken by the FIDIC Form seems preferable. The FIDIC Form gives the contractor the right to object to a variation instruction where it '. . . cannot readily obtain the Goods'.[90]

5.93 One of the problems with a percentage cap on variations, of the type used under the MF/1 Form, is the uncertainty of its application. The MF/1 Form defines the cap as a percentage of the contract sum. However, since the contract sum increases by the value of variations, it can be uncertain as to when the relevant percentage has been reached. The contractor may have submitted claims for variations but they may not have been accepted in principle by the employer; or, if accepted in principle, valuation may be disputed. Once the value of total variations gets close to the cap, the assessment of whether a new variation will push the total over the limit may be dependent on an uncertain prospective valuation of the new proposed change.

88. See *Curzon Interiors Ltd* v. *Richmond Terrace (Brighton) Ltd* [2004] EWHC 410 (TCC), discussed further below.

89. Clause 27.2 of the standard form IET/IMechE model form MF/1(rev. 5). The parties can agree to waive the cap.

90. Clause 13 of all contracts in the FIDIC Form.

5.94 Rather than capping variations by reference to a percentage of the contract sum, other contracts seek to limit using vaguer tests, turning on reasonableness. The NF/07 Norwegian Fabrication Contract, used in the oil and gas industry, states that the employer '. . . has no right to order Variations to the Work which cumulatively exceed that which the parties could reasonably have expected when the Contract was entered into.' A clause using such a reasonableness criteria to cap variations was the subject of the Australian case of *Wegan Constructions Pty Ltd* v. *Wodonga Sewerage Authority*.[91] The contract provided that the extent of the variations should not '. . . without the consent of the contractor, be such as to increase or decrease the moneys otherwise payable under the contract to the contractor by more than. . .a reasonable amount'.[92] The contract related to the construction of sewers. The excavation work was increased by 60 per cent and the sewer lengths by around 40 per cent. The court considered that these increases were beyond what the variations clause allowed for. However, such a test will clearly be very difficult for the parties to apply. This will create considerable uncertainty as to whether or not the contract administrator is entitled to instruct the change and whether the contractor is obliged to undertake it.[93]

5.95 The contractual limit on variations may be driven by concerns as to its financial exposure. In *Curzon Interiors Ltd* v. *Richmond Terrace (Brighton) Ltd*[94] the courts were called upon to interpret contractual provisions which sought to ensure that the employer had to give payment security before variations could be ordered. The contract, based on the JCT 1998 form of contract, contained an additional bespoke clause which read:[95]

> 'In the event that the contractor reasonably considers that by reason of any instructions requiring a variation. . . he is entitled to become entitled to a payment of an amount exceeding the contract sum plus £300,000 by £25,000 or more, he shall be entitled to give written notice to the employer requiring the employer to provide sufficient evidence that the employer will be able to discharge his payment obligations under the contract. For the purpose of this clause the employer and contractor agree that any of the following will constitute sufficient evidence that the employer will be able to discharge all of its payment obligations. . .
>
> 4.4.1.1 An advance payment made to the contractor of the amount by which the contract sum plus £300,000 has been exceeded.
>
> 4.4.1.2 A guarantee from a bank or other financial institution acting reasonably.
>
> 4.4.1.3 A surety bond given by a bank or insurance company acceptable to contractor acting reasonably.
>
> 4.4.1.4 Payment to the escrow account established under 30.5 of this contract.'

91. [1978] VR 67.
92. *Ibid*. at 67.
93. See section A of this chapter for a review of the implications for a contractor in undertaking variations that are instructed in circumstances where it may be uncertain as to whether or not it is valid in the light of the powers under the contract.
94. [2004] EWHC 410 (TCC).
95. *Ibid*. at para. 8.

5.96 The issue between the parties related to whether the clause allowed the contractor to call for security for all variations previously instructed even if the contractor had not previously asked for any security at the time those variations were instructed, as the contractor contended; or alternatively whether, as the employer contended, the provision related only to the proposed variation. The court preferred the employer's analysis. It found that the provision was there to safeguard a contractor from a proposed variation and the security needed to be provided in relation to the instructed variation which had triggered the contractor's request.

5.97 The court provided the following comments on the interpretation of the clause and the right of the contractor to refuse to undertake the variation if security was not provided:[96]

> 'Clause 4.4.1 is triggered when the contractor reasonably considers that, by reason of any instruction requiring the variation, he is likely to be entitled to a payment, of a sum in excess of £25,000 over and above the contract sum plus £300,000. Thus, once the contractor reasonably considers that the original guarantee provided was likely to be exceeded by £25,000 or more, 4.4.1 is engaged. Once engaged, the contractor is entitled to require the employer to provide sufficient evidence that it will be able to discharge all of its payment obligations under the contract. . .
>
> . . . Clearly it is open to the employer to produce other evidence to convince a contractor that he can discharge his payment obligations. If the deemed sufficient evidence is furnished to the contractor, he is obliged to carry out the proposed variation as instructed. If such deemed sufficient or other reasonable evidence is not forthcoming within seven days, the contractor is entitled to refuse to undertake the variation and is relieved of the obligation to comply with the instruction.'

5.98 Such a clause, if operated effectively, should therefore protect the contractor from the risk of not being paid for additional work it undertakes because of an employer's lack of funds.

5.99 Where the contract provides that variations may only be instructed for a certain purpose, such as in furtherance of the project completion, then this may prevent extensive changes.[97]

Volume of variations changing the nature of the contract

5.100 In the absence of an express cap on changes, the contractor may seek to argue that the employer's unilateral right to instruct changes under the contract is subject to implied limits. As discussed in section A of this chapter, the House of Lords case of *Thorn* v. *London Corporation* indicates that if extra work is 'so peculiar, so unexpected, and so different'[98] from what the parties contemplated, then the contractor may refuse to carry it out. In certain circumstances a court may find that a very high volume of change may fall within

96. See *ibid.* paras. 12 and 15.

97. For example, as discussed in section A of this chapter, the wording of ICC Measurement Contract 2011, Clause 51(1) only allows the engineer to order variations which are desirable for completion or improved functioning of the works.

98. (1876) 1 App Cas 120 at 127.

this category. The volume of additional work may be disproportionate to the original project scope, such that it does not amount to a variation to the works within the meaning of the contract.[99]

5.101 The contractor may have the right to refuse to undertake a variation if a single instruction represents an enormous increase in volume. However, in practice, it is more likely to be the case that the number of variations steadily rises during the course of the project, thereby steadily increasing the volume of change to the project scope. It then becomes difficult to pinpoint the stage at which the incremental changes lead to something that is not contemplated by the contract.

5.102 If the contractor undertakes instructed work as a contract variation, it will be difficult for it subsequently to claim that this was work that the employer was not entitled to order under the contractual mechanism, and that therefore it is work that should be valued differently. Unless the contractor has raised a complaint at the time, and has purported only to be undertaking the work outside the contract procedure, it is likely that it will be taken as having waived its right to object.[100] It will have willingly undertaken the extras as contract variations and there will be no reason to value them otherwise. This is a particular problem for the contractor whose complaint concerns the volume of change, where the changes have increased gradually over a period of time. The contractor will often, understandably, not have raised a complaint when the changes started to be received, as each individual change may have been relatively minor. It is only towards the end of the project that it can be said that the cumulative total of changes has altered the nature of the works.

5.103 A large number of changes may not only alter the nature of the project but the cumulative impact of them may be very disruptive, with the additional costs of this disruption not being compensated under the valuation rules. These issues were discussed in the case *McAlpine Humberoak Ltd* v. *McDermott International Inc (No. 1)*.[101] The contractor claimed additional money for variations and the costs of delay and disruption as a result of a large number of changes. Whilst it was successful at first instance, the decision was overturned in the Court of Appeal.

5.104 McDermott had been employed by Conoco (UK) Limited to construct the deck structure of an offshore oil rig. McDermott, in turn, employed McAlpine to build four of the pallets making up this deck. Very significant changes to the design were introduced by McDermott via additional and revised drawings, in response to Technical Queries and in Variation Orders. HHJ John Davies QC, who tried the case at first instance, came to the conclusion that the volume of change was so great as to be beyond that contemplated by the contract. He stated:[102]

99. A party may also be able to rely on the rationale of *Abbey Developments Ltd* v. *PP Brickwork Ltd* [2003] EWHC 1987 (TCC); (2003) CILL 2033, which indicated that the power to vary must be instructed within the intended purpose of the provision.

100. See the introductory section of this chapter, paras. 5.35–5.43, dealing with the contractor's remedies.

101. (1992) 58 BLR 1.

102. *Ibid*. at 74.

> 'In my view the sheer volume of these changes and their impact on the contract work made the thing undertaken a thing different in kind from that contracted for.'

5.105 The trial judge found that the effect of the large number of changes was to frustrate the contract because McAlpine's contractual obligations became incapable of being performed as a result of the large number of changes. He found that a substituted contract came into existence under which McDermott was obliged to pay for the work undertaken (i.e. all of McAlpine's works) on a reasonable basis.[103]

5.106 The contract contained a lengthy variations clause, the purpose of which was to seek to ensure that the parties agreed the time and cost impact of changes before they were instructed. Whilst the impact of the extensive changes was not agreed before they were undertaken, in the manner contractually envisaged, there were ongoing discussions between the parties during the project as to their valuation.

5.107 The Court of Appeal forcefully rejected the trial judge's approach. Lloyd LJ commented:[104]

> 'The revised drawings did not "transform" the contract into a different contract, or "distort its substance and identity". It remained a contract for the construction of four pallets. . .'

5.108 The judgment goes on to point out that the contract variation clause specifically provided that the revised drawings by McDermott should be treated as variations under the contract. In addition, there had been a delay in finalising and signing the contract, such that by the time it was signed the contractor had already been issued with a large number of drawing revisions. The court stated:[105]

> 'If we were to uphold the judge's finding of frustration, this would be the first contract to have been frustrated by reason of matters which had not only occurred before the contract was signed, and were not only well known to the parties, but had also been expressly provided for in the contract itself.'

5.109 Since the contract allowed for variations to be instructed, the very fact that they were instructed could not be treated as having frustrated the contract.

5.110 The trial judge's method of analysing the issues had meant that he did not have to assess the cost (and time) impact of each variation. He had awarded the contractor monies on a reasonable basis by reference to its total actual cost under the new, substituted contract. He therefore did not need to look at the causal link between each change and its effect.

5.111 The Court of Appeal found that the contractor's entitlement had to be assessed by reference to the provisions of the contract variations clause. In order for the contractor to establish

103. See also Chapter 9, section F where this case is discussed further in the context of claims for payment for additional work on the basis of a separate contract.
104. (1992) 58 BLR 1 at 18.
105. *Ibid*.

entitlement it needed to identify each variation and the payment due for each variation, by reference to the valuation rules and contract mechanism. The parties had, after all, included such a variation mechanism in their contract in order to regulate the ordering and payment of extra work. The contractor could not jettison it and seek to claim for extra work on a different basis. The trial judge's approach, which was, effectively, a comprehensive remeasure of the works, may attract more sympathy from the courts if the changes are consensual variations, rather than instructed under a contract mechanism.[106]

5.112 The Court of Appeal did not directly comment on whether there could ever be an implied limit on the volume of variations that may be instructed under a variations clause.[107] The focus of the judgment is instead directed towards analysing (and overturning) the trial judge's finding that a contract could be frustrated as a result of a large volume of variations having been instructed. However, the court was certainly very dismissive of the proposition that a contractor cannot cope with processing a large number of variations. The conclusion must be that a contractor, faced with such a situation on site, should increase its contract administration resource for the project in order to deal with the volume of changes and process the changes contemporaneously under the variation procedure. In addition, it should implement systems to ensure that it keeps adequate records of the disruptive impact and additional costs of the changes.

5.113 The case, *Sir Lindsay Parkinson & Co Ltd* v. *Commissioners of His Majesty's Works and Public Buildings*,[108] also involved a contractor seeking to claim that there was an implied limit on the volume of additional work that the employer could instruct. This case is considered in detail in Chapter 3, paragraphs 3.340–3.350, and arose in the context of a contractor seeking an uplift on its fee under a construction management type arrangement. Whilst the contractor was successful, the basis of the claim did not involve a contractor seeking to limit the amount of extra work it was required to undertake, but instead concerned the increased fee that the contractor claimed as a result of an increase in extra work.

Adjustment of rates for variations and measurement contracts

5.114 Contracts will often provide that a significant increase in the amount of work will justify variations being priced with an uplift on the normal rates for extras.[109]

5.115 The position is more complex with measurement contracts. Such agreements contemplate that the actual quantities of work undertaken will be different from the estimated quantities that the contractor has tendered against. As such, a change in quantities between those estimated and those actually carried out is not a variation but the consequence of the

106. See *Pepper* v. *Burland* 170 ER 107; (1791) Peake 139, which amounts to longstanding judicial authority for this approach, which is discussed at Chapter 11, section D.

107. The Court of Appeal decided the case on the basis that the parties had, in any event, settled the majority of the contractor's claims for costs arising from variations under a number of settlement agreements.

108. [1950] 1 All ER 208.

109. See, for example, JCT Standard Building Contract 2011, Clause 5.6.1.2. See Chapter 11, section B for a discussion as to how types of change can justify rate increases.

remeasurement process.[110] However, most measurement contracts provide that the contractor will be entitled to a rate uplift if there is a significant divergence between estimated and actual quantities.[111]

5.116 Just because such provisions are contained in a contract does not mean that the employer is then entitled to increase the volume of work without any limitation. However, the existence of such provisions may influence a tribunal in determining what level of increase may be treated as reasonable, and therefore allowable, under the terms of the contract. Not least, because such provisions indicate that the parties contemplated that a significant increase in the volume of work would occur.

Limits on the amount of change because of uneconomic rates

5.117 Subject to express provisions that allow an uplift to reflect a significant increase in the volume of work, contract rates are treated as sacrosanct for the purpose of valuing variations. Contracts normally provide that variations are priced by reference to the rates in the contract sum breakdown or by reference to a price schedule. The parties' agreement is that those rates should be used to price extra work. If a rate has been included in error, it cannot be adjusted when variations come to be valued as they represent the parties' bargain.[112]

5.118 Where a limited amount of extra work of a particular type is ordered, this will generally not constitute a problem for the contractor. But if the employer orders a large number of extras that come to be valued at an uneconomic contract rate, then this may put the contractor in financial difficulties.[113] The question then arises as to whether the contractor can limit the volume of the additional work.

5.119 As discussed in the introductory section of this chapter, in different commercial contexts the courts have limited the degree to which a party may exercise its unilateral power to vary.[114] Under a contract that gave a finance company the unilateral power to vary the interest rate payable by its customer, the Court of Appeal found that a term should be implied to restrict that power. The finance company's power 'should not be exercised dishonestly, for an improper purpose, capriciously or arbitrarily'.[115] Whilst there are no cases dealing with such a situation in a construction context, it is possible that this approach to the exercise of such unilateral powers to vary under different types of commercial agreement may be applied by the courts. Where an employer takes advantage of a mistakenly low rate in a contract to order a significant amount of additional work, this concept of restricting the use of the power to prevent dishonest use, or use for an improper purpose, may find favour with the courts.

110. Discussed in further detail in Chapter 3, section I, which contains a more detailed general discussion about measurement contracts. See *Arcos Industries* v. *Electricity Commission of New South Wales* [1973] 2 NSWLR 186; (1973) 12 BLR 65.

111. See Chapter 11, section E, which discusses variations under measurement contracts.

112. *Henry Boot Construction Ltd* v. *Alstom Combined Cycles Ltd* [2000] BLR 247. See Chapter 11, section B.

113. In theory, the rate for work could be zero such that the employer could order as much extra work of that type as it wanted at no cost. See *infra*, paras. 11.23–11.25.

114. See the introductory section of this chapter, paras. 5.28–5.31.

115. *Paragon Finance* v. *Nash* [2001] EWCA Civ 1466; [2002] 1 WLR 685.

The reasoning also has parallels with the reasoning of HHJ Humphrey Lloyd QC in *Abbey Developments Ltd* v. *PP Brickwork Ltd*.[116] That case concerned omissions of work from a contract. The judge decided the case on the rationale that a variation could not be ordered by an employer for a purpose for which the contractual power was not intended.

SECTION D: TIMING

5.120 Most contracts only allow the employer to instruct changes up until the date completion is certified.[117] An exception are the contracts in the ICC suite, which allow variations to be instructed during the period for correcting defects.[118] A further approach is to provide that the right to instruct variations is dependent on the stage of the project that has been reached.[119]

5.121 Using the certified completion date as the cut-off for variations will often be necessary because the project will then be physically handed over and the facility occupied by the end user.[120] Even on projects where the contractor maintains a site presence after completion, it will still normally demobilise most of its resources at this stage, such that implementing variations afterwards will be more difficult and expensive.[121] Contracts that allow for variations to be undertaken after completion typically have valuation regimes that are more flexible and therefore can give the contractor an uplift for changes instigated in this later period.[122]

5.122 The process of correcting defects after completion can lead to a realisation that changes need to be made to the design. Most contracts provide for completion to be certified subject to minor defects that the contractor is obliged to correct later. However, what may appear at completion to be a minor defect may later prove to be more complex such that it can only be satisfactorily resolved by a change to the design of the works. The work that needs to be undertaken is then not the fixing of snags, which the contractor is required to carry out, but the implementation of a variation which the employer may not have the power to instruct.

5.123 Construction contracts under which the contractor agrees a long-term obligation to operate and maintain the facility after it has been built[123] will often provide for variations to be instructed during that operational period.[124]

116. [2003] EWHC 1987 (TCC); (2003) CILL 2033; this case is discussed further in section E of this chapter.

117. FIDIC Silver, Red and Yellow Books 1999, Clause 13.1 allow changes prior to the issuing of the Taking-Over Certificate.

118. See ICC Measurement Contract 2011, Clause 51(1).

119. See, for example, the ENAA Model Form International Contract 2010, which states that the right to instruct depends on the 'state of advancement of the Works'. See section B of this chapter where the variation provision in this contract is commented upon further.

120. In particular, building projects such as office developments.

121. The contracts that allow for variations to be instructed after certified completion are normally those designed for civil engineering rather than building projects, where the contractor is more likely to have site access and retain a presence.

122. The valuation provisions of the ICC Measurement Contract 2011 recognise that for work undertaken after completion an uplift may be appropriate. See Clause 52(4)(b).

123. Commonly called DBO (Design Build Operate) contracts.

124. Under the FIDIC Gold Book 2008, which is a DBO contract, variations may be instructed during the 20-year operational service period after construction of the facility has been completed and the contractor is managing and maintaining it. See Clause 13.1.

5.124 If the cut-off date for instructing variations has passed, the contractor can refuse to undertake the work. If it does carry out the work, it is likely to be treated as having waived its right to refuse, although the change may instead be treated as having been undertaken outside the contract mechanism, which may justify uplifted rates.[125]

Uncertainty as to the cut-off date for variations

5.125 If the variations clause does not expressly provide for a cut-off date for instructing variations, it will be necessary to consider whether the employer can instruct after completion. This issue has arisen in relation to cases concerning the JCT forms of contract, which do not contain clear provisions on this point. There are three reported cases where the issue has been considered. These are of interest, not just in the context of understanding the position under the relevant JCT contracts, but also in indicating the approach that the courts may take with other contracts that do not specify a cut-off date.

5.126 *New Islington and Hackney Housing Association Ltd* v. *Pollard Thomas and Edwards Ltd*[126] concerned the question whether an architect was under an ongoing duty to review its design following practical completion. In analysing this point, Dyson J considered whether the architect had power under the contract to instruct variations after that stage. The contract under review was the JCT Intermediate Form 1984, which did not have an express cut-off date. The court was referred to the comments of Bowsher J QC in *University Court of Glasgow* v. *William Whitfield and John Laing Construction Ltd*,[127] which had indicated that there was no limit.[128] Dyson J stated that he considered that the conclusions of the judge in that previous decision had been heavily coloured by the special facts of the case, and made the following comment on this issue:[129]

> 'On the true construction of the building contracts, [the architect was] authorised to issue variation instructions at any time up to practical completion of the works. But once practical completion had been achieved, the power to issue variation instructions was spent, and the only remaining functions for [the architect] to perform under the contracts were to issue the certificates of making good defects and the final certificates.'

5.127 The issue was touched upon again five years later by the same judge, sitting in the Court of Appeal. *TFW Printers Ltd* v. *Interserve Project Services Ltd*[130] involved consideration of an employer's obligations to insure against loss or damage to existing structures and the works caused by elements such as fire, lightning and flood and, where such loss occurs, the architect's obligation to issue an instruction for the making good of the damage.[131] Dyson LJ gave

125. These issues are discussed further *supra*, paras. 5.35–5.43.
126. [2000] EWHC 43 (TCC); [2001] BLR 74.
127. (1988) 42 BLR 66 at 78.
128. The following passage from the *University Court of Glasgow* case was referred to at para. 21 of the *New Islington* judgment: 'I see no reason in principle why the duty [of the architect to check that his design will work in practice and to correct any errors that emerge] should be so limited in time [i.e. up until practical completion] despite the fact that the architect's right to require work to be done alters at that point.'
129. [2001] BLR 74 at para. 22.
130. [2006] EWCA Civ 875.
131. JCT Agreement for Minor Building Works (1993 revision), Clause 6.3B.

the leading judgment. He did not refer to his previous judgment in *New Islington*, instead referring to commentary taken from *Keating on Building Contracts*,[132] stating:

> 'In my judgment, the architect cannot issue instructions under clause 6.3B after practical completion for the same reason as he cannot issue instructions for a variation under clause 3.6 after practical completion. I would accept as correct the statement in *Keating on Building Contracts* (7th edition) para. 18-142. It is there submitted that the architect cannot issue instructions requiring a variation after practical completion, so that if thereafter the employer wishes them to be executed, they should be the subject of a separate agreement: the Works are complete and the procedure for final adjustment of the Contract Sum begins. It is true that these comments are made in relation to the JCT Standard Form of Building Contract (1998 version), but in my judgment they are equally applicable to the JCT Minor Works Form of Contract whose provisions are not materially different for the purposes of the present argument.'[133]

5.128 Therefore, although not referring to his previous judgment considering the matter, the outcome was consistent.

5.129 A different conclusion was reached in the more recent case of *Treasure & Son Ltd* v. *Dawes*.[134] This concerned the enforcement of an adjudicator's decision. At paragraph 36, Akenhead J gave consideration to the provisions of the JCT Standard Form of Prime Cost Contract (1998 Edition with Amendments 1 and 2) regarding variations. He observed:

> 'It is clear from the JCT form of contract which was being used by the parties that a contractor who has not completed the Works in full by Practical Completion still remains under an obligation to complete the Works. Mr Jones is wrong where in Paragraph 41 of his Statement he says that the only work that the contract permitted to be performed was in connection with remedying recognised defects following Practical Completion. Article 1 of the Prime Cost Contract required Treasure to carry out "and complete" the Works. That obligation is reflected in other clauses in the Contract Conditions. There is no obvious time limitation on the Architect's or Contract Administrator's entitlement to issue instructions (including instructions requiring changes to or variations in the Works). Clause 3.3 of the Standard Clause does not suggest that the Contractor can do anything other than comply with instructions whenever they are issued. Clause 3.3 enables the Contractor to object to instructions which alter the nature and scope of the Works but it is not obliged to do so. Thus, unless reasonable objections were raised (which seems inapplicable here), Treasure was obliged to comply with the Architect's instructions to alter the Works (to the extent that it was instructed so to do) even if those instructions were issued after Practical Completion.'

5.130 Although the case of *Treasure & Son* was based on a different JCT contract from those referred to in the earlier decisions of *New Islington* and *TFW Printers*, the underlying

132. Vivian Ramsey, *Keating on Building Contracts*, 7th Edn (2000, Sweet & Maxwell).
133. [2006] EWCA Civ 875 at para. 34.
134. [2007] EWHC 2420 (TCC); [2008] BLR 24.

wording was not materially different. It is therefore surprising that these earlier authorities were not cited or followed.

5.131 The interpretation of a contract will depend on its precise wording. However, in the absence of clear wording to the contrary, it seems likely that the Court of Appeal's approach in *TFW Printers* would be followed, and practical completion would be treated as the cut-off date for the power to vary.[135]

Late variations

5.132 The later a change is instructed the more disruptive and costly it will be to implement.[136] If it is instructed in the design development phase it will have relatively little impact. If it is instructed before the related on-site work has commenced, then its impact will also be reduced.[137]

5.133 The question therefore arises as to whether there can be restrictions on when during the course of the works an employer can instruct a variation despite provisions in the contract stating that the change can be ordered at any point prior to completion. This has been the subject of judicial comment in two South African cases that are discussed below. As discussed further below, the issue is closely connected with the question whether the contractor will otherwise be properly compensated for the impact of the variation.

5.134 The first of these two cases, *Alfred McAlpine & Son (Pty) Ltd* v. *Transvaal Provincial Administration*[138] concerned the construction of a road. The contract entitled the engineer to provide further drawings and instructions as necessary. It did not, however, stipulate when such further drawings and instructions might, or might not, be provided. The contract also empowered the engineer to order variations.

5.135 The Supreme Court of South Africa upheld the existence of an implied term that the engineer was required to provide further drawings and instructions associated with the original scope within a reasonable time.[139] It then went on to consider whether such a term might be implied where a contract conferred on the engineer an absolute entitlement to instruct variations. The Supreme Court of South Africa held that such a term did not apply to the ordering of variations. The engineer's entitlement to instruct variations was not subject to an obligation requiring it to do so within a reasonable time. However, the Supreme Court of South Africa did consider that, having instructed a variation, the engineer was subject to an implied duty to 'deliver to the contractor drawings and instructions reasonably required

135. No amendments were made to the 2011 JCT Forms in order to address and clarify this issue.

136. Complaints concerning the disrupting impact of late changes are often associated with the numbers of changes: see *McAlpine Humberoak Ltd* v. *McDermott International Inc (No. 1)* (1992) 58 BLR 1 reviewed at section C of this chapter.

137. See *infra*, paras. 12.7–12.10 concerning delay arising from such late variations.

138. [1974] 3 SALR 506.

139. See *Neodox Ltd* v. *The Mayor, Aldermen and Burgesses of the Borough of Swinton and Pendlebury BC* (1958) 5 BLR 34, discussed at Chapter 4, section A.

to execute the variation or the work as varied and this must be done within a reasonable time'.[140]

5.136 The second case is that of *Group Five Building Limited* v. *The Government of the Republic of South Africa*.[141] The Supreme Court of South Africa was asked to consider whether a term might be implied into a contract requiring that all variations and instructions be given 'timeously in relation to the actual progress of the works, *alternatively* at an opportune time, *further alternatively* in such a way and at such a time so as not to disrupt the general progress or momentum or method or sequence of construction of the works'.

5.137 The court considered a lengthy passage of *Hudson on Building on Engineering Contracts* (10th edition), which suggested that whilst a court might oppose interpreting a contract so as to prevent an employer varying the work at any stage, it might be prepared to imply a term requiring extras and variations to be ordered 'at a reasonable stage in relation to the works as a whole'. This was said to be particularly the case where the provisions regarding payment in respect of variations precluded the contractor from recovering losses due to 'interference with the economic or systematic execution of the works in addition to the value of the work done'. The court acknowledged that it could find no authority in support of such an implied term. However, it nevertheless considered that there was something to be said for the implication of such a term, particularly where the contractual machinery for valuing variations would not permit a contractor to recover an allowance for the 'lateness or otherwise inopportune timing of the relevant instruction'. The comment was *obiter*, the case being decided on other grounds. This particular passage of the judgment has not subsequently been considered and reviewed judicially.

5.138 The valuation of a variation will often compensate the contractor for costs that arise as a result of abortive work such as cancelling orders for materials.[142] The rates in a contract may be subject to adjustment because the point in time at which the work is undertaken represents dissimilar conditions justifying an uplift.[143] Where a change is instructed after the associated work phase has already been built, then the direct costs that the valuation will cover will simply be greater. Such a late variation is more likely to lead to an entitlement to an extension of time and a claim for loss and expense. Typically, therefore, the contractor will have the right to be compensated for the effect of a variation instructed at a late stage and therefore it is unlikely that the employer's power to change the works in this way will need to be considered.

SECTION E: OMISSIONS AND INSTRUCTING ALTERNATIVE CONTRACTORS

5.139 This section considers the extent to which an employer may omit work from the contractor's scope. The contractual power to omit will always be treated with caution by the courts

140. [1974] 3 SALR 506 at 536.
141. [1993] 2 SA 593.
142. See *infra*, paras. 11.92–11.94, and the case *Tinghamgrange Ltd* v. *Dew Group Ltd and North West Water Ltd* (1995) 47 Con LR 105, where the contractor was entitled to the cost of cancelled materials orders as part of the valuation of the variation.
143. See *infra*, paras. 11.57–11.71.

because of the risk that it can be abused by an employer to open up and undo the parties' bargain. This section will also consider the extent to which an employer may hire new contractors to undertake additional work on a project, which is an issue closely connected with the power to omit.

5.140 An employer will always be entitled to waive the necessity that the contractor builds certain parts of the works, in the same way that any buyer may choose not to receive certain goods. However, such a waiver should be distinguished from the omission of an element of works via the contract variations clause, which will normally entitle the employer to a cost saving. In order for the employer to be entitled to omit work the variations clause must expressly provide for omissions.[144]

5.141 This issue was considered by the Court of Appeal in *SWI Ltd* v. *P&I Data Services Ltd* which stated:[145]

> 'Normally without some term allowing for variations under a fixed price contract to perform works, the paying party is not entitled to vary the contract by reducing the work to be done; the builder would have a right to say that he had quoted a fixed price to do certain work and he was prepared to carry out all that work in order to receive his payment. If, of course, the paying party simply waives his right to have the complete works performed the builder will be entitled to his full price for what he has done, and. . . would not be in breach of contract for not performing.'

5.142 This section considers omissions instructed under variations clauses rather than the waiver of the performance.

5.143 Whilst contracts will typically contain very wide powers to vary works, an employer cannot omit part of the works in order to redistribute that work to another contractor, or remove such a large element of work as to effectively render the work commercially unviable for the contractor.[146] If the employer wants to change the content of the project so as to deliver its goals using a revised scheme, then the contractor will often have the right to undertake the varied works in accordance with that new design.[147] Such restrictions on the power to omit are subject to the employer's right to bring new contractors on to the project to undertake additional work, not forming part of the original scheme, as it sees fit. These issues are discussed in further detail in this section.

The omission of work and redistribution to another contractor

5.144 If an employer were allowed to operate in this manner it would effectively be able to re-tender individual packages, already awarded to the initial contractor, as the project proceeded. A

144. All the commonly used standard form construction contracts provide for omissions. See section A of this chapter, which reviews the relevant clauses.
145. [2007] EWCA Civ 663; [2007] BLR 430 at para. 18.
146. As discussed below, this may be subject to very clear wording to the contrary.
147. Subject to express contract terms. Discussed further below.

contractor will enter into a contract for the whole of the works described in its scope in the expectation that it will be allowed to undertake it all, subject to relatively minor revisions. Indeed, certain elements of the work may be more profitable than others, such that the commercial viability of the project will often be dependent on undertaking all of the works.

5.145 In view of these commercial drivers, many common law jurisdictions have treated the power to omit works as being subject to an implied restriction that omitted work cannot subsequently be given to a rival contractor. In the Australian case of *Carr* v. *J A Berriman Pty Ltd*,[148] the employer omitted steel fabrication work from the contractor's scope in order to procure it elsewhere. The contractor walked off site as a result of this omission and the court upheld its right to rescind the contract, despite the contract including a wide variations clause, on the basis that the employer's omission was wrongful and therefore amounted to repudiation.[149]

5.146 The 2003 English Technology and Construction Court case *Abbey Developments Ltd* v. *PP Brickwork Ltd*[150] considered this area of law, and the previous cases on this subject, in detail.

5.147 Abbey was a house-building contractor and PP Brickwork was a labour-only brickwork subcontractor. The contract stated that whilst there were 69 plots on the site of the housing estate that was being built, Abbey reserved the right to vary the number of plots PP Brickwork would work on. The variations clause in the contract gave a wide power to reduce or increase the quantities, or to suspend the subcontractor's work.

5.148 Abbey was dissatisfied with the subcontractor's performance and made a number of written complaints. Matters came to a head when Abbey wrote stating that it would limit PP Brickwork's work to the plots on which it was currently working and once those plots had been finished its contract would be determined. Abbey asked the court for a declaration that it was entitled to remove the remaining plots from its subcontractor's scope of work.

5.149 HHJ Humphrey Lloyd QC begins his judgment by reviewing the fundamental principle that a construction contract gives the contractor both an obligation and an entitlement to carry out the defined work. Any intrusion into this right is an infringement and breach of contract, unless of course the employer is contractually entitled to omit elements of work via a variations clause. As such, any contractual right to omit must be closely monitored.[151]

5.150 The report specifically states that there is no principle in English law that it is a breach of contract for an employer to omit work, even where this involves giving the work to another

148. [1953] 89 CLJ 327.

149. In terms of US authorities, see *Gallagher* v. *Hirsch* (1899) 45 AD 467. The New York Appellate Division found that the word 'omission' sanctioned the employer to take works out of a contract completely but not such as to then redistribute the work to another contractor.

150. [2003] EWHC 1987 (TCC); (2003) CILL 2033. Note that this case was cited with approval in *Multiplex Construction (UK) Limited* v. *Cleveland Bridge UK Limited & Others* [2008] EWHC 2220 (TCC) at para. 1553 of that judgment.

151. *Abbey*, at paras. 45–46. See also *Stratfield Saye Estate Trustees* v. *AHL Construction Ltd* [2004] EWHC 3286 (TCC).

contractor.[152] The judge found that this issue should be looked at in terms of whether the provisions of the contract give the employer the right to omit work and to pass that work on to be done by others instead.[153] He went on to say that it is clear that a contract can allow work to be omitted and given to others but this requires clear wording. The report states:[154]

> '. . . the cases do show that reasonably clear words are needed in order to remove work from the contractor simply to have it done by somebody else; whether because the prospect of having it completed by the contractor will be more expensive for the employer than having it done by somebody else, although there can well be other reasons such as timing and confidence in the original contractor. The basic bargain struck between the employer and the contractor has to be honoured, and an employer who finds that it has entered into what he might regard as a bad bargain is not allowed to escape from it by the use of the omissions clause so as to enable it then to try and get a better bargain by having the work done by somebody else at a lower cost once the contractor is out of the way (or at the same time, if the contract permits others to work alongside the contractor).'

5.151 The judge's analysis is therefore that the omission and redistribution of work will normally be treated as a breach because the express provisions of the contract do not allow the employer to vary in this manner, not because there is an absolute bar on such an omission. His rationale is that, in order for a variation to be valid it must be ordered 'for the purpose' for which the right was given under the contract and that variations provisions are there for the purpose of changing the requirements for the development. They are not incorporated in the contract for the purpose of redistributing the work during the project. In the judge's words:[155]

> 'The test must therefore be whether the variations clause is or is not wide enough to permit the change that was made. If, with the advantage of hindsight, it turns out that the variation was not ordered for a purpose for which the power to vary was intended then there will be a breach of contract. So the motive or reason is irrelevant. . .
>
> . . . the test is familiar and objective – what purpose did the contract envisage? That purpose must however be expressed with clarity to displace the contractor's right to have the opportunity of completing all the work distinctly undertaken.'

5.152 It had been widely recognised, prior to this case, that there was an implied restriction on an employer being able to omit work and give it to another contractor. Since it was an implied restriction it clearly had to be subject to the possibility that express words may allow the contractor to do just this (as the earlier quote from *Abbey Developments* makes clear). In order to assess whether the express wording of a contract is sufficient to allow the omission, one needs to take account of the basis upon which the courts are determining that this rule

152. *Abbey*, at para. 54.
153. The judge took the view that cases such as *Carr* v. *J A Berriman Pty Ltd* [1953] 89 CLJ 327 were all examples of situations where the clause did not give the employer such an express right.
154. *Abbey*, at para. 47.
155. *Abbey*, at para. 50.

is being applied. This case states that the rule arises because a standard variations clause is insufficiently wide to allow a variation to be ordered 'for the purpose"' of omitting the work and giving it to another contractor. A standard variations clause is there for the purpose of allowing the employer to alter the development, not to redistribute the workload.

5.153 This approach is contrasted in the judgment with the viewpoint of some commentators (for example *Hudson on Building and Engineering Contracts*[156]) who had suggested that the rule arose as a result of implied obligations of reasonableness and good faith. Such an approach meant that one would have to consider the motivation behind the employer's desire to omit and redistribute work in order to assess whether the employer had contravened these implied obligations of reasonableness and good faith. The editor of *Hudson* had made a distinction between legitimate and illegitimate motivations behind omitting and redistributing work. Legitimate grounds included where depressed market conditions compelled an employer to omit part of the work for an indefinite time with the intention of carrying it out at a future date beyond the construction period and where the present contract work is straining the contractor's available resources. Illegitimate grounds would include transferring the work so as to take advantage of a more competitive price.

5.154 The *Abbey Developments* test of requiring one to assess whether the variation has been ordered '*for the purpose*' for which the right was given makes the rule concerning the omission and re-distribution of work objective. The judge dismisses the *Hudson* approach pointing out that this would lead to an investigation into the employer's motives and is therefore an impractical subjective test.[157]

5.155 In the context of the *Abbey Developments* contract, the judge cited two relevant clauses: one in the invitation to tender letter, which was incorporated into the contract, and one in the body of the contract itself:[158]

> '. . . Abbey Developments Limited reserve the right to vary the number of units and the construction programme without vitiating the Contract or giving rise to a claim from the Sub-contractor.'
>
> 'Whether. . . instructions constitute a variation will be determined and valued by the Contract Surveyor, and a Variation Order will be issued detailing the changes and the value of such addition or deductions. The issue of a Variation Order for additions or omissions to sections of the works will in no way vitiate the Sub-Contract, and Sub-Contractors should take special note that no additional payments will be made except where a Variation Order has been issued, prior to the commencement of the works in question.'

156. *Hudson on Building and Engineering Contracts* (Sweet & Maxwell). The judgment makes extensive reference to the 11th edition (2003) which had evidently been referred to at length by the parties in their submissions. See paras. 49–50 and 60 of the judgment, in particular.

157. See para. 49 of the judgment. The judge also points out that the parties in *Amec Building Ltd* v. *Cadmus Investment Co Ltd* (1996) 51 Con LR 105; (1997) 13 Const LJ 50 considered that the reason behind the omission was irrelevant.

158. [2003] EWHC 1987 (TCC) at para 3.

5.156 The judge found that there was no material difference between the two; the clause in the invitation to tender letter simply sought to summarise what later appeared in the body of the main contract document. He described the clause as 'a standard variations clause', and went on to say:[159]

> 'It does not, in my judgment, begin to confer upon the claimant the right to take away work from the defendant so that it can be done by others. It is a right only to omit work that the claimant considers is no longer required for the project.'

5.157 In light of this analysis, it would seem that variations clauses of the type appearing in standard form contracts would be treated in the same way.

5.158 Bespoke contracts could contain provisions which expressly entitle the employer to omit and redistribute work, provided they pass the 'purpose' test set down in *Abbey Developments*. The judgment gives some assistance in terms of the characteristics of the contract that would also need to be borne in mind in making such an assessment.[160] One factor is whether the contractor is incurring liabilities to third parties for plant and materials as opposed to undertaking the work from its own resources, as is the case with a labour-only subcontractor. If a contractor is being required to incur third-party liabilities, then the expectation is that the power to omit would be interpreted more narrowly.[161] The judge also indicated that where the variations clause allows compensation for omissions it may be doubted whether there could then be a viable claim for breach of contractual obligations and damages resulting from the omission of work.[162]

5.159 The case indicates that the courts will allow employers to omit and redistribute work if the contract clause is drafted to allow this. This could be a perfectly acceptable, and enforceable, commercial arrangement. For example, a main contractor employs a number of labour-only subcontractors of the same trade, each with a planned volume of work and with the contract containing clear provisions specifying that the main contractor retains the right to redistribute work and that the subcontractor has no guarantee of a minimum.[163]

5.160 Finally, in the context of this case, the approach adopted – that an employer's powers under a variations clause must be operated 'for the purpose' contemplated by the clause – may well have possible application outside the realm of omissions.

5.161 Whilst a contractor may be constrained from omitting work and passing it to another contractor under the common law, including a provision to this effect may be considered useful in clarifying the extent of the employer's powers.[164]

159. See para. 69 of the judgment.

160. See paras. 56–57 of the judgment.

161. In contrast to this case, in *Carr* v. *J A Berriman Pty Ltd* [1953] 89 CLJ 327, as previously referred to (*supra*, para. 5.145), the omitted work (steel fabrication) was in fact an element of the work for which the contractor had engaged a subcontractor.

162. This was not a provision of the contract in *Abbey Developments* but it is a relevant factor referred to by the judge at para. 54.

163. If a contract is set up in this manner, the main contractor should consider having two different variations provisions: one to allow the work and design to be altered in the same manner as a traditional variations clause; and the second to allow the redistribution as between the subcontractors.

164. See, for example, FIDIC Red Book 1999, Clause 13.1.

The omission of substantial amounts of work from a contract

5.162 If an employer was allowed to omit a very substantial amount of work from a contractor's scope then it may be able to effectively terminate the contract, at no cost, even though it may otherwise have no right to do so.[165]

5.163 Equally, the project may be financially worthwhile for the contractor only if it is of or above a minimum value. For example, it may have fixed site preliminaries costs which can only be supported with a minimum project turnover. Therefore, even if the omissions clause is widely drafted with no limits as to the amount of work which can be taken out of the scope of work, the courts are typically keen to imply a restriction.

5.164 The Technology and Construction Court case of *Stratfield Saye Estate Trustees* v. *AHL Construction Ltd*[166] looked at the implied limitation on the work that may be omitted and, interestingly, considered the principles that may be said to justify such implied limitations.

5.165 Stratfield Saye Estate Trustees ('the Estate') was the owner of a large derelict property called Heckfield Wood House. It employed AHL as the contractor to undertake works to make it wind and weather tight, which the parties called the Phase 1 works. It was employed against a quite general description for the works, on a cost-plus basis with agreed rates. The contractor also agreed to keep three men on site for the duration of the works. The Estate sought effectively to cancel the project by omitting the works required to make the building wind and weather tight, although the contractor was required to complete certain lesser works in order to leave the site in a suitable state. It would appear that the Estate, having entered the contract, realised that the works would cost more than it wanted to pay. There is no suggestion that the work was being omitted so as to transfer the work to another contractor.

5.166 The court considered whether such a large omission was something that the Estate was entitled to order. Jackson J quoted a lengthy passage from the *Abbey Developments* judgment. He made particular reference to the *Abbey Developments* approach, that the 'basic bargain' struck between the parties had to be honoured, and that if an employer found it to be a bad bargain it could not escape it by using the omissions clause. He went on to comment as follows:[167]

> 'How do these principles apply in the present case? The "basic bargain struck between the employer and the contractor" was this: AHL would carry out works to make Heckfield Wood House wind and weathertight. The employer, acting through Mr Glover, was fully entitled to give instructions which would vary the details set out on the

165. The employer can, of course, always choose not to have parts of the project constructed. What it cannot necessarily do is remove the work using the variations provision and therefore not pay for it. See *supra*, paras. 5.140–5.141.

166. [2004] EWHC 3286 (TCC). Note that this case and *Abbey Developments* were cited with approval in *Multiplex Construction (UK) Limited* v. *Cleveland Bridge UK Limited & Others* [2008] EWHC 2220 (TCC): see para. 1553 of the judgment.

167. [2004] EWHC 3286 (TCC) at para. 36.

drawings or the works described in the site minutes. However, the employer's power to omit works was subject to a clear limit. AHL had been employed to carry out the phase 1 works. "Phase 1" was understood by everyone to mean works which would convert Heckfield Wood House from a derelict property into a building which was wind and weathertight. The employer, acting through Mr Glover, had no power to issue omission instructions which would detract from or change this fundamental characteristic of the works.'

5.167 The judge also made reference to various commercial factors which he considered reinforced his view that the large omission violated the parties' basic bargain. He pointed out that the contractor had been required to maintain a minimum of three men on site at all times and that the rates finally agreed were significantly less than originally quoted. In addition, it was clear that such arrangements had been made on the basis that the contractor would have continuity of work over a period of months. He considered that it would not make business sense for it to tie up resources if the project could be cancelled at a month's notice.[168]

5.168 The judge, in this case, was interested in taking account of whether the commercial basis of the contract was such that a very large omission would make it untenable. If a contract is structured such that a contractor is properly compensated for its preliminaries costs, overheads and profit contribution (i.e. its fixed costs) via the rates, then large omissions of work may be viewed more favourably.[169] This is probably a factor that will be influential in marginal situations. Where the amount of work omitted is so great as to amount to an effective termination of the project, it is likely that a tribunal will have little difficulty in finding that such an omission is not covered by the contractual variations provisions.[170] However, in less extreme situations, but where the volume of omitted work is still very significant, a tribunal is likely to look at the underlying commercial basis of the contract in order to determine whether the 'basic bargain' between the parties has been violated.

5.169 The principle that was applied in *Stratfield Saye* was also adopted in *Sandbar Construction Ltd* v. *Pacific Parkland Properties Inc*.[171] Following the employer's repudiation of the contract, the contractor brought a claim for loss of profit. In the subsequent proceedings the British Columbia Supreme Court found that the employer could not claim that work had been omitted from the contractor's scope simply as a means of reducing its exposure under the loss of profits claim.

168. *Ibid*. at para. 37.

169. Certain 'call off' contracts may involve prices which allow the contractor to be properly compensated in this manner. Such contracts may state the contractor's anticipated annual turnover, but with no entitlement actually to be granted any minimum level of work. If the work is not actually granted then there is no formal 'omission' of work because there is no fixed work scope that has been varied. However, this type of contract illustrates the fact that commercial arrangements can be structured in such a way that the contractor does not lose out as a result of a large omission. See also the case of *Weldon Plant Ltd* v. *Commission for the New Towns* [2001] 1 All ER (Comm) 264.

170. See also *Chadmax Plastics Propriety Ltd* v. *Hansen and Yuncken (SA) Pty Ltd* (1984) 1 BCL 52, a case of the Full Court of South Australia, where a main contractor omitted 98% of the subcontractor's work. The court found this is to be a repudiation.

171. (1995) 11 Const LJ 143.

5.170 A contractor seeking to resist a very significant omission may also seek to rely on the dicta of Lord Cairns in *Thorn* v. *London Corporation*,[172] that the change is not of a kind contemplated by the contract. A deduction of work may be allowed only if it falls under what is understood as a variation to the works. As with very large increases in work, very large reductions in work may equally be said not to vary the initial project plan but effectively to replace it with something quite different. Again, such an argument may be dependent on the nature of the change contemplated by the clause.[173]

Changes to the project scheme and the instruction of new work

5.171 This section has, up until now, considered changes that the employer may seek to make which involve removing work entirely from the contractor's scope or removing work and giving it to a new contractor. However, controversial omissions may not simply involve deletions or transfers of work. The employer may change the design of the scheme such that something different is required. As part of that redesign process, it may seek to omit certain work packages from the contractor's scope. This is not therefore an omission that simply involves the redistribution of the original contract work.

5.172 Where the employer wants to make significant additions part way through a project, one solution may be to introduce a new contractor rather than giving more work to the original contractor. Having two contractors working in parallel will often create problems.[174] But it depends on the nature of the works. Such an approach will be easier where the extra work is geographically separate, for example under a roads project where the employer wants to add an additional stretch. Or where the processes involved in construction are sequential and the interface between stages is limited.

5.173 It is therefore necessary to consider the right of the employer to bring new contractors on to the development to undertake additional work rather than passing it to the original contractor.

5.174 In *Gilbert Blasting & Dredging Co* v. *R*,[175] the Exchequer Court of Canada found that there was no implied obligation on an employer under a construction contract to instruct the contractor to undertake the additional work it started. The same approach was followed in *Hunkin Conkey Construction* v. *United States*.[176] The contractor in this case had been employed to build a dam, but it was discovered part way through the project that an additional concrete cut-off wall needed to be built. The employer, which was a government body, sought tenders for the work involved in the construction of the wall. The original main contractor was just one of three contractors that tendered. The employer and the original contractor could not agree a price, and so the employer brought a new contractor on to the

172. (1876) 1 App Cas 120.
173. For example, ICC Measurement Contract 2011, Clause 51(1)(b) contract refers to variations desirable for the completion or improved functioning of the works. See section A of this chapter for a discussion on such general restrictions on the power to vary.
174. See *infra*, para. 5.176
175. [1901] 7 Can Ex R 221.
176. [1972] 461 F 2d 1270.

project to construct the wall. The Court of Claims found that the original contractor had no grounds for objecting to what the employer had done, since the new work was not part of the original scope.

5.175 In both these situations the change in question involved an additional work package being instructed. The approach taken by the courts in these cases, where the work is simply additional, is perfectly logical. After all, there seems no good reason why the employer, as a buyer of goods and services, should be obliged to purchase new goods from the contractor, simply because it has supplied goods in relation to the same job in the past. To insist on this would be a perverse restraint of trade.

5.176 The original contract itself may, of course, expressly prevent the employer from bringing in a new contractor. The original contractor may be entitled to exclusive possession of the site. Even if no such express limitation exists, it will be necessary to consider such issues as project management, site supervision and health and safety monitoring if two main contractors are to work efficiently in parallel. The original contractor may also be entitled to compensation for delay and disruption caused by an employer bringing a new contractor on to site. Such an approach may therefore still require the employer to negotiate with the original contractor to resolve these issues.

5.177 Whilst, therefore, the employer may be able to bring a new contractor on to the project to undertake additional works that were not part of the original package, restrictions will apply where the employer seeks to tender a redesigned section of the original scope.

5.178 *Simplex Floor Finishing Appliance Co Ltd* v. *Duranceau*[177] involved the construction of floors in a development of the Montreal post office. The government body responsible had hired Duranceau as main contractor, who in turn had employed Simplex to undertake the flooring. The original subcontract scope had referred to maple and birch hardwood flooring but the government body subsequently decided it wanted asphalt floor tiles instead. Duranceau sought to cancel the subcontract with Simplex and to hire a new contractor to undertake the flooring instead. The subcontract contained the following clause:

> 'Any change ordered by the architect or owner to be made in the plans and specifications will entail an adjustment. . . of the amount of this contract, in the event of any amendment in the amount of the contract between the owner and the [main] contractor.'

5.179 The Supreme Court of Canada held that the main contractor was not entitled to cancel the subcontract. It stated:[178]

> 'It was the appellant company's obligations, but likewise its privilege, to carry out the flooring contract in question, whether the floors were to be of wood or, owing to changes in the plans and specifications, of some other material. The respondents contend that, as a result of the substitution effected, the subject of the contract no longer existed and,

177. [1941] 4 DLR 260.
178. *Ibid*. at para. 12.

> therefore, the respondents were no longer bound toward the appellant. I cannot share this view. . . The quality of the material to be used can, in my opinion, be determined subsequently without the validity of the contract being affected. In the present instance, the appellant was asked to provide wood floorings, but it was agreed that any changes made in the specifications by the Government would have to be carried out.'

5.180 The subcontractor had undertaken to carry out the flooring works package. The subcontract not only put it under an obligation to carry out this package of works, but it also gave it the right to carry out the package. As per the provision from the subcontract (quoted above), the subcontractor's right existed even if the scope under the main contract was varied.[179]

5.181 The position in this case is quite different from that in both *Gilbert Blasting* and *Hunkin Conkey* (referred to above, at paragraph 5.174), because it involved a change to a work package rather than an entirely new element of work being tendered. It should also be borne in mind that the subcontract in Simplex contained a clause which gave a clear indication that a change by the employer would not alter the obligations in relation to the subcontract package.

5.182 Clearly, the express terms of other contracts may give the main contractor or employer greater leeway to alter and transfer the scope of work in a package that it is letting. The change to the design of a package of work may be such that it is unsatisfactory, from a technical perspective, for a contractor with no competence in that field to undertake it.[180] However, in those circumstances the employer or main contractor may need to negotiate a cancellation, involving lost profit compensation for the contractor.

Measurement contracts

5.183 Measurement contracts describe the works that a contractor will undertake but provide for the actual quantities to be remeasured once complete, by reference to agreed unit rates. The change in the quantities from that estimated to the final quantity is not a variation, but a function of the remeasurement process.[181] Under such a contract the scope of works is defined, even though the quantities are subject to remeasurement, and therefore the courts take the same approach to omissions as to simple lump sum contracts.

5.184 The nature of measurable work may be such that changes in quantities lead to a variation of the work. However, as discussed above, the employer will still be obliged to instruct the original contractor to undertake work and cannot omit it from the scope. This is illustrated in the context of a measurement contract by the Australian case of *Commissioner for Main Roads* v. *Reed & Stuart Pty Ltd*.[182] The contractor was employed under a contract which involved the

179. See also Chapter 4, section A, which considers the contractor's obligations to undertake the defined works under the contract, which extends to the obligation to undertake those works as the employer may validly instruct by way of variation.

180. See also section B of this chapter, dealing with variations to type of work undertaken.

181. *Arcos Industries* v. *Electricity Commission of New South Wales* [1973] 2 NSWLR 186; (1973) 12 BLR 65, a reduction in quantities was not the same as an 'omission' under the variations clause. See Chapter 3, section I, which discusses measurement contracts in further detail.

182. (1974) 12 BLR 55; (1974) 48 ALJR 460.

laying of topsoil on embankments. It was expected that most of the topsoil required for the embankments could be obtained from within the boundaries of the site itself. However, the site contained less suitable topsoil than predicted and as a result it was necessary to import topsoil from off-site. The contract had covered this eventuality:[183]

> 'If sufficient topsoil to meet the requirements of the Works cannot be obtained from within the [site], the Engineer may direct the Contractor in writing to obtain topsoil from other approved locations. The excavation and removal of topsoil from such locations shall be under the direction of the Engineer. Payment for such additional topsoil per ton will be made at the schedule of rate.'

5.185 The engineer instructed a third-party contractor to undertake the importing of topsoil. The High Court of Australia found that this amounted to a breach of contract. The original contractor was entitled to undertake the work in constructing the embankment and instructing the alternative contractor to undertake this work amounted to an unlawful omission.

5.186 Whether work has been omitted from the contract can turn on the interpretation of what the scope of work incorporates. This can be a particular issue in relation to measurement contracts. The employer may allege that the estimated quantity represents the scope of work, and that it is not obliged to instruct the contractor to undertake works in excess of this. Under a typical measurement contract this is not a sustainable position because, as with any contract involving a defined scope, the contractor is entitled to undertake all the works (subject to the proper exercise of the right to omit).

5.187 This is illustrated by the House of Lords case of *Tancred Arrol & Co* v. *Steel Company of Scotland Ltd*,[184] which related to the construction of the Forth Bridge. Tancred was the main contractor and had employed the Steel Company of Scotland to '. . . supply the whole of the steel required by you for the Forth Bridge. . .', less 12,000 tons of plates that was subject to a different supply contract. The contract also stated: '. . . estimated quantity of steel we understand to be 30,000 tons, more or less'. Tancred then discovered that it could get steel rivets more cheaply from a different supplier and transferred that part of the order. It argued that it was only obliged to buy 30,000 tons of steel from the Steel Company of Scotland, less a five per cent margin to reflect the 'more or less' provision. The court found that the Steel Company was entitled to supply all the steel that was required for the project (less the 12,000 tons expressly excluded). The reference to 30,000 was simply an estimated quantity, and the contract scope which the supplier had the right to provide was the whole of the steel needed for the bridge.

5.188 This approach to restricting omissions applies also to provisional sum items in a contract. Whilst provisional sum work has not been finalised at the time the contract is let, the parties have agreed that the contractor will undertake such work, and therefore the employer is not at liberty to take it away. In *Amec Building Ltd* v. *Cadmus Investment Co Ltd*[185] the defendant

183. (1974) 12 BLR 55 at 60.
184. (1890) LR 15 App Cas 125.
185. (1996) 51 Con LR 105; (1997) 13 Const LJ 50.

was a shopping centre developer and the contractor's claim was an appeal from an arbitrator's award. It included a number of claims, including one for lost profit arising from the omission of work in fitting out a food court on the basis that the work had been transferred to others. The work in question was covered by provisional sums. The fact that it was contained in the contract as a provisional sum made no difference to the court's analysis, which found that the omission amounted to a breach of contract.[186]

SECTION F: THIRD-PARTY CONSTRAINTS

5.189 The limitations on the employer's power to vary under the contract may mean that the contractor can refuse to undertake a variation that the employer wishes to instruct. However, the constraint on the employer's power to vary the works may emanate from a third party.

Third-party rights

5.190 The Contract (Rights of Third Parties) Act 1999 allows the parties to a contract to grant rights to third parties to enforce certain specified rights within their agreement. The parties to a construction contract may, for example, agree to grant such a right to a prospective tenant of the building that the contractor is going to construct, rather than issue collateral warranties. If such rights are granted, then the parties to the contract cannot subsequently vary their contract.

5.191 At the time that the legislation was introduced it was clearly intended that variations instructed under a construction contract would not be caught. The explanatory notes accompanying the Act, prepared by the Lord Chancellor's Department, expressly state at paragraph 12 that the constraint on the varying of the contract:

> '. . . does not, for example, affect the terms of a construction contract which allow one of the parties to that contract to alter, or "vary", the details of the work; such a variation is not to the contract but only to the work.'

5.192 It is unclear from this passage whether it was thought that an instructed variation was not caught because it was a unilateral variation or whether the nature of an instructed change under a construction contract, being to the works, means that it is not a variation of the contract. Neither assumption seems correct.

5.193 A unilateral variation that an employer is entitled to instruct under a contract is still a variation to a contract. Such a power to unilaterally vary a contract arises in other commercial contexts and has been widely recognised by the courts.[187] It has the same effect as a consensual variation, subject to the fact that the power is pre-agreed and so the other party's consent is not required when it is operated.

186. This case pre-dates *Abbey Developments Ltd* v. *PP Brickwork Ltd* [2003] EWHC 1987 (TCC); (2003) CILL 2033. It makes reference to the decision of *Carr* and *Hudson on Building Contracts* but does not seek to analyse the principle underlying debarring an employer from omitting and redistributing work.

187. See *Chitty*, para. 22-039 in relation to unilateral variations, and *May* & *Butcher Ltd* v. *The King* [1934] 2 KB 17, for an example of a unilateral variation in a different commercial context.

5.194 Whilst an instructed variation involves a change to the works undertaken, it is still a variation of the contract. It results in a change to the product that the seller is required to supply. A change to the product to be supplied is just as much a variation of the contract terms as an alteration to the wording of a contract condition.[188] It is a change to the parties' obligations.

5.195 Despite this, it would seem that conferred third-party rights will not prevent the employer instructing a variation. This is because the third party is only entitled to exercise its rights subject to the provisions of the contract. The relevant provision reads:[189]

> 'This section does not confer a right on a third party to enforce a term of a contract otherwise than subject to and in accordance with any other relevant terms of the contract.'

5.196 Where a construction contract contains a provision allowing the employer to vary the scope of work, then the rights conferred on the third party must be taken to be subject to this provision of the contract. It seems likely that the power to vary must be exercised subject to the usual limitations not to instruct changes which are 'so peculiar, so unexpected, and so different' from the subject matter of the contract, in accordance with the test in *Thorn* v. *London Corporation*.[190] Therefore, where a third party has been given rights, the employer may be constrained from varying the works outside what is contemplated by the contract, not only because the contractor may be able to refuse to implement the change but because this variation is caught by the Act.

Guarantor's liability

5.197 Where an underlying contract, which is being guaranteed, is varied, then the guarantee is no longer enforceable. This is because the guarantor's liability relates to the underlying contract and if it does not give consent to the variation it can no longer be bound.[191]

5.198 For this reason guarantees typically contain indulgence clauses which expressly allow variations to the underlying contract to be made whilst maintaining the enforceability of the guarantee. Even where the guarantee contains such a saving provision, this will not cover a variation which involves a change to the fundamental basis of the underlying contract.[192] This is sometimes called the purview doctrine:[193]

188. See Wilkin and Ghaly, *The Law of Waiver, Variation and Estoppel*, 3rd Edn (2012, Oxford University Press), paras. 19.03–19.04.

189. Section 1(4).

190. (1876) 1 App Cas 120. See *supra*, paras. 5.22–5.24. See also discussion later in this section about the discharge of guarantors and the purview doctrine.

191. *Holme* v. *Brunskill* (1877) 3 QBD 495.

192. *Trade Indemnity Co Ltd* v. *Workington Harbour and Dock Board* [1937] AC 1 at 21, Lord Atkins commented on an indulgence clause in the guarantee, stating: 'the words "any arrangement. . . for any alterations in order to the said works for the contract" are very wide. Probably they would have to be cut down so as not to include such changes as had been suggested substituting a cathedral for a dock, or the construction of a dock elsewhere, or possibly is such an enlargement of the works as would double the financial liability.'

193. Longmore LJ in the Court of Appeal case *Triodos Bank NV* v. *Dobbs* [2005] 2 CLC 95 at para. 14, citing with approval from *Rowlatt on the Law of Principal and Surety*, 1st Edn (1989, Sweet & Maxwell). See also *CIMC Raffles Offshore (Singapore) Limited, Yantai CIMC Raffles Offshore Limited* v. *Schahin Holding SA* [2013] EWCA Civ 644 at para. 41 *et seq*.

'. . . assent, whether previous or subsequent to a variation, only renders the surety liable for the contract as varied, where it remains a contract within the general purview of the original guarantee.'

5.199 Case law indicates that a variation that is unilaterally instructed under a construction contract will not operate to invalidate a guarantee in the same way as a consensual variation would.[194] In *Beck Interiors Limited* v. *Dr Mario Luca Russo*[195] the defendant was the guarantor in relation to a construction contract on which there were variations. Ramsey J concluded:[196]

'[Counsel for the defendant] submitted that the further contract variations were an alteration and it was not self-evident that they were insubstantial or could not be prejudicial to Dr Russo [the guarantor]. She submitted that the variations would mean that the Company would be less able to discharge its obligations for payment under the Contract and it could not be said that this alteration could not be prejudicial to Dr Russo. It seems to me that in circumstances where there is a contractual provision which provides for there to be variations to the work under a contract and a guarantee is given, there would be no alteration to the terms of the Contract when there was a variation to the work made under the provisions of that contract. The terms of the contract would not be varied and the obligation in terms of the amount of work would be altered in the manner provided for in the contract.'

5.200 Since the underlying agreement that the guarantor is securing contains a unilateral variation clause, then when a variation to the scope is triggered under it there is no change to the terms of the agreement itself. In this sense the terms of the contract have not been varied, as the passage above makes clear. Such a variation is quite different from a consensual variation of the underlying contract which is not contemplated by the provisions of the contract and cannot therefore be said to be part of the bargain covered by the guarantee.

Constraints under procurement legislation

5.201 EU procurement rules are designed to ensure that the tender process for the letting of public sector and certain utilities contracts is competitive and transparent. If a contract is caught by the legislation,[197] it will be necessary for the employer to tender the work in accordance with the statutory procedures. This will involve, amongst other things, advertising the invitation to tender in the specified manner as well as awarding the contract in accordance with particular criteria. A failure by the employer to properly follow the procedures can mean that the contract award is open to challenge.

5.202 In order to prevent employers from circumventing the procedures by letting new projects as variations to existing contracts, the European Commission has introduced a change to EU

194. *Wren* v. *Emmetts Contractors Pty Ltd* (1969) 43 ALJR 213.
195. [2009] EWHC 3861 (QB).
196. *Ibid*. at paras. 31–32.
197. This will depend on the type of work that is the subject matter of the contract and financial thresholds that apply.

legislation intended to codify recent case law.[198] The European Parliament adopted the new procurement directives on 15 January 2014.[199] These will replace Directives 2004/17 and 2004/18 and are due to come into force in March 2014.

5.203 The Directive provides that work can still be instructed as a variation to a contract, rather than having to be tendered as a new contract through the usual procurement regime, provided that it falls within certain criteria set out at Article 72 of the Directive on 'classical' Public Procurement. These are quite wide and will capture variations of differing types and sizes. For example, work can still be let as a variation if the process of letting the work to a new contractor cannot be made for economic or technical reasons, such as requirements concerning the interchangeability of equipment and where a change of contractor would cause 'significant inconvenience or substantial duplication of costs' for the employer.[200] These would have to amount to disproportionate technical difficulties or costs. The general gist of the modification provisions is that the modification should not be so significant that it would alter the overall nature of the contract or framework agreement, so that additional bidders might have been attracted to bid originally had the modification been included in the original tender. Variations will be allowed if they are less than €5 million and, in addition, less than 15 per cent of the initial value.[201] All exceptions from the obligation to advertise a variation will be construed narrowly.

5.204 If an employer seeks to vary a contract in contravention of public procurement legislation, it opens itself up to the risk of a legal challenge by another contractor that considers that it has lost out on the opportunity to secure the work.

198. This legislative change arose as a result of court challenges to variations made to public works contracts where the claimant alleged that the work should have been tendered as a new contract in accordance with the usual public procurement regime. See (Case C-454/06) *Pressetext Nachrichtenagentur GmbH* v. *Republik Österreich (Bund), APA-OTS Originaltext – Service GmbH and APA Austria Presse Agentur registrierte Genossenschaft mit beschränkter Haftung* [2008] ECR I-04401.

199. The UK Cabinet Office, in its Procurement Policy Note of July 2013, stated that the intention was to transpose the new rules into UK law as soon as possible. EU Member States have 2 years to implement them.

200. See Art. 72.1(b). There is also the added requirement under this head that the variation must not be higher than 50% of the value of the original contract sum. In relation to a variation which is exempted under this particular head the employer must still publish a notice in the Official Journal of the European Union with details of the modification.

201. These are the values and percentages in relation to public works contracts. Different values and percentages apply to different types of contract covered by the proposed legislation.

CHAPTER SIX

VARIATIONS REQUIRED BECAUSE OF CONTRACTOR RISK

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SECTION A: INTRODUCTION

6.1 Responsibility for certain risks under a contract will belong to the contractor. Those risks may result in the need to undertake additional work.[1] For example, the contractor's defective workmanship may mean that the design has to be changed. This chapter considers variations instructed in these circumstances.

6.2 The contractor may ask the employer to agree a change to assist it, even though it is still possible to construct the defined scope. Such a change may be requested to reduce costs for the contractor, for example because it has realised that the works can be built equally effectively using an alternative, cheaper material. Or, the contractor may request that the works are altered, or the method or sequence changed, so as to reduce the critical path. If these risks are the responsibility of the contractor, the change is requested simply to limit its exposure, either by reducing its build costs or project delay for which it will be liable.

6.3 Alternatively, it may be the case that a change is necessary in order for the works to be constructed in circumstances where the contractor is responsible for the relevant risk. The need to make a change in order to proceed with the works may arise because of an inherent problem with the defined scope, or because an event brings the project to a standstill.[2]

6.4 The problem in constructing the works may arise from an inherent deficiency, or it may be that the design was based on assumptions as to the site conditions, which proved to be inaccurate.[3] It may be impossible to build the defined scope because the contractor has warranted that the works will achieve certain performance criteria, and it transpires that the specified design will fail to achieve these criteria.[4] For example, a contractor agrees to construct foundations to a particular design and also warrants that they will pass specified

1. In such situations, where it is necessary to make an alteration to the contract scope because of a risk that is the contractor's responsibility, the change may not amount to a variation under the contract. The contract may require the contractor to undertake changed or extra work as part of its obligation to build in accordance with the defined scope. See Chapter 3, section C and *Davy Offshore* v. *Emerald Field Contracting Ltd* (1991) 55 BLR 1, as an example. This chapter considers instead situations where a variation is required.

2. Chapter 2, sections A and C consider such necessary changes.

3. These are the facts of *Simplex Concrete Piles Ltd* v. *The Mayor, Aldermen and Councillors of the Metropolitan Borough of St Pancras* (1958) 14 BLR 80.

4. The contractor's obligations are such that it has agreed to works that it cannot deliver. See Chapter 3, section D and the illustrative cases: *Steel Co of Canada* v. *Willand Management* [1966] SCR 746 and *Greater Vancouver Water District* v. *North American Pipe & Steel Ltd* [2012] BCCA 337.

load-bearing tests, but this proves to be physically impossible. Where the work cannot be achieved, the contractor will be in breach unless the employer agrees to vary the scope.

6.5 It may be the case that, owing to an unexpected event which is the contractor's responsibility, what was previously a buildable design can no longer be constructed. The event may be that a change to the law renders a method of working illegal, or the contractor's poor workmanship may necessitate a change to the design. For example, part way through construction of a tunnel there is a collapse, for which the contractor is responsible, and it is therefore necessary to re-route the tunnel, such that it does not follow the original design.[5]

Ways in which the employer can approve change

6.6 Whilst it is necessary for a contractor to obtain the employer's approval for any change it makes to the scope, that approval does not need to be instructed as a variation under the contract.

6.7 In circumstances where the employer considers that the contractor is responsible for the need to change the works, it may choose to approve the alteration as a concession.

6.8 Such a concession to depart from the scope is permissive. It does not require the contractor to make the change in the same way that a variation instruction does. It simply allows the contractor to depart from the scope and confirms the employer's consent to the execution of what would otherwise be nonconforming work. Because the variations mechanism has not been operated, the contractor is not entitled to be paid for the change. Such concessions to depart from the scope are discussed further in Chapter 9, section B.

6.9 If the employer instead instructs a formal variation, the question then arises whether the contractor is entitled to additional money and time in accordance with the contract. This issue is considered in detail in section B of this chapter.

The employer's duty to vary

6.10 The question whether an employer may be under an obligation to approve a change to the scope, in circumstances where the alteration is required because of something which is the contractor's risk, is considered in Chapter 7. This issue can be controversial, especially if the project cannot proceed unless a change to the works is implemented.

Disagreement as to the reasons for change

6.11 The parties may disagree as to why the change in question is needed and whether the change is required because of a contractor's risk event. This is discussed in section C of this chapter.

5. As an example of such a situation where defective work necessitated a change to the design, see *Howard de Walden Estates* v. *Costain Management Design Ltd* (1991) 55 BLR 124.

Such a disagreement can lead to an impasse on the project, with the employer refusing to instruct a variation and the contractor refusing to undertake the works without one.

SECTION B: CONTRACTOR'S ENTITLEMENT TO BE PAID FOR VARIATION

6.12 Contracts will sometimes expressly provide that the contractor is not entitled to either money or time in relation to variations instructed because of its failure or default.

6.13 For example, NEC3 Clause 61.4, which deals with the notification of compensation events (which incorporate variations for the purposes of this contract), states:

> 'If the Project Manager decides that an event notified by the Contractor. . . arises as a result of a fault of the Contractor. . . he notifies the Contractor of his decision that the Prices, the Completion Date and the Key Dates are not to be changed. . .'

6.14 ICC Design and Construct Contract 2011, Clause 51(4) states:

> 'No alteration ordered under this Clause shall in any way vitiate or invalidate the Contract but the fair and reasonable value (if any) of all such alterations shall be taken into account in ascertaining the amount of the Contract Price except to the extent that such alteration is necessitated by the Contractor's default.'

6.15 Other contracts contain such provisos, but rather than being of application to all instructed variations, only concern changes that are instructed in relation to certain specific events. For example, Clause 3.13 of the JCT Design and Build Contract 2011 allows the employer to instruct changes if the contractor's work is not in accordance with the contract, but goes on to state that the contractor is not entitled to money or time if it is at fault.

6.16 Only if the variation has been instructed will the contractor be entitled to money and time in accordance with the contract procedures. The employer may, alternatively, approve the change as a concession that permits, but does not require, the contractor to vary. If the employer has instructed the change as a variation, and the contract does not contain a clause excluding entitlement, then the contract may allow the contractor money and time despite this appearing to be inequitable. These issues were the subject of the case *Simplex Concrete Piles Ltd* v. *The Mayor, Alderman and Councillors of the Metropolitan Borough of St Pancras*.[6]

6.17 Camden Council planned to build a nine-storey block of flats and hired Simplex, a foundations contractor and expert in driven piles. The contract specification set out details of the driven piles Simplex was to construct. Simplex took design responsibility for the performance of the piling. It guaranteed the load-bearing performance of the piles by reference to test criteria and specifically took the risk as to the ground conditions not being as anticipated. In addition, Clause 7 of the contract stated that Simplex 'shall be liable to make good at his

6. (1958) 14 BLR 80.

own cost any failure or inadequacy of the work covered by [the contract] due to faulty design, materials or construction. . .'

6.18 The employer was entitled to instruct variations which changed the design, even though this was a design and build contract. The variations clause contained the wording: 'The architect may, in his absolute discretion and from time to time issue further drawings, details and/or written instructions. . . in regard to. . . the variation or modification of the design, quality or quantity of the works or the addition or omission or substitution of any work.'

6.19 The ground conditions were not as anticipated and the driven piles failed the load-bearing tests in relation to Block A, being the part of the development which the litigation concerned. It was accepted by all involved that the piling design would have to be changed. The contractor put forward two alternatives to overcome the difficulty. One involved Simplex increasing the number of driven piles. The other alternative involved using bored piles instead of driven piles. Simplex obtained a quotation for bored piles from a company called Cementation. Simplex sent the Cementation quotation to the architect with a request: 'we shall be glad to have your instructions and views as to the extra cost which will be involved'. The architect's letter in response, dated 30 July, commented on the bored piling design and included the crucial wording: 'We are prepared to accept your proposal that the piles supporting Block A should be of the bored type in accordance with quotations submitted by Cementation Co Ltd.'

6.20 Edmund-Davies J found that the architect's letter amounted to a variation instruction under the contract and that the contractor was entitled to be paid for the extra cost of the bored piles. The judge placed weight on the fact that the architect had intended to instruct the additional work as a variation rather than as a concession to allow the contractor to change.

6.21 It does not seem fair that a contractor in these circumstances should be entitled to payment for the variation where it is required only because of the contractor's breach. The employer sought to argue that the contractor had no entitlement because it was obliged to undertake this work in any event.

6.22 Simplex was in breach, because the specified driven piling design, described in the specification, could not pass the required load tests. It had agreed to undertake works that would not achieve the load-bearing performance required by the contract.[7] This was not in dispute and, as the judge noted:

> '. . . the plaintiff's learned Counsel conceded at the outset, had the architect not proved amenable, the plaintiffs would, by reason of (inter alia) Clauses 3, 5, 7 and 17 of the General Conditions and Preliminaries, have no defence to a claim for damages for breach of contract'.

6.23 It was, therefore, only the architect's agreement to vary the scope that caused Simplex not to be in breach.

7. See Chapter 3, section D for further discussion as to how this may arise.

6.24 The employer argued that the contractor was required to change the piling design because this was part of the contractor's design responsibility. The bored piling could not therefore be instructed as a change, since this was something that the contractor was required to do under the contract anyway. The judge disagreed with this analysis:[8]

> 'In my judgment it is an over-simplification of the case to say that, following upon the 30 July letter, the plaintiffs did no more than they were contractually bound to do and that, accordingly, they cannot claim extra payment. If they failed to carry out the Section A works, their liability was in damages, which might as events turned out be substantial or small, according to what alternative arrangements the defendants might have been able to make. What the contract did not oblige them to do was to get the work done by sub-contractors in a wholly different way at considerable extra expense.'

6.25 The judge went on to say that the effect of the variation instruction was to lead to Simplex 'doing something different from that which they were obliged to do under their contract'.[9]

6.26 The judge was clearly correct in his observation that, until the instruction was issued, Simplex was not obliged under the contract to undertake the new bored piling work. Indeed, the contractor would have been in breach had it departed from the scope without employer approval. The contractor's design did not work and therefore it was necessary to change that design if the project was to be completed. But the change was equally a variation to the contract scope, and that variation needed the employer's approval. The contractor could not unilaterally choose to depart from the defined scope in the way it saw fit, without getting the employer's agreement.

6.27 The employer was correct in saying that the contractor was in breach because its design had failed. However, the necessary change was still an alteration to the contract scope of works. As discussed in Chapter 3, section C, it is possible that a contractor's obligations can be defined in such a way that the contractor is required to achieve an end result, and is therefore entitled to depart from the specification so that this can be achieved. If the contractor's obligations are formulated under the contract in that way, it can depart from the specification without this being a variation and in those circumstances the employer's consent is not required.[10] In the context of *Simplex Concrete*, the contract could have stated that the contractor was required to follow the driven piling design in the specification, but only to the extent that, and subject to, achieving the overall project objective of building foundations that were fit for the purpose of supporting a nine-storey tower. If the works had been described in this manner, Simplex would have been required to construct the revised bored piling design as part of its obligation to carry out and complete the works. The departure from the specification would not, in those circumstances, have been a variation and there would have been no need for the employer to issue an instruction.

8. (1958) 14 BLR 80 at 98.
9. *Ibid*. at 99.
10. As an example, see the case of *Davy Offshore* v. *Emerald Field Contracting Ltd* (1991) 55 BLR 1, discussed *supra*, at paras. 3.96–3.97.

6.28 However, the build obligations were not formulated in this manner. Instead, Simplex agreed to build driven piles and they subsequently proved inadequate. Even though the change may only have been required because of the contractor's default, it was still the case that the scope needed to be varied, and the employer needed to approve that change.

6.29 The difficulty for the employer was that the change was approved as an instructed variation rather than as a concession, and the contract did not distinguish between the reasons why such a variation may be ordered. Whilst it was not disputed in this case, the parties can often disagree as to the reason why a variation has been instructed.[11]

6.30 If the change had been approved as a concession, the employer would not be liable to pay for the change. Entitlement to money and time under a contract arises because a variation is ordered, whilst a concession amounts to permission that change may be made. However, a contract administrator has no implied authority to make a concession to the contractor in this way, whereas it is empowered to order a variation under the contract procedure. Such concessions to allow alterations to the scope to be undertaken are considered further in Chapter 9, section B.

6.31 An employer seeking to resist payment for change in such circumstances may seek to claim that its communication was a concession rather than an instruction. The distinction between the two is therefore important. Indeed, this point was also argued unsuccessfully by the employer in *Simplex Concrete*. The court found that the architect's letter of 30 July could not be treated as a concession because he had intended it as an instruction under the contractual variation provisions.[12]

6.32 The case *MT Højgaard A/S* v. *E.ON Climate and Renewables UK Robin Rigg East Ltd*[13] discussed whether the reason for a variation should influence the way it was assessed. It involved a disagreement between the parties as to how an instructed omission should be valued, which turned on the correct interpretation of the valuation clause. The contractor favoured an assessment which simply deducted the relevant part of the contract sum breakdown, whilst the employer favoured a calculation using a schedule of rates for valuing change, to which the relevant clause referred. In considering the approach to be taken, Stuart-Smith J discussed whether the reason for the variation was relevant in interpreting the valuation clause:[14]

> '. . . the parties offered various different examples of when [the variation valuation clause] might be called into operation. What became clear is that there is a spectrum of possible circumstances, each of which will be likely to arise as a result of differing commercial or operational concerns. At one extreme, an employer might decide the day after the execution of the Contract that his financial interests would be best served if his contractor were to be instructed to use alternative or additional equipment that is more efficient (and expensive) than originally provided for in the Contract, in order that all

11. See section C of this chapter.
12. The distinction between variation instructions and concessions is discussed *infra*, paras. 8.36–8.51.
13. [2013] EWHC 967 (TCC).
14. *Ibid*. at para. 64.

> or part of the Works can be concluded and brought into profitable operation sooner so as to enable the employer to capture a particular commercial opportunity. In that case, the intuitive reaction might be that the employer "should" carry the additional financial burden. At the other extreme, an employer might consider that his contractor is seriously in breach of contract and in delay such that, in desperation, the employer requires the same alternative or additional equipment in order to mitigate substantial financial losses that are being caused by the delays. In that case, the intuitive reaction might be different. The permutations between the two extremes may be many and varied.'

6.33 The judge went on to say that the reason for the variation was not relevant in seeking to interpret the valuation clause and that 'such intuitive reactions' (as referred to in the above passage) were 'an unreliable guide to contractual interpretation'.

6.34 He gave three reasons for this. Firstly, the valuation clause needed to have a single and consistent meaning and could not be applied differently depending on the reason for the change. Secondly, post-contract events cannot generally influence contract interpretation. Thirdly, the court will not always know why the variation procedure has been operated. There may be disagreement as to why a change was instructed. In practice, when a contract administrator is seeking to value, or a tribunal is reviewing that valuation, it will often not have information in front of it as to the reasons for the change, which themselves may be unclear.[15]

Valuation of the contractor's entitlement

6.35 If a contract provides that the contractor has the right to be paid for an instructed variation, without any distinction being made as to the reasons which led to the change, then it is important to consider the approach to be taken to the valuation of that variation.

6.36 Contracts often contain very flexible valuation provisions which would allow the fact that the contractor was responsible for the change to be taken into account in making the assessment of the sum due.

6.37 For example, JCT Standard Building Contract 2011, Clause 5.10.1 states:

> 'To the extent that a Valuation does not relate to the execution of additional or substituted work or the omission of work or to the extent that the valuation of any work or liabilities directly associated with a Variation cannot reasonably be effected in the Valuation by the application of clauses 5.6 to 5.9, a fair valuation shall be made.'

6.38 In the type of situation faced in *Simplex Concrete*, it would seem arguable that an assessment that awarded the contractor payment for the change would not amount to a reasonable valuation of the parties' liabilities. In which case, it may be that this provision could be relied upon so as to ensure that a fair valuation was made.

15. See section C of this chapter.

6.39 Such an approach, which focuses on the valuation of the variation to avoid the contractor being paid for a change for which it is responsible, was not raised by the employer in *Simplex Concrete*. The following clause from the contract is referred to in the judgment:[16]

> 'If compliance with Architects Instructions involves any variation, such variation shall be dealt with. . . and the value thereof shall be added to or deducted from the Contract Sum.'

6.40 Even with this type of provision, it could be said that the 'value' of the variations work is zero.

6.41 One approach in this type of situation is to assess the additional cost of the variation by taking account of the cost to the employer of undertaking the change and deducting from this the liability that the contractor has to the employer as a result of its breach. The value, or additional cost, of the variation is the difference.

6.42 Analysing the quantification of the variation in this way would allow the employer's decision to upgrade the design to be taken into account.

6.43 For example, in this case, Simplex had given the employer two possible alternative design solutions to overcome the shortcomings of the original contract design. Simplex had suggested that it could adopt a design that still involved driven piles but used more of them. Instead, the employer opted for the other alternative: bored piles. Suppose the extra driven piles had cost £2,000 and the bored piles had cost £3,000. Suppose, also, that as a matter of fact it was established that the solution using extra driven piles was a satisfactory and safe one, which fulfilled all of Simplex's other contractual obligations. The valuation should take into account Simplex's liability for damages for breach at £2,000 because this is the solution which the employer, acting reasonably, should have adopted. The £2,000 therefore represents, in financial terms, the contractor's liability. If the employer instead instructed Simplex to install bored piles at a cost of £3,000, the variation should be valued £1,000. This is because this represents the additional cost to the contractor of undertaking the additional work, having set off its liability for breach against the cost of undertaking the changed work.

SECTION C: DISPUTES AS TO WHY CHANGE IS REQUIRED

6.44 As discussed in section 2 of this chapter, an employer may be liable to pay for variations despite the fact that the change was only required because of the contractor's risk. Indeed, it may seek to approve a change in such circumstances as a concession.

6.45 The parties may disagree as to why the change is required and therefore whether it is the contractor's responsibility. A disagreement as to what gave rise to the need for the change may be at the heart of a dispute such as that in the *Simplex Concrete* case, where the employer

16. (1958) 14 BLR 80 at 90.

refuses to pay for an instructed change.[17] Equally, the contractor may refuse to undertake a change to the works on the basis of a concession given by the employer, insisting that a formal instruction should be issued.[18]

6.46 It may be difficult to determine the reason why a variation has been instructed and whether this is because of the contractor's risk.

6.47 This can be illustrated by reference to the facts of *Simplex Concrete*. The employer in that situation could have instructed exactly the same change from driven to bored piling for reasons of its own, rather than because the original contract design failed. There may be multiple reasons why such a change needs to be made. For example, suppose that the employer in the *Simplex Concrete* case had decided, after the works commenced, that it wanted a 15-storey block of flats rather than the specified nine storeys. Suppose that, as a result, the foundations had to be changed from the original driven piles to the bored piles in order to ensure that the larger building had adequate support. In these circumstances there would, of course, be no question that the variation was being introduced to suit the employer's changed requirements for the project. However, a deficiency in the original design might also have been discovered at the same time that the employer was considering its design change, such that the change to bored piles was required anyway. Or the deficiency with the driven piles might have been discovered first, with the employer later deciding to take advantage of the revised piling design by adding to the size of the building.

6.48 In certain circumstances the contractor may ask that an element of the scope be varied so as to assist it in completing the project. For example, a change to a specified material may help speed up the works and allow for early completion, or at least completion by the planned takeover date. Whether this is a variation to assist the contractor may often, of course, be controversial because the employer may be partly or wholly to blame for the unavailability of the original specified material. Or the need to accelerate the project may have arisen because of delay caused by the employer.

6.49 The employer may instruct a change to the design because it considers that the contractor's design has failed and the contractor disagrees with this analysis. These were the facts in *Skanska Construction Ltd* v. *Egger (Barony) Ltd*.[19]

6.50 Egger was a company that produced chipboard and had employed Skanska to build a factory for it in East Ayrshire. One aspect of Skanska's work involved designing and building a fire-fighting system. Part way through the work Egger instructed changes to the fire-fighting system, which also required Skanska to install a second main water system. The issue between the parties was whether Egger was liable to pay for the second main, which represented an extra cost for Skanska. Egger argued that it was not responsible to pay for the second main because it said that a properly designed fire-fighting system would have required two mains anyway. Therefore, it said that this did not represent an extra because

17. Albeit this was not in issue between the parties in *Simplex Concrete*, where the contractor accepted that it was responsible for the need to change the design. This case is fully reviewed in section B of this chapter.
18. This may lead to an impasse on the project. See Chapter 2, section C.
19. [2005] EWCA Civ 501.

this was something that Skanska would have had to install anyway in fulfilment of its design and build obligation. The system that Skanska had developed as part of its design solution included only a single main. The judge found that the system that Skanska had developed complied with the employer's requirements, so Egger's change to two mains systems was a variation.

6.51 A further example is *Cable (1956) Ltd* v. *Hutcheson Ltd*.[20] The case turned on whether the contractor had design responsibility for a storage hopper it was constructing. In the final stages of the project it was realised that the design was such that, as and when the hopper was filled, the foundations would not support the weight of the structure. The foundations design was found to be the employer's design responsibility. The cost of remedying the foundations was therefore to be borne by the employer.

6.52 Whether the change is required because of a contractor's risk may be unclear, because it turns on complex issues concerning the interpretation of the contract documents. The technical schedules to the contract may contain ambiguities, and it may be difficult to determine with certainty what constitutes the scope, and therefore which party is responsible for the change that is necessary.

Project impasse and interim agreement

6.53 This type of situation can therefore lead to the project reaching an impasse if the employer refuses to issue an instruction because of a disagreement as to responsibility. Chapter 2, section C considers such situations in further detail.

6.54 The parties may agree an ad hoc approach to assessing liability and payment.

6.55 In *Howard de Walden Estates* v. *Costain Management Design Ltd*[21] Costain had been employed to undertake the refurbishment of two Georgian buildings in Harley Street, London. The work included the underpinning of the rear walls. Costain excavated beneath the walls under which it was to pour concrete. However, it did not undertake this work in accordance with the design and as a result the walls collapsed. The parties did not agree as to the cause of the collapse and whether the contractor should be paid for the additional work that was required as a result. Therefore, the remedial work undertaken was instructed by the architect under separately identifiable variation orders with the prefix 'DST'. The parties agreed that Costain would undertake the DST variation order work and that there would be a determination, at a later stage, as to who was liable to pay for it.

6.56 In the subsequent arbitration dealing with liability for payment for the DST work, Costain relied on *Simplex Concrete*. Costain convinced the arbitrator that the decision in *Simplex Concrete* was authority for the proposition that a contractor is entitled to be paid for an instruction once issued, irrespective of the fact that the work was only required because of the contractor's breach.

20. (1969) 43 ALJR 321.
21. (1991) 55 BLR 124.

In the subsequent appeal from this award, HHJ Newey QC rejected the analysis of the arbi- **6.57**
trator on the basis that the position was quite distinct from that in *Simplex Concrete*. The parties had clearly agreed that the issuance of an instruction would not be determinative of the employer's liability to pay. They had expressly agreed that the question of the contractor's entitlement to be paid for the DST work was to be reserved for future assessment. Therefore the instructions could not automatically give rise to an entitlement to be paid.

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CHAPTER SEVEN

DUTY TO VARY

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SECTION A: INTRODUCTION

7.1 It may be difficult to proceed with the works unless they are varied The question arises whether, in such circumstances, the employer can be said to be under an obligation to agree to vary the works.

7.2 Whether such a duty arises depends, to a large degree, on whether the need to make the change has arisen because of a factor that is the contractor's responsibility or the employer's responsibility. Therefore, whilst section B of this chapter considers both express and implied duties generally, sections C and D deal with the specific situations where the contractor or employer is responsible for the need to make the change.[1]

Circumstances in which the duty may need to be considered

7.3 The question whether an employer is under a duty to vary will most commonly arise where the works cannot be progressed unless a change is introduced. It may not be possible to construct the defined scope because of an inherent problem with the contract design or because an event that has occurred part way through the project which has led to the design becoming unbuildable.[2] In either case the risk may be the responsibility of the contractor or the employer.

7.4 The contract may allow the contractor to alter the works without needing the employer's permission to vary.[3] For example, the contract may deem a variation to have been instructed in particular circumstances such as where the contractor cannot otherwise proceed.[4] Or, certain types of unavoidable change to the way the works are undertaken may be compensated under different provisions which do not require the employer's prior agreement.[5]

7.5 The question whether there is a duty to vary may also need to be considered in circumstances where the variation is not essential in order for the project to proceed, but is nonetheless

1. Establishing who is responsible for the need to vary the works can be complex and difficult to determine with certainty. See Chapter 6, section C.
2. See Chapter 2, section A.
3. See Chapter 2, section C.
4. See Chapter 3, section G.
5. See Chapter 9, section H.

proposed by the contractor. The contractor may want to implement changes to the scope in order to reduce the cost or time involved in building the project. It may propose changes to the design as improvements as part of a value engineering review.

Different forms of employer approval

7.6 Approval to change the works can be given in different ways and does not necessarily involve an instruction under the contract.

7.7 A variation instruction will typically give the contractor the right to additional money and time under the contract. The contractor may, alternatively, consent to the change by way of a concession which permits the alteration without instructing it.[6] A contractor that is simply permitted to change the works will not be able to claim money and time because those entitlements are triggered via the contract mechanism allowing for instructed variations.[7]

7.8 The contractor may be perfectly content with a concession. For example, where it wants to change the works in order to take advantage of an alternative material which reduces its costs or shortens the project critical path. However, in other situations the nature of the change may be such that the contractor thinks it should be paid for the extra work, in which case a concession will be unacceptable to it. In those circumstances it may insist on a variation instruction being issued before it is prepared to undertake the work.

The contractor's remedies if the employer refuses to authorise a change

7.9 This chapter also considers the remedies that may be open to a contractor if it can establish that a duty to vary exists. It is important, in this context, to consider the various circumstances in which such a duty arises and precisely what form of authorisation the employer is obliged to give. For example, is the employer under a duty simply to approve a change (as a concession), or is it obliged to instruct a variation and pay for the change.

7.10 A dispute concerning the lack of authorisation may arise before the work in question is carried out. If the employer refuses to grant permission for the change then the project may reach a standstill.[8] The employer may permit a change to be made by way of a concession, whilst the contractor may want to be paid for the alteration and therefore refuse to undertake the variation unless it is instructed.

7.11 Alternatively, the dispute may arise retrospectively. In these circumstances it will again be necessary to consider whether the contractor wants a formal instruction or whether a simple concession to change will be sufficient. An instruction will be required if the contractor wants money and time in respect of the varied work.[9] The employer may have refused to

6. See Chapter 9, section B.
7. Chapter 9 considers the other ways in which approval of change can be given.
8. See also Chapter 2, section C.
9. The contractor may, in any event, be entitled to money and time in the absence of an instruction. See also Chapter 9, which considers other arguments that the contractor may raise in such situations, such as claiming that the employer waived the need to obtain a formal instruction as a condition precedent to payment.

give permission that nonconforming work remain because it wants the contractor to reinstate by reference to the original design. It may also refuse to certify completion. In such circumstances it will be necessary to consider whether the extent or nature of the contractor's departure from the contract scope is of a minor nature such that the employer is not entitled to take such drastic steps.[10]

Duty to instruct the resident contractor rather than new contractor

7.12 The question of an employer's obligation to instruct can also arise where it wants to make a change but is considering bringing a new contractor on to site to undertake the work. The original contractor may contend that it is entitled to carry out all variations on the existing project. This issue is closely related to the question whether an employer can omit works and transfer them to a new contractor, and therefore this issue is considered in the context of variations at Chapter 5, section E.

SECTION B: EXPRESS AND IMPLIED DUTIES

7.13 This section considers the employer's obligation to vary generally, which is then applied in sections C and D to the particular situations concerning change arising from contractor or employer risk events.

7.14 The starting point should be to recognise that the contractor is obliged to build in accordance with the scope as defined by the contract and that it will be in breach if it constructs something different.[11] The parties' bargain is based on the work as described in the agreement. To place a duty on a buyer to agree to receive something different from that which it contracted for is only likely to arise in unusual circumstances; for example, where otherwise the project cannot be completed.

Express obligation to vary

7.15 The contract may contain an express provision which requires the employer to vary the works. This will typically apply in circumstances where the works need to be changed in order for the project to be completed. For example, ICC Measurement Contract 2011, Clause 51(1)(a) states:

> '51 (1) The Engineer
>
> (a) shall order any variation to any part of the Works that is in his opinion necessary for the completion of the Works. . .'

7.16 Sub-clause (b) goes on to refer to the engineer having the power to instruct in wider circumstances and that provision is considered at paragraph 7.29 below.

10. See Chapter 4 where these issues are considered.
11. See Chapter 4.

7.17 Sub-clause 51(1)(a) will often need to be considered in conjunction with Clause 13(1) of the same contract, which provides that the contractor is under no obligation to proceed with works where this proves impossible.[12]

> '13 (10) Save insofar as it is legally or physically impossible the Contractor shall construct and complete the Works in strict accordance with the Contract to the satisfaction of the Engineer and shall comply with and adhere strictly to the Engineer's instructions on any matter connected therewith (whether mentioned in the Contract or not).'

7.18 There have been a number of reported cases dealing with the operation of this clause as it appeared in earlier versions of this contract, which had similar or identical wording. See, for example, *Yorkshire Water Authority* v. *Sir Alfred McAlpine & Son (Northern) Ltd*,[13] which is reviewed in more detail at paragraph 3.176 above, where the full facts of the case are set out.[14]

7.19 Y*orkshire Water* involved a situation in which it was impossible for the contractor to proceed with the works as described under the contract without changing the method of construction. The contractor therefore adopted a revised method of building the works but did not obtain the prior consent of the employer. The case required the court to consider the contractor's entitlement to a variation instruction and its right to be paid for the change. The judgment of Skinner J concludes:[15]

> 'If the variation which took place was necessary for the completion of the works because of impossibility within clause 13(1), then, in my judgment, the [contractors] were entitled to a variation order with the consequent entitlement to payment of the value of such variation as is provided in clause 51. . . .'

7.20 The obligation under Clause 51 places a duty on the employer, via the contract administrator, to exercise its power to unilaterally vary when this is necessary to complete the works.[16] This may apply in circumstances where the employer or the contractor is responsible for the risk that has led to the standstill on the project.

7.21 There could be said to be a conceptual problem in applying this type of provision. The 'works' to be carried out and completed are those that are defined in the contract. A variation, by its very nature, is an order that something other than that which was originally defined as

12. It should also be noted that Clause 13(3) provides that, if the engineer issues instructions pursuant to Clause 13(1), then the contractor shall be entitled additional money and time. Importantly, it provides that any instructions issued pursuant to Clause 13(1) which require a variation to the works shall be deemed to have been given pursuant to Clause 51. As such, the contractor will be entitled to be paid for those changes as variations. An instruction given under Clause 13(1) could, however, be given orally and so this provision potentially gives the contractor the opportunity to be paid for changes that are not instructed in writing in accordance with the usual procedure.

13. (1985) 32 BLR 114.

14. See also the following cases which concern the operation of this clause: *Havant Borough Council* v. *South Coast Shipping Ltd (No. 1)* (1998) 14 Const LJ 420; and *Turriff Ltd* v. *The Welsh National Water Development Authority, McCreath Taylor & Co Ltd and Trocoll Industries Ltd* [1994] Const LY 122.

15. (1985) 32 BLR 114 at 126.

16. The employer may be responsible for the contract administrator's failure to perform its duties; see Chapter 10, section D.

the 'works' should be built.[17] Rather than the originally defined 'works' being built, something different is ordered if a variation is instructed. How can it therefore be the case that in order to better carry out and complete the 'works' a variation should be introduced?

7.22 There are two ways in which such a provision can be analysed:

- A change in the detailed scope of works is required in order to complete the construction of the project. This was the approach taken in *Holland Hannen & Cubitts (Northern) Ltd* v. *Welsh Health Technical Services Organisation*,[18] which is reviewed in section D of this chapter. It is then possible to place a duty on the employer to vary the works, in pursuance of the aim of achieving completion of the project. The difficulty comes if the changes that need to be made in order to complete the project involve dispensing with aspects of the design which may be considered important to the overall project strategy. The assessment of what the high level definition or aim of the project is will of necessity be subjective as it is not based on a defined contract term. Such an interpretation requires a purposive rather than literal reading of the clause.
- A change in the temporary works or methodology is required in order to achieve the permanent works. The clause can then be read as placing an obligation on the engineer to instruct a variation of the temporary works in order to ensure completion of the permanent works. However, this is not what the clause says as it makes no distinction between permanent and temporary works. In *Yorkshire Water* the variation was to the construction methodology and so, in this sense, it follows the logic that the temporary works can be varied in order to achieve completion of the permanent works, as defined under the contract. But in *Yorkshire Water* the obligation to change the construction methodology was found to arise precisely because the court considered that the methodology formed part of the works overall and was thereby caught by Clauses 13 and 51.

7.23 In the absence of a clear contractual duty to vary the works, such as the one discussed above from the ICC form of contract, contractors have on occasion sought to rely on other contract provisions. In particular, a contractor may cite a clause putting the employer under a general obligation to assist the contractor in the performance of the works, in order to establish a duty to vary. The case law in this area indicates that in the absence of clear wording a contractor will find it very difficult to establish that such a duty exists.

7.24 In *Davy Offshore* v. *Emerald Field Contracting Ltd*[19] the contractor claimed that a general non-obstruction clause in the parties' contract placed such a duty to vary on the employer. The clause stated that the employer '. . . shall not by any acts or omissions delay or obstruct [the contractor] in the performance of the Work. . .'. The contractor argued that the 'omission' by the employer in failing to issue a variation obstructed the contractor in the performance of

17. Such a provision is clearly not seeking to place a requirement on the contractor to achieve project criteria such as employer's requirements. See, for example, paras. 3.87–3.99, which discuss the type of contractual arrangement whereby the contractor is required to depart from the technical details of the contract design to achieve overarching project criteria. However, the performance of the work in accordance with those criteria represents the scope which the contractor has to achieve and therefore there is no variation in such circumstances. See *Davy Offshore* v. *Emerald Field Contracting Ltd* (1991) 55 BLR 1.

18. (1981) 18 BLR 80.

19. (1991) 55 BLR 1. The case is reviewed fully *supra*, at paras. 3.58–3.70.

the work and that as a result the employer came under a positive duty to instruct. The court rejected the argument and stated that this clause:[20]

> '. . . cannot be used as a springboard to impose an obligation on [the employer] to exercise a power under the contract, where the contract itself does not impose such an obligation by either its express or its implied terms.'

7.25 In the same case the contractor also sought to rely on a combination of clauses to argue that a duty to vary arose. A coordination agreement had been entered into by a number of project participants, including the employer and contractor, which required all involved to 'coordinate their activities at the various worksites so as to ensure the proper execution of the Work in a timely and cost effective manner in accordance with the [construction contract] and this Agreement'. The coordination agreement went on to state that the employer would exercise its 'rights and privileges under the [construction contract] in a manner which is consistent with the terms of this Agreement'. The contractor sought to argue that the employer's power to vary the works under the construction contract was one of the 'rights and privileges' it had and that this needed to be exercised so as to achieve the 'proper execution' of the work in a 'timely and cost effective manner'.

7.26 The judge in this case considered that the coordination agreement required the employer to help the contractor perform its obligations in the sense of having discussions and consultations. However, the provisions of the agreement were not to detract from, or change, the contractor's obligations to perform the works under the construction contract. The employer was therefore entitled to exercise its contractual power to vary the works, but did not come under an obligation to do so as a result of these provisions.[21]

7.27 In *Cubitts* the contractor successfully argued that the employer was under an obligation to vary on the basis of a clause that required the architect to supply more detailed design particulars. The clause stated:[22]

> '. . . the Architect without charge to the Contractor shall furnish him with two copies of such drawings or details as are reasonably necessary to explain and amplify the Contract Drawings or to enable the Contractor to carry out and complete the works in accordance with these Conditions.'

7.28 In this case the employer's design had failed and the contractor sought a variation in order to complete the project. This case is considered further in section D of this chapter.

Obligation to exercise a discretion to vary

7.29 The express provision in the ICC form of contract considered above required the contract administrator to issue a variation instruction where this was necessary for completion. The

20. *Ibid*. at 65.
21. *Ibid*. at 65–67.
22. See *infra*, para. 7.77.

contract may instead simply allow the contract administrator to instruct a change in certain circumstances, as is the case under clause 51(1)(b) in the ICC contract:

> '51 (1) The Engineer. . .
>
> (b) may order any variation that for any other reason shall in his opinion be desirable for the completion and/or improved functioning of the Works.'

7.30 Contracts will sometimes allow the contractor to propose changes to the works; for example, value engineering proposals.[23]

7.31 The question arises whether in these circumstances the employer is under any duty to consider the contractor's proposed variation or whether it has an absolute discretion in exercising its decision to vary. It will depend on the particular contract wording, albeit such provisions will typically place no duty on an employer to instruct. There is case law, in the context of other commercial arrangements, to the effect that a party exercising discretionary decision-making powers under an agreement must do so in accordance with certain standards.[24]

Implied obligation to vary

7.32 An employer has an implied duty to cooperate with the contractor and not to hinder it in the performance of its obligations. In terms of the positive duties that this may give rise to:[25]

> '. . . where in a written contract it appears that both parties have agreed that something shall be done, which cannot effectually be done unless both concur in doing it, the construction of the contract is that each agrees to do all that is necessary to be done on his part for the carrying out of that thing, though there may be no express words to that effect'.

7.33 This duty to cooperate has led the courts to infer a number of obligations on the employer under a construction contract. For example, it gives rise to an obligation on the employer to supply instructions and design details within reasonable timescales so as to enable the contractor to carry out its work.

7.34 In *Holland Hannen & Cubitts (Northern) Ltd* v. *Welsh Health Technical Services Organisation*[26] the court found that the employer's duty to cooperate meant that the employer's architect did owe an obligation to issue a variation instruction in certain circumstances. The case is reviewed in further detail in section D of this chapter.

7.35 In *Cubitts*, the difficulties that the contractor had in proceeding with the work arose because of a deficiency with the design for which the employer, rather than the contractor, was

23. See Chapter 8, section E.
24. See *Socimer International Bank Ltd (in Liquidation)* v. *Standard Bank London Ltd (No. 2)* [2008] EWCA Civ 116, which is discussed *infra*, at para. 10.86.
25. *Per* Lord Blackburn in *Mackay* v. *Dick* (1881) 6 App Cas 251 at 263.
26. (1981) 18 BLR 80.

responsible. The court considered that the implied term could lead to the employer being under a positive duty to issue instructions. In that case reference was made to *North West Metropolitan Regional Hospital Board* v. *T A Bickerton & Son Ltd*,[27] in which the House of Lords decided that the duty to cooperate meant that the employer had an obligation to issue an instruction to make a fresh nomination of a subcontractor as the original subcontractor had gone into liquidation. The court in *Cubitts* was of the view that the implied term to cooperate meant that the employer's architect was under a duty to instruct a change to the design, although it was not required to adopt the proposals that the contractor put forward.

7.36 The obligation on the employer and the decision in *Cubitts* was considered in *Davy Offshore* v. *Emerald Field Contracting Ltd*.[28] In that case, HHJ Thayne Forbes QC emphasised that there was no duty on the employer to vary the works simply because this was fair or helpful for the contractor. The duty arose only when it was a matter of necessity:[29]

> 'I accept [the employer's] submission that the authorities do not support the proposition that an architect/engineer (or in the case of this contract, the employer) has to exercise a power to order a variation when it is fair to do so. There may be cases where, unless the architect/engineer exercises his power to vary the contract, the contractor will be unable to perform the contract (the contractual deadlock). In such a case, depending on the terms of the contract in question, the court will imply a term that the employer exercise his power to vary (even when expressed permissively), the exercise of which is in such circumstances necessary for the performance of the contract by the contractor: see *Bickerton and Holland Hannen & Cubitts* v. *WHTSO*. However, such a term is not a term that the architect will act fairly and it is implied because it is necessary, not because it is fair to do so (although it may also be fair from the contractor's point of view). In my opinion Judge Newey QC did not purport to found his decision on the concept of fairness to the contractor, nor was that the basis of the decision in *Bickerton*. It was necessity which was the basis of the implication in both cases.
>
> I am of the opinion that the question, whether a party is obliged to exercise a power which he possesses under the contract, is not to be answered by reference to a concept such as fairness to the other party, but by reference to the following:
>
> (i) the express terms of the contractual provision from which the power derives, to see if and to what extent there is an obligation to exercise the power;
>
> (ii) where the contract will not otherwise work, in which case a *Bickerton* type term will be implied.'

7.37 In *Davy* the judge stated that contractual deadlock can arise if the employer does not vary and as a result the contractor is unable to perform the contract.[30] He also stated that, depending on the contract terms, the court will imply a term that the employer exercises its power to vary in order to avoid such deadlock. Whilst the judge did not go on to analyse

27. [1970] 1 WLR 607.
28. (1991) 55 BLR 1. The case is reviewed fully *supra*, paras. 3.58–3.70.
29. *Ibid*. at 61–62.
30. See Chapter 2, section C, which discusses such contractual deadlock.

the various types of situation that can give rise to such deadlock, it is important to make a distinction between deadlock arising because of the contractor's risk, and deadlock arising because of the employer's risk.

7.38 If such a deadlock arises because of an event that is at the contractor's risk, it seems highly unlikely that the employer can be said to be under an obligation to vary. This may arise because the contractor has agreed to undertake works that it cannot perform. For example, a contractor may have agreed to undertake foundations work in accordance with its own design to a fit-for-purpose standard, which then turns out to be inadequate because it will not support the load necessary.[31] The deadlock that arises in this situation occurs because the contractor is incapable of fulfilling its contractual obligation because of its own default. The contractor is in breach and the employer cannot be said to be obliged to receive a product different from that promised under the contract. Of course, the employer is likely to compromise and agree to a change, but it is not obliged to do so. It cannot, therefore, be the case that the employer is always under a duty to vary the works where such contractual deadlock arises.

7.39 The obligation to vary to avoid deadlock really makes sense only where it arises because of an employer risk. The previous passage from *Davy* refers to *Cubitts*, a case which involved changes required because of an employer risk.

7.40 In the above passage from the *Davy* judgment, the judge states that unless a variation is instructed when a deadlock situation arises, the contractor will not be able to perform the contract. As discussed above at paragraphs 7.21–7.22 in the context of express obligations, there is a conceptual problem with this form of analysis because the result of a variation is entirely the opposite: to ensure that the works as originally described under the contract are not performed.[32]

SECTION C: CHANGE AS A RESULT OF CONTRACTOR RISK OR REQUEST

7.41 This section considers whether an employer can be under a duty to agree to a change to the works in circumstances where the alteration is needed for the contractor's benefit.

7.42 This may arise because the project cannot otherwise proceed unless a change is made in circumstances where the factor that has led to this difficulty is the contractor's risk under the contract. For example, the contractor's design has proved to be defective and cannot be built, or the contractor's work is defective such that the contract scope needs to be altered.[33]

31. This situation where the contractor has undertaken to provide a product which is impossible to deliver is reviewed at Chapter 3, section D.

32. As discussed previously, it is necessary to analyse the obligation to complete the works as being by reference to a high level description of the works with which the detail design conflicts, or to treat the changes required as being to the methodology or temporary works so as to ensure that the permanent works are delivered.

33. There are two reasons why it may be impossible for the contractor to build in accordance with the contract scope. It may be that the scope as described in the contract cannot be built, or it may be that an event has occurred, such as defective work by the contractor, which means that what was originally a perfectly workable scope can no longer be followed. See Chapter 2, section A for a more detailed discussion as to this categorisation.

7.43 Alternatively, a change may be requested by the contractor in order to assist it in undertaking the works. In these circumstances it will still be physically possible to build in accordance with the original design, but a variation will allow the costs or the construction period to be reduced. It may, therefore, be the case that the change to the scope will ensure that the contractor avoids what would otherwise be a breach of contract. The contract may also provide a mechanism to allow the contractor to propose changes to improve the design as a value engineering process.

7.44 The contractor may seek nothing more than the employer's consent to a change to the scope. Alternatively, it may want a formal instruction so as to entitle it to payment for the variation, in which case a mere concession giving permission will be inadequate.

7.45 Disagreement between the parties as to an employer's refusal to give permission or to give a formal instruction (if this is what the contractor demands) can arise prospectively or retrospectively.

7.46 If the issue arises prospectively, the contractor may refuse to undertake the work unless the relevant permission is given, resulting in the project reaching a standstill.[34]

7.47 If the issue only arises retrospectively, the nature of the dispute will depend on whether the employer is refusing to issue an instruction or is refusing to give any form of permission.

7.48 A retrospective dispute concerning the employer's refusal to issue an instruction will typically arise because the contractor wants extra payment for the change.[35] In such circumstances the contractor will typically seek to establish its claim for extra money on a number of grounds, including a duty to vary. For example, the contractor may also seek to claim that the employer has waived the need for an instruction or that the work was undertaken under an implied promise that it would be paid for.[36] The contractual obligation on the employer to instruct a change (as discussed further below) may in itself trigger a right to payment.[37]

7.49 A dispute about the employer's refusal to permit a change, as opposed to a dispute concerning a formal instruction, may also arise retrospectively. In such circumstances, the focus of the dispute will concern the allegation that the contractor is in breach for departing from the contract scope without permission. The contractor may be under pressure to put the works back into the form they were in before the change and to compensate the employer. In such circumstances the dispute will not concern payment for the change, but solely the question of permission to allow the nonconforming work to remain. The contractual obligation on the employer to permit a change (as discussed further below) will ensure that the contractor is not in breach. In these circumstances it will also be necessary to consider whether the nature

34. See Chapter 2, section C.

35. The contractor may equally want an instruction to establish an entitlement to extra time to complete the project. The same principles apply to both money and time.

36. See Chapter 9, section D. If the employer specifically refused to give an instruction because the need to change arose because of a contractor risk, then clearly there will be no basis to claim that an instruction can be implied. Chapter 9 considers more broadly the various ways in which a contractor may seek to establish that a change has been approved in the absence of an instruction, and why an entitlement to money and time may arise.

37. See Chapter 9, section E.

and extent of the contractor's departure from the scope is so minor as to deny the employer any effective remedy such as damages, the right to terminate, or the right to withhold a completion certificate.[38]

Duty to vary

7.50 The contract may contain an express duty to vary the works, such as that included at Clause 51 of the ICC Measurement Contract 2011. That clause requires the engineer under the contract to order a variation where this is necessary for completion. In *Yorkshire Water Authority* v. *Sir Alfred McAlpine & Son (Northern) Ltd*[39] this obligation was considered in conjunction with Clause 13(1) of an earlier version of the ICC contract, which provided that the contractor was not under an obligation to proceed with the works where this proved to be impossible. No distinction is made in the contract as to whether the impossibility of proceeding arises because of a contractor's risk as opposed to an employer's risk. The judge in the case indicated that, since a duty to vary existed, the contractor would be retrospectively entitled to be paid for the change it implemented.[40]

7.51 Such an express provision, which may be triggered in circumstances where the works cannot otherwise proceed, will not of course apply where the change is requested by the contractor simply in order to reduce the construction cost and time.[41]

7.52 A general non-obstruction clause will not typically be sufficient to establish an obligation on the employer in such circumstances.[42] Indeed the courts have emphasised that there will be no duty on an employer to vary the works simply because this may be perceived to be 'fair' or helpful for the contractor.[43]

7.53 In *Holland Hannen & Cubitts (Northern) Ltd* v. *Welsh Health Technical Services Organisation*[44] it was found that an employer may owe an obligation to vary the works based on the implied duty of cooperation. However, the case concerned a situation where the inability to otherwise proceed with the works arose because of an employer's risk, not a contractor's risk. Whilst, in that case, the judge held out the possibility that a contractor's workmanship default could 'conceivably' lead to a situation where the employer could have a duty to vary its design, the comment was *obiter* and there was no proper discussion of the ramifications of such an approach.[45]

7.54 There are clear difficulties in seeking to claim that an employer could be under an implied duty to vary the scope if the problem with proceeding with the works arose because of a

38. See Chapter 4, where these issues are discussed.
39. (1985) 32 BLR 114.
40. See section B of this chapter.
41. See discussion *supra,* at paras. 7.29–7.31 concerning the employer's obligation to vary where this involves the exercise of its discretion.
42. See para. 7.24.
43. See para. 7.36.
44. (1981) 18 BLR 80.
45. *Ibid.* at 119.

contractor risk.[46] For example, the contractor may have agreed to undertake works which cannot be performed because there is an inherent deficiency with its own design. If a duty to vary existed, the employer would be obliged to agree to a change, in circumstances where it would rather abandon the project entirely because the variation will make the facility uneconomic. Another example would be where a contractor's defective work led to a situation where the planned design could no longer be built. It would seem surprising, in such circumstances, that an employer could be said to be under an implied duty to accept something different. The position would be different if the parties had included in their contract an express duty to vary where the works were impossible to construct, such as that existing under the ICC contract, as discussed above. As discussed below, even if the employer is entitled to refuse to vary the works, there may be implications in terms of financial recovery in such circumstances.

The employer's discretion to change

7.55 In the two situations described above, work cannot be progressed without a change. Other situations arise in which the contractor is able to proceed with the works but seeks the employer's approval for a variation, as this would assist. A variation may help the contractor because this may make the work cheaper, quicker, or more convenient to undertake.

7.56 Contracts typically include mechanisms that allow a contractor to propose variations.[47] Such provisions are designed to encourage the contractor to propose changes that are for the benefit of both parties, whether this be increased functionality or lower cost. If there is an express right under the contract to propose variations, the employer may be under a duty to at least consider them. Typically the employer has complete discretion as to whether or not to adopt such proposals and the clause will normally set down a procedure and a cost-saving mechanism.

7.57 Since, in this situation, the works can be undertaken, albeit perhaps at greater time or cost, then the type of duty imposed on the employer by Clause 51(1)(a) of the ICC contract, to vary because this is necessary to complete, cannot be invoked. In other commercial contexts, a party to a contract can be treated as being under an obligation to exercise its discretionary decision-making powers in accordance with certain standards.[48]

7.58 It may, of course, be the case that the employer will agree to change the scope of works because it benefits from the variation. If the change results in a reduction to the contract programme or the cost of the works, there may be a strong incentive on the employer to agree.

46. If a duty could be found to exist, it would involve permission to change rather than a duty to issue an instruction.

47. See Chapter 8, section E.

48. See *Socimer International Bank Ltd (in Liquidation)* v. *Standard Bank London Ltd (No. 2)* [2008] EWCA Civ 116, which is discussed *infra*, at para. 10.86. However, there is no case law in a construction context that indicates that an employer is obliged to exercise its power to vary by reference to any such duty where the works can be undertaken in accordance with the original scope and the change would be for convenience or reduction of cost or time.

It may even be the case that a breach by the contractor will lead to extra costs for the employer but that the contractor's proposed variation would allow that cost to be mitigated. In those circumstances it is conceivable that the employer's failure to mitigate by refusing to instruct the proposed variation could have an impact on the damages recoverable. **7.59**

Differences concerning the design solution

Situations can arise in which the employer is prepared to consent to an alteration but has a different opinion from the contractor's as to the design solution that should be implemented. The employer can instruct the change that it favours as a variation,[49] albeit changes under design and build contracts are more difficult to control where the variation is expressed as an alteration to the performance criteria that the contractor is obliged to achieve.[50] **7.60**

The employer may grant permission to change the works as a concession, but strictly on the basis that its own design solution is adopted. In such circumstances the project may still reach a standstill because the contractor will not be paid for the variation and may consider the employer's solution to be over-engineered.[51] **7.61**

Implications of the employer's refusal to approve change

The employer may refuse to allow a change to the works. Whilst it may be under no duty to vary, this is not to say that there will be no commercial incentives for it to permit an alteration. **7.62**

If the project, or an aspect of the project, cannot proceed, the employer may incur very significant financial losses. Whilst it may seek to recover such losses against the contractor on the basis that this has been caused by its breach of contract, full recovery may not be feasible. The level of damages that the employer can recover may be reduced if it has not acted reasonably in mitigating its loss. An employer may not be able to recover substantial damages as a result of the project, or part of the project, being abandoned, if this occurred only because it did not agree to an inconsequential change to the scope.[52] A party has a duty to mitigate and this will be an important factor in applying pressure on an employer to be sensible and reasonable when seeking to agree necessary changes to a specification. The same considerations will apply where the employer's refusal to approve a change leads to delay rather than full project abandonment. **7.63**

49. In *Holland Hannen & Cubitts (Northern) Ltd* v. *Welsh Health Technical Services Organisation* (1981) 18 BLR 80, whilst the court found that the architect was under a duty to vary so that the project could be completed, it was not obliged to adopt the contractor's proposals. See *infra*, para. 7.80.

50. See *supra*, paras. 3.218–3.223.

51. It would be necessary to consider, as discussed below (paras. 7.62–7.63), the implications of the employer's refusal to approve change, albeit responsibility for the delays that may ensue will typically depend on the appropriateness of the employer's proposed solution.

52. An analogy can be made with the situation where a contractor seeks a completion certificate despite there being minor departures from the scope. See Chapter 4, section D.

SECTION D: CHANGE AS A RESULT OF EMPLOYER RISK

7.64 This section considers the degree to which an employer may be under a duty to vary the works in circumstances where otherwise they cannot proceed because of a risk that is the employer's responsibility.

7.65 It may be impossible to build the contract works because of an inherent problem with the design as described in the contract,[53] or because an event has occurred that is the employer's risk.[54]

7.66 The employer may refuse to consent to a change to the works even though it is necessary to implement such an alteration in order to complete the project.[55] Alternatively, the employer may approve a change but only as a concession and not as an instructed variation under the contract. The contractor may refuse to undertake the work without a formal instruction because the change is needed as a result of an employer risk, and therefore it considers that it should be paid.[56]

7.67 In such circumstances the project may reach an impasse.[57] The contractor may seek to argue that the employer has a duty to consent to a change, or even to issue a variation instruction. The contractor may undertake the necessary variation to the scope in the absence of the employer's approval and then retrospectively claim payment on the basis that such a duty existed.

7.68 As discussed in section B of this chapter, the contract may place the employer under an express duty to vary the works. For example, Clause 51 of the ICC Measurement Contract 2011 requires such a change to be made if it is needed to complete the project.[58]

7.69 In the absence of such a clause the contractor may seek to rely on other contractual provisions, such as those requiring the employer to supply design details, to force the employer to approve the changes needed to achieve completion.

53. For example, the employer is responsible for, and has warranted, the design but that design cannot be built such that this impedes progress. It is important to recognise that these circumstances will arise in a relatively limited number of situations for two reasons. Just because the employer's design is inadequate does not mean that it cannot be built. It is often the case that inadequate design will only affect the final functionality of the works. Inadequate design will hinder progress only if it has a physical or safety impact, such as a foundations design which prevents safe construction of the superstructure. The second reason is that, unless there is express provision to the contrary, the contractor will take the risk for buildability of the employer's design even where that design is inadequate.

54. For example, there may have been a change in legislation such that the contract design cannot be followed and that this is a risk which is the employer's under the contract. See Chapter 2, section A.

55. If it can be established that it is because of a risk that is the employer's responsibility that the works cannot otherwise proceed, then clearly the employer is unlikely to refuse consent to the change as it will be responsible for the costs of delay if there is an impasse.

56. Concessions are discussed in detail at Chapter 9, section B.

57. Such impasses are discussed in Chapter 2, section C. That section discusses further the contract provisions which may avoid such an impact. For example, the contract may provide that there is a deemed variation in such circumstances.

58. See *supra*, para. 7.15.

7.70 The case of *Holland Hannen & Cubitts (Northern) Ltd* v. *Welsh Health Technical Services Organisation*[59] considered such an alleged duty.

7.71 Cubitts, the main contractor, had been employed to build a 350-bed general hospital near Rhyl, and in turn employed Crittalls to construct the windows. Once the installation of the windows was under way, it was found that Crittalls' design was inadequate and that the windows leaked. Under the main contract, Cubitts was not responsible for windows design. However, Crittalls, under its direct agreement with the employer, did have design responsibility for the windows. So, in the context of the dispute as between Cubitts and the employer, it was the employer that had design responsibility for the windows, albeit that they had the right to then claim recompense via the direct agreement with Crittalls.

7.72 Lengthy discussions took place between all three parties as to how the windows design should be adjusted to prevent water ingress. It was necessary for the windows to be weather tight before Cubitts could undertake internal finishes work. If the design of the leaking windows was not resolved, therefore, Cubitts could not move on to the subsequent activities and so finish the works. As a result, the leaking windows caused delay to project completion and additional cost to Cubitts.

7.73 Crittalls ended up installing windows to a revised design which resolved the water penetration problem. However, the employer refused to issue Cubitts with a variation instruction in respect of this change.

7.74 In considering the court's judgment it is important to recognise that this was a decision on preliminary issues. Therefore, whilst the judgment lays down some very helpful guidance as to the law in this area, it does not seek to analyse this type of situation comprehensively. The court considered three preliminary issues that are relevant to the issue being considered in this section. These are reviewed in turn below.

7.75 Preliminary Issue Question No. 7 asked what action the architect should have taken once the window leaks were initially discovered.[60] HHJ Newey QC held that the architect had an obligation to issue an instruction to change the design.

7.76 The judge found that this obligation arose as a result of an express obligation under the contract to issue the instruction, and also because of the implied term to cooperate.

7.77 Clause 3(4) of the contract stated:[61]

> 'As and when from time to time it may be necessary the Architect without charge to the Contractor shall furnish him with two copies of such drawings or details as are reasonably necessary either to explain and amplify the Contract Drawings or to enable the Contractor to carry out and complete the Works in accordance with these Conditions.'

59. (1981) 18 BLR 80.
60. *Ibid.* at 117–119.
61. Unamended clause from the 1963 RIBA Standard Form of Building Contract.

7.78 The judge stated that the obligation to instruct the change arose as a result of the clause 3(4) requirement that the architect provide details to enable the contractor to carry out and complete the works. He went on to say that the term 'the works' in this context should be treated as having the meaning used in the Articles of Agreement:[62]

> 'The employer is desirous of carrying out the construction and completion of a District General Hospital providing 340 beds (hereinafter called the "Works") at Bodelwyddan near Rhyl in the County of Flint and has caused Drawings and Bills of Quantities showing and describing the work to be done to be prepared by or under the direction of [the architect].'

7.79 The judge also found that the architect's duty to vary was implied under the contract.

7.80 It was accepted by both parties that there was the usual implied term of cooperation that the employer was under an obligation to do all that was necessary to enable the contractor to carry out the works.[63] Cubitts successfully argued that the architect was required to issue the variation instruction because of this implied duty of cooperation. This was in addition to the duty that arose under Clause 3(4):[64]

> 'In my view, the implied term required [the architect] to issue a Variation Instruction. . . or to take other appropriate action if the building of the hospital were brought to a stop. . .
>
> . . . [the architect] owed a duty to Cubitts to issue a Variation Instruction overcoming the failure of design, but were not under a duty to adopt Crittalls' proposals.'

7.81 The approval of the change was essential to allow Cubitts to complete the works:[65]

> 'So far as instructions under the contracts were concerned, Cubitts and Crittalls were free to go on installing windows, which everyone by then knew leaked and which would prevent Cubitts from ever being able to complete the hospital. Wrongfully. . . [the architects] did not issue any instructions to alter the design so that the windows would not leak. . .

62. (1981) 18 BLR 80 at 97. The judge has taken the broad 'high level' definition of the works included in the contract. As such, he is able to conclude that the employer is under an obligation to vary the detailed description of the works in the specification in order to ensure completion of the project by reference to this high level description. It is necessary, in these circumstances, to draw a distinction between the broad project definition and the detailed works description. If not, one ends up concluding that it is necessary to vary the 'works' in order to complete the 'works', which would be nonsensical.

63. The court also made reference to the case of *North West Metropolitan Regional Hospital Board* v. *T A Bickerton & Son Ltd* [1970] 1 WLR 607 (HL), in which the House of Lords decided that this implied obligation required the employer to make a fresh nomination of a subcontractor when the original subcontractor went into liquidation.

64. (1981) 18 BLR 80 at 119. See also the passage from *Davy Offshore* v. *Emerald Field Contracting Ltd* (1991) 55 BLR 1 as referred to in section B of this chapter, in which HHJ Thayne Forbes QC refers to this case and recognises that the court will imply a term that the employer exercise its power to vary '. . . in such circumstances necessary for the performance of the contract by the contractor. . .'.

65. (1981) 18 BLR 80 at 124.

> . . . In my view, [the architect], by their failure to issue a Variation Instruction, made it impossible for Crittalls to complete their sub-contract, and made it impossible for Cubitts to complete the main contract so far as the windows are concerned.'

7.82 Preliminary Issue Question No. 11 asked whether the windows that were finally installed were 'Contract Works', i.e. had they as a matter of fact and law been instructed as variations such that they fell within the definition of the Contract Works?[66]

7.83 The contractor argued that the architect had impliedly issued an instruction. The judge summarily rejected this argument because, whilst an instruction had been requested, it had been expressly refused.

7.84 The contractor had also asked the judge to issue an instruction himself, retrospectively. This was rejected on the basis of the judge's view that the court had no such powers but without any real discussion as to the underlying law in this area. This issue is discussed further below.

7.85 Preliminary Issue Question No. 12 asked whether there was an obligation on the employer to pay Cubitts or Crittalls for the revised windows.

7.86 The judge found that the subcontractor, Crittalls, was entitled to be paid for its work via a new direct collateral contract as between it and employer:[67]

> 'Crittalls went on to provide windows "at their own risk", meaning that, if the windows should still leak, no payment would be made to them, but in the expectation that, if the windows did not leak, they would be paid. In my view, [the architect] and WHTSO, by their words and conduct, agreed to that arrangement. I think that the result was a new contract between Crittalls and WHTSO, to which Cubitts were not parties, that, in consideration of Crittalls providing window assemblies for the hospital, WHTSO would pay to them a *quantum meruit*.'

7.87 This seems to be an imaginative but a rather contrived solution to the problem and of limited general application.

7.88 Whilst the judge found that the architect was under a duty to issue a variation instruction and that it had been wrongful for it to refuse to issue such an instruction, this did not form the basis of its award of money in respect of the extra work. The case was relatively unusual in that the remedy involved payment direct from the employer to the subcontractor with there being a direct contractual relationship between the two.

7.89 Where an instruction has been refused, the main contractor will typically be seeking to recover as it will be out of pocket. The contractor will want to know whether the contract administrator's wrongful refusal to issue an instruction will trigger compensation.

66. If they had been so instructed, then the contractor would be entitled to be paid for the works *ibid.* at 120–121.
67. *Ibid.* at 125.

7.90 It is important to distinguish between, firstly, the employer or contract administrator's duty to approve a change which will allow the alteration to be made without the contractor being in breach, and secondly, its obligation to issue a variation instruction which will trigger payment. An approval may be given but the contractor may still need to demand an instruction. In the *Cubitts* judgment the court talks in terms of a duty to instruct a variation rather than simply a duty to approve the change as a concession. The employer in that case had refused to give any approval, although situations arise where the work is permitted but not instructed.[68]

7.91 As discussed above, whilst the court in *Cubitts* considered that such a duty existed, it also found that it had no power itself to issue the instruction retrospectively. It seems questionable whether it is necessary for the court to possess or exercise this power in order for the contractor to obtain financial recovery. In such circumstances the court does not need to artificially issue an instruction retrospectively on the employer's behalf, it needs only to find that the lack of an instruction is not an impediment to payment.

7.92 In *Brodie* v. *Corporation of Cardiff*[69] the House of Lords upheld an arbitrator's award in relation to a variation which had been refused on the basis of the contract administrator's refusal to issue an instruction. It found that the arbitrator had the power to review the contract administrator's decision to refuse the instruction. Indeed, the courts will often dispense with the requirement that a certificate be issued under the contract as a condition precedent to payment.[70] The contractor may rely on the principle that a party to a contract cannot take advantage of its own wrong:[71]

> '. . . it is a principle very well established at common law, that no person can take advantage of the non-fulfilment of a condition the performance of which has been hindered by himself.'

7.93 In *Yorkshire Water Authority* v. *Sir Alfred McAlpine & Son (Northern) Ltd*[72] the court considered the engineer's duty to issue a variation instruction where this was required under a clause of the contract.[73] Skinner J concluded that not only should the instruction have been issued, but as a consequence the contractor was entitled to payment in respect of it:[74]

> 'If the variation which took place was necessary for the completion of the works because of impossibility within clause 13(1), then, in my judgment, the [contractors] were entitled to a variation order with the consequent entitlement to payment of the value of such variation as is provided in clause 51. . . .'

7.94 Whilst the obligation to instruct a variation is often discussed in the context of a contract administrator having the obligation, an employer has obligations to the contractor in respect

68. Compare *Amec Mining Ltd* v. *The Scottish Coal Company Ltd* [2003] ScotCS 223, discussed *infra*, paras. 7.95–7.99.
69. [1919] AC 337.
70. The *Brodie* case is discussed in detail at Chapter 9, section E. See, in particular, paras. 9.164–9.169.
71. Blackburn J in *Roberts* v. *The Bury Improvement Commissioners* (1869–70) LR 5 CP 310 at 326.
72. (1985) 32 BLR 114.
73. See *supra*, para. 7.18.
74. (1985) 32 BLR 114 at 124.

of the failure of its contract administrator. The failure of the contract administrator to issue an instruction where there was an obligation to do so may be treated as something for which the employer is directly responsible.[75]

7.95 The decision in *Cubitts* can be contrasted with that of the Scottish Court of Session in *Amec Mining Ltd* v. *The Scottish Coal Company Ltd.*[76] In this case the employer consented to the change but refused to issue an instruction. The court refused to accept that the employer could be said to be under any duty to issue a variation instruction.

7.96 Amec had entered into a contract to undertake open-cast coal excavation at Scottish Coal's site near New Cumnock in Ayrshire. Before coal could be extracted by Amec, the top layer of peat needed to be removed. The contract provided that this work would be undertaken by a different contractor, that had been employed by Scottish Coal. However, that other contractor had not removed the peat when Amec commenced work. The position was discussed at meetings between the parties and it was common ground that Scottish Coal agreed that Amec should remove the peat, although no formal variation instruction was issued.[77]

7.97 Amec argued that, once Scottish Coal had consented to their removing the peat, they were also under an obligation to issue the variation instruction.

7.98 The *Cubitts* case does not seem to have been cited by either party and is not referred to in the judgment. The circumstances of the two cases are similar. In both, the contractor needs to make a change to the works in order to proceed, and the difficulty in proceeding has arisen because of a matter for which the employer is responsible. The difference is that, in the *Amec* case, the employer had approved the change but not issued an instruction. The contractor wanted to establish a duty to issue the instruction in order to trigger payment.

7.99 The court emphasised that the contract made it perfectly clear that variations ordered by the employer had to be instructed in writing. Therefore, the contractor should not undertake changes unless they were directed in this manner:[78]

> 'Given that payment for the works, including additional works or variations, is regulated by the contract, there is no basis upon which a term can be implied into the contract which imposed an obligation upon the Site Manager to issue an "Instruction" to vary the works. . .
>
> . . . there is no basis upon which it could be said that such a term needed to be implied as a matter of business efficacy. . . Indeed, the contrary is the case. The contract as it is phrased makes the position clear and any term which introduced an obligation of the

75. For further discussion on this issue, see *infra*, paras. 10.89–10.99.
76. [2003] ScotCS 223.
77. The contractual position and responsibility for removing the peat was not entirely straightforward, as Amec had limited obligations regarding peat removal and, therefore, whether Amec was required to remove it as part of its scope was a matter of dispute. Amec also alleged that there was an oral agreement that the employer would pay for the work, and this was disputed.
78. [2003] ScotCS 223 at 51–52.

> type contended for would appear to undermine that clarity and indeed contradict the express terms in the contract in relation to the requisites for payment for work done. . .
>
> . . . In this case, however, I can see no basis for imposing an obligation to issue an Instruction under the contract where the contract otherwise seems to intend that such issuing can be done only in pursuance of a unilateral power; albeit one which, when exercised, creates mutual obligations. If the [contractor] considered that what they were being asked to do was not covered by the original contract, and hence could not command an obligation of payment, their remedy was not to do it in the absence of a written Instruction.'

7.100 A contractor may conclude that if an instruction is refused in circumstances where approval for a change has been given, it should simply refuse to proceed because, even if the factor preventing progress is an employer risk, it will not be able to claim payment retrospectively. Such an approach leads to a situations where the work on a project comes to a standstill. It is also important to recognise that such an impasse on a project entails considerable risk for both parties, because it can often be uncertain which party is responsible for the risk that has led to the stoppage.[79]

7.101 In the *Cubitts* case, the discussion focused on whether the employer was obliged to agree to a change to the windows design so as to ensure project completion, with the assumption that the necessary approval would be in the form of a variation instruction. Had the employer, as in the *Amec* case, approved the change but refused to issue an instruction, then the court's analysis may have been different.

7.102 The cases discussed in this section have involved situations where a contractor has claimed that a duty to issue an instruction arises so as to facilitate a retrospective claim for payment. It may be the case that the contractor only needs to establish a duty on the employer to approve a change so as to avoid otherwise being in breach for constructing nonconforming work.[80]

7.103 There are various other bases on which a contractor may make out a claim for payment for changed work in the absence of an instruction. For example, the employer may have waived the requirement of an instruction as a condition precedent to payment; it may be that the employer can be said to have impliedly consented to change in the absence of a formal instruction. Situations where the courts have found that a change should be treated as approved, and that the contractor is entitled to be paid for the additional work involved, are considered further in Chapter 9.

79. See Chapter 2, section C, which discusses such situations in further detail.
80. See Chapter 4.

CHAPTER EIGHT

VARIATION INSTRUCTIONS

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SECTION A: INTRODUCTION

8.1 An employer will normally have the right unilaterally to change the scope of works but only if it instructs the variation using the contract procedure. This will typically require the variation to be instructed in a particular manner, such as an instruction in writing. The contractor may be entitled to payment under the contract valuation provisions only if the variation has been instructed in accordance with the specified procedure.[1] Therefore, both in terms of the employer's power to order the change and the contractor's right to be paid, it is important to follow the procedure.

8.2 This is not to say that consent to change and entitlement to compensation arise only as a result of variations instructed under the contract procedure. The employer may consent to change in other ways. For example, the employer may allow the alteration as a concession or negotiate an ad hoc variation with the contractor. These other ways of approving change are reviewed in Chapter 9.

8.3 This chapter deals only with variations instructed in accordance with the contract mechanism. It reviews the process of, and rules surrounding, issuing instructions. The wider issue of employer approval is covered in Chapter 2.[2]

8.4 Adopting a procedure whereby variations must be instructed in writing, and the contractor is paid only when there is a written instruction, has many practical benefits, especially for the employer. This should ensure that developments to the design are closely monitored and only changes that have been approved by the relevant people in the employer's design team are implemented. A degree of formality avoids a situation where unauthorised personnel are

1. Section B of this chapter considers the degree to which requirements for written instructions may amount to conditions precedent to payment and/or additional time to complete the work.

2. Chapter 2 discusses the requirement that the employer gives approval for change. It also considers the problems created by such a rule where the project cannot be progressed unless a variation to the works is made, but the employer refuses to instruct one. The employer may refuse for various reasons; for example, the employer may disagree that the work in question represents a variation, or that the change is required only because of a risk that is the contractor's responsibility.

instructing ad hoc changes, which may not have been properly considered in the context of the integrity of the project design overall.[3]

8.5 A formal process also gives the contractor the security of knowing that the changes it is being asked to implement have proper employer authorisation. It is also less likely that the changes being ordered will be countermanded at a later stage.

8.6 The question whether or not certain works are a variation may be contentious. The contractor may be obliged to undertake work that is not specifically referred to in the technical documents. Such work may be treated as necessary to complete the defined scope and is therefore part of the contractor's obligations even though not specifically referred to. As the project proceeds, the employer may be entitled to provide further details of its requirements which the contractor needs to take account of as part of the design development process, without these amounting to changes. The contractor may be obliged to undertake such extra work because its design obligation requires it to alter the work described in the drawings and specification. In any event, an employer will often be called upon during a project to approve various details of the contractor's design, or approve the materials or equipment it is going to incorporate in the works. In such situations, the question whether certain work or details constitute a variation may be complex.[4]

8.7 A formal variation procedure should ensure that there is a discussion and resolution of these issues as the project progresses. If the contractor considers that the provision of further information by the employer, or the discussion as to certain design details, amounts to a contract variation, then the issue can be raised immediately. An assessment can then be made by the contract administrator, albeit if the contractor disagrees with the determination it will need to consider the remedies available to challenge or dispute it.[5] A formal procedure should therefore ensure that a clear record is maintained as the project progresses, as to the variations which have been instructed.[6]

8.8 If work is instructed that is already within the contractor's obligations, it will not normally be a variation because a variation is usually defined as a change to the scope of work.[7]

8.9 A formal change process also allows the employer to monitor cost increases. If the valuation of variations can be resolved as the project progresses, the employer can seek to ensure that

3. On technically complex projects the design team may operate a design review process in order to monitor individual changes centrally and systematically, so as not to undermine the integrity of the original design.

4. These issues, concerning whether such work or details amount to a variation, are reviewed in detail in Chapter 3. See in particular section C of Chapter 3, which looks at the contractor's obligation to undertake work that is not referred to in the technical documents, such as the drawings and specification, as part of build obligations such that it does not amount to a contract variation. Even if the provision of such details is not a variation, the employer will be obliged to supply them within a reasonable time. Even once a variation has been formally instructed, further details and approvals may subsequently need to be provided: see *supra*, paras. 4.10–4.14.

5. See Chapter 2, section D.

6. If the contractor disagrees with the contract administrator's assessment of whether certain work is a variation, then it has the opportunity to formally signal its complaint. In most modern contracts the disagreement can be dealt with on an interim basis, such as by adjudication in the UK, or using a disputes adjudication board on large international infrastructure projects.

7. See *supra*, para. 3.15.

the project comes in on budget, and can make decisions about possible variations based on accurate figures. It reduces the risk of a large and unexpectedly high final account claim.

8.10 Equally, formal procedures to monitor variations give the contractor greater certainty when expending costs associated with the changes it has been asked to implement. This reduces the risk that the employer will dispute the costs incurred by the contractor, or will claim that the change was not asked for. Procedures that require supporting documentation for variations to be submitted within set timescales can also help to ensure that the valuation process works efficiently, by resolving payment issues as the work proceeds.

8.11 Therefore, there are commercial drivers for incorporating provisions requiring formal authorisation for a variation, and for this to be a condition precedent to payment. As Lord Blackburn stated in *Tharsis Sulphur and Copper Company* v. *McElroy & Sons*:[8]

> '. . . it is common enough to have provisions, as these are here, more or less stringent, saying that no extra work shall be paid for unless it is ordered in writing by the [contract administrator]; and if such conditions are properly made, and there is nothing fraudulent or iniquitous in the way they are carried out, those conditions would be quite sufficient and effectual.'

8.12 A variation instruction can stipulate the precise changes that should be made to the scope of works. Alternatively, the instruction may give a broad outline of the change that the employer wants, such that the contractor will need to put together details of exactly how the change will be implemented. This will be the case particularly under design and build contracts, where the employer may identify the changes that need to be made to performance criteria, and the contractor will need to implement a solution.[9] So as to ensure that the employer has some certainty as to how the contractor will implement a variation the contract may incorporate a procedure whereby the employer sets out the criteria for a possible change and the contractor makes proposals. The details of the change will therefore be agreed before any work is undertaken. Contracts may sometimes also seek to ensure that the contractor's entitlements to money and time are agreed before the instruction is finalised.[10]

8.13 A construction contract will typically provide that the contract administrator, rather than the employer, issues variation instructions. The contract administrator acts as the agent of the employer in instructing changes to the works. A contract administrator would not normally have implied authority to vary the works, but the inclusion of a variations mechanism in the contract gives it such authority. This does mean that the nature and extent of the contract administrator's authority to vary the works is completely unfettered. Such authority normally depends upon the contract administrator acting within the boundaries set down by the contract.[11] If the contractor wants approval for changes that need to be agreed outside of the variations mechanism, these will need to be agreed with the employer itself. Depending

8. (1878) 3 App Cas 1040 at 1050.
9. See Chapter 3, section F.
10. See section E.
11. See section C of this chapter which discusses the role of the contract administrator and the limits of its authority in detail.

on the form of employer as a legal entity, the contractor may need to ensure that any agreement or instruction is issued by someone within that organisation with appropriate power and authorisation.[12]

SECTION B: WRITTEN INSTRUCTIONS AND CONDITIONS PRECEDENT

8.14 Most modern construction contracts require variation instructions to be given in writing.[13] Some contracts impose even more formal requirements, such as the need for a variation to be instructed on a particular form, or for the written instruction to be via letter rather than email. An instruction in the correct contractual form may then constitute a condition precedent to payment albeit it will not necessarily guarantee a right to be paid for the change.[14]

8.15 During the course of a project there will normally be a considerable amount of communication between the employer's team and the contractor as to the details of the work being built. Contract provisions that stipulate the form of a variation order allow the parties to easily identify the instructions that may give the contractor the right to extra payment. Many of the older cases dealing with this issue concerned contracts which stated that the contractor would only be paid for variations instructed in writing, to distinguish them from other communications concerning the detail of what was required to be built.

8.16 *Russell* v. *Viscount Sa da Bandeira*[15] is one such case. Russell, a London-based shipbuilder, had been hired to construct a warship for the Portuguese Government. The Government, in turn, had employed Sir George Rose Sartorius, an Admiral in the British Royal Navy, to oversee the work.

8.17 The contract description of the works was very limited and simply stated that the shipbuilder would undertake the work as 'usually supplied' for this type of vessel, which had to be equipped 'in a manner similar to. . . vessels of the same class in Her Majesty's navy'. The contract stated that the work had to be supplied to the Admiral's satisfaction and the contractor was not entitled to be paid for extra work unless those extras had been ordered in writing by Admiral Sartorius. The relevant passage of the contract stated:[16]

> '. . . the said purchase-money of 10,400l. is inclusive of all charges for the said ship or vessel finished and fitted perfectly in every respect; and no charges shall be demanded

12. One may need to consider whether the person representing the employer has the authority to act on behalf of the organisation, or is acting *ultra vires*. See *Royal British Bank* v. *Turquand* [1856] 6 El & Bl 326; and *Freeman & Lockyer* v. *Buckhurst Park Properties (Mangal) Ltd* [1964] 2 QB 480.

13. See, for example, Clause 1.7 of the JCT Standard Building Contract 2011 and Design and Build Contract 2011; Clauses 12.3 and 13.1 of the NEC3 Engineering and Construction Contract; and Clauses 3.3, 13.1 and 13.3 of the FIDIC Red Book 1999.

14. Instructions as conditions precedent are considered in this section. If the instructed work is necessary because of an event which is the contractor's responsibility under the contract, then the contractor may not be entitled to be paid for the change: see Chapter 6.

15. (1862) 143 ER 59.

16. *Ibid*. at 66.

for extras. But any additions which may be made by order in writing of the said Sir G.R. Sartorius as an extra or extras shall be paid for at a price to be previously agreed upon in writing.'

8.18 As the work progressed, Russell was involved in discussions with Portuguese government agents as to their precise requirements for the warship, with instructions issued as to what they required.

8.19 A dispute arose as to whether Russell was entitled to be paid for additional work even though Admiral Sartorius had not issued written orders. The court found that the clause was quite clear and should be given its full effect. Erle CJ stated:[17]

'It almost invariably happens that, in the course of the construction of a house or a ship or other extensive work, the party for whom the work is done from time to time desires to have additions or alterations; and it is by no means an unusual thing to insert a clause providing that the employer shall not be liable for extras or additions unless there be an order in writing fixing the price or the certificate of the architect for the work so done. In many cases, the court, though satisfied that the builder, acting upon the faith of an oral request, has fairly done the work for which it seeks to be paid, has felt itself fettered by the express terms of the bargain the parties have entered into. We cannot yield to the suggestions of hardship on the one side or the other. . .

By the terms of this contract, the 10,400l. is inclusive of all charges for the ship, furnished and fitted perfectly in every respect; and no charges are to be demanded for extras: but any addition or additions which may be made by an order in writing of Sir George Sartorius as an extra or extras are to be paid for at a price to be previously agreed upon in writing. No additions were ordered by the Admiral in writing: but, during the progress of the work, orders were from time to time given by persons who represented the Portuguese government, for additions and alterations for which under ordinary circumstances Mr Russell might well suppose he was at liberty to charge. He might have declined to comply with these requests unless they were made in writing.

. . . I feel bound to give effect to the terms of the contract, and to hold that the extras and additions supplied not under written orders. . . are not to be paid for by the defendant.'

8.20 With this, and other similar nineteenth-century cases, the written contract was by modern terms very short, and the description of the works very limited.[18] In such cases, the employer would need to be consulted on a regular basis as to the details of what was required. However, such ongoing consultation would not necessarily mean that the contract scope was being varied. If the contractor thought that it was being asked to stray from the contract scope, such a contract would allow it to flag this up. The issue could then be considered, and if particular instructions effectively required the contractor to provide something beyond the

17. *Ibid*. at 81.

18. See also *Tharsis Sulphur and Copper Company* v. *McElroy & Sons* (1878) 3 App Cas 1040; *The Thames Iron Works and Ship Building Company* v. *The Royal Mail Steam-Packet Company* (1862) 143 ER 142; and *Lovelock* v. *King* (1831) 174 ER 21.

contract scope, then the employer could reconsider and discuss precisely what was required and the price for the extra work.

8.21 Modern contracts obviously contain much more detailed descriptions of the work to be undertaken. However, the parties to a project will still need to engage in discussion about the details of what is required. As discussed in Chapter 3, the work that the contractor is obliged to undertake will not necessarily be comprehensively defined within the technical documents, such as the drawings and specification. The contractor may be obliged to undertake additional or even different work from that described on the technical documents in order to fulfil its obligation to build the defined scope.[19] Therefore, even in contracts with voluminous technical schedules, it may be a matter of some debate whether or not working details discussed part way through a project amount to variations.

8.22 The employer will want to know whether the work under discussion is going to lead to an increase in the contract price, and potentially extend the build time. A procedure which stipulates that variations are in writing ensures that the employer is warned where the contractor considers that a change to the scope is being requested. Equally, some changes to the scope may be so minor, or involve alterations in materials of equal cost, such that they have no financial impact.[20]

8.23 Most modern contracts provide that all variations must be in writing and that the contractor is entitled to be paid only for changes that have been instructed in this manner. For example, in *Kitsons Sheet Metal Ltd* v. *Matthew Hall Mechanical & Electrical Engineers Ltd*,[21] Clause 20 of the contract stated that the contractor '. . . shall make such variations in respect of the [contract] works as may be ordered in writing by the [employer]. . . Save as aforesaid the [contractor] shall not make any alteration in, or modification to the [contract] works'. Clause 21 went on to state that '[a]ll authorised variations of the [contract] work shall be valued in the manner provided by the clause. . .'. In the light of these provisions, one of the preliminary issues that the court was asked to consider was whether the requirement for an order in writing for a variation was a condition precedent to payment. HHJ Newey was clear that the written notice was a condition precedent. He concluded:[22]

> 'I think that on their face the meaning of these clauses is clear and does not involve any ambiguity. Clause 20 required the plaintiffs to make variations when ordered to do so

19. See Chapter 3, section C. For example, the contractor may have a design obligation which requires it to deliver a project which achieves certain performance criteria. These will normally take precedence over the description of the works in the technical documents. The contractor may therefore need to undertake additional or changed work in order to deliver a facility which complies with the performance criteria. See *Davy Offshore* v. *Emerald Field Contracting Ltd* (1991) 55 BLR 1 as an illustration of such a contractual arrangement.

20. See *SC Taverner & Co Ltd* v. *Glamorgan County Council* (1940) 57 TLR 243. The contract contemplated that all variations would be instructed in writing. The court emphasised that changes to scope may or may not result in additional expense and that the purpose of such a clause was to allow the contractor to flag situations where changes would lead to additional cost. Humphreys J stated: '. . . [T]he contractor, while he is bound to execute all additions and extras which are ordered by the county surveyor, it is not required to do so, if in his opinion (and it is left to him to decide) those extras will cause additional expense, without getting an order in writing signed by the clerk of the county council.'

21. (1989) 47 BLR 82.

22. *Ibid*. at 112.

in writing, but not otherwise. Clause 21 provided for valuation (leading to payment) of "authorised variations" to be authorised, or indeed to be a variation at all within the contract, one had to be ordered in writing. A written order was a condition precedent to payment under the contract.'

8.24 A contract may stipulate that variation instructions must be in writing, but particular clauses may relax this requirement. For example, whilst Clause 51(2) of the ICC Measurement Contract 2011 states that variation instructions must be in writing, Clause 13 states that instructions issued under that clause will be 'deemed' to be variations and will therefore capture oral instructions. In this way, oral instructions will be valid variation instructions provided that they are instructed under Clause 13.[23]

8.25 Whether a contractor is entitled only to be paid for variations instructed in writing is, of course, a matter of contract interpretation. For example, in *Diamond* v. *McAnnany*[24] the contract stipulated that the contractor must comply with written variation instructions issued by the employer. However, the court found that this provision did not mean that the contractor was not entitled to be paid for extra work that was instructed orally.

8.26 In any event, an employer may waive the requirement that an instruction in writing is a condition precedent to payment. The existence of such a clause will not necessarily prevent the contractor's claim for payment, as the employer may be estopped from relying upon such a provision.[25]

8.27 The question whether a variation instruction must be in writing, as a condition precedent to payment, will be less clear where the contract contemplates oral instructions with subsequent written confirmation. A contract may refer to written instructions but equally provide that the contractor may also be orally instructed to undertake variations. The Court of Appeal decision in *Ministry of Defence* v. *Scott Wilson Kirkpatrick & Partners and Dean & Dyball Construction Ltd*[26] illustrates how a contract may operate in this way.

8.28 The MOD employed Dean & Dyball as contractors to refurbish the roof at Plymouth dockyard. Several years after the work had been undertaken high winds lifted off a section of the roof, depositing it on a local playing field. The contract had required the contractor to use nine-inch nails when fixing the roof. In fact, they had used four-inch nails, which was the reason the roof was inadequately fixed.

8.29 In the dispute over liability for the defect, the key issue was whether the contractor had been instructed to change from nine- to four-inch nails. The contractor claimed that the works had been varied by the superintending officer (SO) under the contract to allow it to use the shorter nails. The trial judge's finding of fact (with which the Court of Appeal did not

23. Clause 13(1) provides that where the carrying out of work is legally or physically impossible, the engineer may issue instructions without specifying that these must be in writing. Clause 13(3) goes on to state that any instruction issued under Clause 13(1) shall be deemed to be a variation.
24. [1865] 16 Up Can CP 9.
25. See Chapter 9, section D.
26. [2000] BLR 20.

interfere) was that the need to change the nails had been the subject of conversations, but that there had been no written instruction. The question therefore arose as to whether the oral instruction was an effective variation under the contract.

8.30 The variations clause, which was under a GC Works contract,[27] read as follows:

> '7(1) The Contractor shall carry out and complete the execution of the Works to the satisfaction of the SO who may from time to time issue further drawings, details and/or instructions, directions and explanations (all of which are hereafter referred to as "the SO's instructions") in regard to. . . the variation or modification of the design, quality or quantity of the Works. . .
>
> 7(2) All SO's instructions shall be given in writing in the manner prescribed by the Authority. If any of the SO's instructions issued orally have not been confirmed in writing by him such confirmation shall be given upon reasonable request by the Contractor.'

8.31 Mance LJ made the following comments on this clause, concluding that a written instruction was not a condition precedent to a variation having been instructed:[28]

> '[the trial judge] also inclined to the view that the absence of any written instruction or confirmation under condition 7(2) prevented there being any valid or relevant instruction within condition 7(1). I cannot agree with him on this last point. The giving or confirmation of instructions in writing is not expressed in condition 7(2) as a condition precedent. On the contrary, as. . . the MOD accepted, there could well be occasions when it was necessary under condition 7(1) that oral instructions should be both given and acted on as a matter of urgency, without the luxury of returning to the site office to put them in writing. Further, both the reference to confirmation in writing and the express provision for situations where instructions have been neither issued nor confirmed in writing, support the view that it would be wrong to read condition 7(2) as introducing any sort of condition precedent.'

8.32 Clause 7(2) specifically refers to oral instructions being given. The clause allows the contractor to request written confirmation, though this would amount to written confirmation of an oral instruction which had already been given. The provisions do not state that the oral instruction will have no effect or status. The intention is that oral instructions will later be confirmed in writing, although in the absence of subsequent written confirmation the oral instruction will not be obsolete. Clause 7(1) refers to the contractor's obligation to comply with 'instructions' but does not specifically refer to written instructions. Hence, the court concluded that an instruction did not need to be given in writing.

27. GC Works 1, Edn 2.
28. [2000] BLR 20 at 28, para. 15.

The 'in writing' requirement

8.33 A number of older cases turn on the question of what amounts to 'in writing'. In *Myers* v. *Sarl*[29] the contract required variations to be directed 'by the architect. . . in writing under his hand'. The contractor sought to rely on unsigned drawings issued by the architect's office. These were held by the court to be insufficient. Drawings were not orders in writing under the hand of the architect.

8.34 As the cases discussed at the start of this section illustrate, the requirement that variations be instructed in writing was traditionally a useful way of ensuring that a special procedure was adopted to ensure that this category of work was identified. Day-to-day instructions as to the carrying out of the work may have been given orally on site, but a special effort was required to record a variation in writing.

8.35 With the use of email and mobile devices, communication in writing is considerably more common. It will therefore be significantly easier to establish that an instruction has been given in writing. Equally, it might be thought that simply having a written communication is not sufficiently distinct from the usual day-to-day instructions, and that variation instructions should be set down in a formal letter or on a specified form.

Instructions that direct change and concessions

8.36 A written instruction is not just a document that refers to the work having been undertaken. An instruction involves the ordering of work. A document that simply recognises or records that the work has been undertaken is not an instruction, although it may approve the change.

8.37 An employer can give permission for a change to be undertaken rather than ordering a variation.[30] That permission may be given retrospectively, where the contractor has undertaken changed work without consent, and the employer subsequently confirms that the altered work may remain. Such permissions, or concessions, are discussed in Chapter 9, section B, and are often given where the change has become necessary only because of a contract risk that is the contractor's responsibility. In those circumstances the employer may give a concession, so that the contractor can implement the change but will not be paid for it.[31]

8.38 A number of the cases concerning whether an instruction has been given involve situations where the employer has acknowledged that a change has been undertaken. Such acknowledgments may amount to the employer consenting to the change, but do not constitute variations.

29. (1860) 3 E & E 306.

30. A communication in respect of changed work may not even amount to a permission or concession that the nonconforming work may remain. It may record the fact that the change has been made but the employer may be entitled to insist that the offending work be removed. See Chapter 9, section B.

31. In these circumstances the employer may instead issue a clear variation instruction. Even though the change is required only because of an event that is at the contractor's risk, the contractor may, under the terms of the contract, be entitled to payment. See *Simplex Concrete Piles Ltd* v. *The Mayor, Alderman and Councillors of the Metropolitan Borough of St Pancras* (1958) 14 BLR 80, discussed at Chapter 6.

8.39 In *Lamprell* v. *The Guardians of the Poor of the Billericay Union, in the County of Essex*[32] the claimant contractor was employed to build a workhouse at Billericay in Essex. The contract provided that the employer's architects may make variations to the works via prior written and signed instructions. One of the points in issue in the case was whether such instructions had been given. The architects had issued letters which incidentally made reference to some of the additional works whilst they were in progress. After the works were complete the architects also produced certificates and a valuation of the additional works.

8.40 The court found that these documents did not amount to instructions that the work was to be undertaken. A contractual requirement for a written instruction cannot be fulfilled simply by pointing to any document that refers to the additional works. The document has to instruct the contractor to undertake the work rather than just acknowledge that the work has been undertaken. The judgment stated:[33]

> '. . . [T]he only documents signed by the architects, namely, the certificates, the letters, and the final valuation, even on the most favourable construction for the plaintiff, were merely writing stating expressly or impliedly their approbation of what had already been done.
>
> . . . they certainly are not what the deed contemplated, which was a previous written authority from the architects. A subsequent written approval, even if the documents in evidence amount to that, is a very different thing from a previous order to the builder.'

8.41 The House of Lords case of *Tharsis Sulphur and Copper Company* v. *McElroy & Sons*[34] considered whether certain monthly valuation certificates could amount to written orders. The contractor's work involved constructing iron girders. The size of the girders had to be increased. The contract had stipulated thinner girders, but these were liable crack and warp. This defect with the girders was the contractor's responsibility and so the need to increase the size was the contractor's risk. The employer's position was that it had allowed the contractor to build the girders to a wider size as a concession, but with no liability to pay extra.

8.42 The contract provided that in order for the contractor to be entitled to additional payment it was necessary for the engineer to have issued written orders in respect of that work. During the course of the project, the engineer had issued regular certificates, which recorded the weight of the girders the contractor had been producing, for the purposes of assessing interim payments. The court considered that these certificates were produced for the purposes of regulating cash flow, and did not amount to written orders as required under the contract. Lord Cairns stated:[35]

> 'An "order" would mean an order by the company to the contractors to execute the work in the altered form. But the position of things was perfectly different, it was the

32. (1849) 154 ER 850.
33. *Ibid.* at 859.
34. (1878) 3 App Cas 1040.
35. *Ibid*. at 1044.

contractors who were suggesting to the appellants, if they were not requesting them, that the girders should be of a thicker form.'

Lord Cairns went on:[36] **8.43**

'The certificates I look upon as simply a statement of a matter of fact, namely, what was the weight and what was the contract price of the materials actually delivered from time to time upon the ground, and the payments made under those certificates were altogether provisional, and subject to adjustment or to readjustment at the end of the contract.'

Certificates which record the work which has been undertaken, for the purpose of assessing interim cash flow payments, are not the same as instructions directing that extra work is required, not least because contracts will normally provide that payment certificates can be opened up at a later stage. They are not designed to bind the parties definitively as to entitlement. They are simply a practical means of ensuring that the contractor receives regular payments.[37] In this context, Lord Blackburn's comments are in *Tharsis* instructive:[38] **8.44**

'It is very common, and in this case it exists, that although the contractors are not to be paid in advance, yet they are not to be kept out of their money until the whole work is done, and therefore it is generally provided, and here it is provided, that as the work goes on they shall be paid proportionate sums according to the contract – more of less according to the work actually done. And for that purpose a survey must be made. . .

. . . They were made out with a view to regulating the advances, and showing how much should be paid on account, not at all as showing how much was to be paid ultimately upon the final account and reckoning.'

The employer may permit the contractor to deviate from the contract scope of works, but such a concession does not entitle the contractor to payment because it has not been instructed to make the change. Lord Blackburn summarised the position as follows in *Tharsis*:[39] **8.45**

'. . . [I]n this case, the company says, We cannot do the work as we have promised to do it unless you permit us to make it thicker than we undertook to make it, and the engineer on behalf of the company says, I will not object to your making it thicker if you cannot do it otherwise, I think there is nothing in that to imply that there was to be any payment for that additional thickness.'

Therefore, approvals given by the employer after the work has been undertaken will often amount to concessions that the contractor may depart from the scope. However, contracts **8.46**

36. *Ibid.* at 1045.
37. See Chapter 11, section B, which examines in further detail the status of interim applications and certificates in the context of determining and settling variations claims.
38. (1878) 3 App Cas 1040 at 1051 and 1054.
39. *Ibid.* at 1054.

will often provide that the employer, or its contract administrator, may give a written instruction subsequent to the work being undertaken.[40] It is also important to recognise that a contract administrator does not have implied authority to give concessions allowing the contractor to change the works, although it does have authority to exercise the power to instruct variations under the contract procedure.[41]

8.47 In the above cases the relevant communication from the employer to the contractor was found to be a concession rather than an instruction, because its purpose was essentially to acknowledge the change rather than to order it. The distinction between the two may be of importance, because the employer agreed to the change only to assist the contractor. The employer may seek to argue that even though the communication was given before the change was made, its purpose was to allow the change and therefore should be treated as a concession rather than an instruction.

8.48 The case *Simplex Concrete Piles Ltd* v. *The Mayor, Alderman and Councillors of the Metropolitan Borough of St Pancras*[42] involved this type of situation. The design and build contractor's piling design proved to be defective, which led to its proposing two alternative piling designs to the employer's architect. The architect sent a letter to the contractor, which instructed one of the alternatives. The contractor subsequently claimed that it was entitled to be paid for the change. The employer defended the claim, partly on the basis that the architect's letter was a concession rather than an instruction which triggered any entitlement under the contract.[43] Edmund-Davies J summed up the position up as follows:[44]

> 'The case for the [contractor] is that this letter constituted the Architect's Instruction for a variation and, as such, entitles them to be reimbursed for the extra expense involved. For the [employer], on the other hand, it is submitted that it amounts to no more than a concession by the architects, enabling the [contractor] to perform their obligations under the contract in a manner different from that specified, but that (being a mere concession) the [employer] are not liable to reimburse the [contractor] to any extent in respect of the extra expense to which they were admittedly put by getting the piling work completed. . . .'

8.49 The judge found that the letter was an instruction. He placed importance on the fact that the architect intended by his letter to authorise the changed design as a variation under the contract. Only later did the architect begin to consider the possibility that he was not justified in authorising a variation because the contractor had design responsibility and therefore his letter could be seen as merely a concession.[45] The judge was of the view that the contract administrator's intention and opinion were relevant:[46]

40. See section D of this chapter.
41. See Chapter 9, section B.
42. (1958) 14 BLR 80.
43. This case is reviewed in detail at Chapter 6, section B.
44. (1958) 14 BLR 80 at 96.
45. *Ibid*. at 96–97.
46. *Ibid*. at 97.

> 'I do not, with respect, think that [the employer's] counsel is right in his observation that the architect's view as to what he was doing, by the letter of 30 July is wholly immaterial. I agree, of course, that reference would in any case have to be made to him as his approval was necessary before the bored piles specialists could be called in to do the work, he in turn would have to satisfy the district surveyor of the structural stability, but the conclusion at which I have arrived is that both by his oral instruction of 29 September and by his letter of the following day he purported to do more than signify assent. He had been asked by the 27 September letter for his "instructions and views as to the extra cost which will be involved", and those instructions and views he proceeded to give. . .
>
> . . . In my judgment, it is not immaterial that the architect intended to authorise a variation, thought he was authorising a variation, and thought further that, as the employers were being rendered liable, he must check on the extra expense involved, all of which factors I find were present in [the architect's] mind when he wrote his letter.'

8.50 It would appear that the judge's analysis of the position turns on whether the letter amounted to an instruction to the contractor to change the work at the time it was given. The fact that the architect decided at a later stage that it only needed to give a concession was irrelevant. The test should be whether the communication was directing the contractor to change the work, rather than permitting a change to be made.

8.51 It will not normally be necessary for an instruction to specify that the works are extra. What is necessary is that the contractor has been requested to undertake the works. Normally, a variation is defined as being something that is additional to the scope, and therefore work that is within scope will not be a variation under the contract.[47] However, unless clear wording to the contrary is included in the contact, the written order does not need to state whether the work is extra or not.[48]

Provisions requiring notice of claim

8.52 The contract may require the contractor to give notice of a claim within a specific period of time. Such a provision may be independent of the need to establish that a written instruction has been issued by the employer in respect of the change.

8.53 The ICE Form of contract (2nd edition) contained such a provision, which was considered in two cases, discussed below: *Tersons Ltd* v. *Stevenage Development Corporation*[49] and *Hersent Offshore SA* v. *Burmah Oil Tankers Ltd*.[50]

47. See Chapter 3.
48. See the Australian case of *Bedford* v. *Borough of Cudgegong* (1900) 16 WN (NSW) 142 (FC), where this approach was followed. The contract required that extras needed to be 'sufficiently shown by any order in writing, or by any plan or drawing expressly given and signed or initialled by him, as an extra or variation'. The letter from the architect ordering the work did not refer to the works being extra. Despite this, the court considered it sufficient.
49. (1963) 5 BLR 54.
50. (1978) 10 BLR 1.

8.54 In the first of these two cases the contractor had been employed to lay sewers as part of the development of Stevenage New Town. Clause 51 of the ICE 2nd edition required the engineer to give the contractor an order in writing in respect of any variation. Clause 52(2) set out the additional requirement that notice be given in order to make a claim. It provided that:

> '. . . no increase of the contract price. . . shall be made unless as soon after the date of the order as is practicable and in the case of extra or additional work before the commencement of the work or as soon thereafter as is practicable notice shall have been given in writing: (a) by the contractor to the engineer of his intention to claim extra payment or a varied rate. . .'

8.55 The employer sought to argue that the contractor had failed to comply with the notification requirements in that it had failed to give full and detailed particulars of the claims in its notices. The court found that Clause 52(2) only required the contractor to specify that a claim was being made, and in general terms to set out what additional work the claim related to. There was no requirement to give full and detailed particulars in order to be compliant with Clause 52(2).[51] Upjohn LJ stated:[52]

> '. . . [I]t seems to me that where an instruction as to carrying out work includes an order to perform additional work, it is sufficient for the contractor to identify the order, and to make it plain that the order is regarded as involving a claim for extra or additional work for which extra payment will be claimed.'

8.56 The court also commented briefly on the requirement that the notice under Clause 52(2) needed to be given as soon as 'practicable'. It pointed out that this was different from a requirement that a notice be as served as soon as is 'reasonable', but noted that the test of practicability may involve issues of reasonableness.[53] Other than this general comment the court did not need to consider whether the contractor's notice had been given as soon after the order as was practicable.

8.57 The second of the two cases in which this ICE notice provision was considered was *Hersent Offshore*.[54]

8.58 Hersent was a contractor employed to build a crude oil transhipment terminal. The engineer had orally ordered certain variations on 10 May 1973, but the contractor did not give notice of intention to claim under Clause 52(2) until 9 August 1974. The relevant variation work had already commenced in January 1974.

8.59 The case was an appeal on findings of law in an arbitrator's award. The arbitrator had directed himself that he needed to consider whether the 9 August 1974 notice was as soon as

51. The contract also contained a provision requiring that the contractor give details of claims in its monthly applications. The court found that this clause did not prevent the contractor in this situation from recovering.
52. (1963) 5 BLR 54 at 71–72.
53. *Ibid*. at 73.
54. (1978) 10 BLR 1.

practicable after the order on 10 May 1973. The court agreed that this was the correct test, rather than its being 'as soon as practicable after commencement of the works'.[55]

8.60 Thompson J also indicated that had notice been given in January 1974 (when the work started) this would still have been too late, as it would not have been 'as soon as practicable' after the order in May 1973.

8.61 The other aspect of the contractor's case was that, because the variation order was given orally rather than in writing, the notice requirement under Clause 52(2) did not need to be fulfilled. Clause 51(1) of the contract required that variation notices must be given in writing and the contractor had no obligation to undertake extras that were ordered orally. The contractor argued that, as a consequence, the variation notification mechanism did not need to be followed. The judge disagreed, and came to the following conclusion:[56]

> 'I reject the submission that because the order was oral clauses 51 and 52 have no application to this claim for extra payment. I do not agree that in the circumstances of this case the order by the engineer falls outside the operation of the procedure there provided. The claimants varied the design of the riser support structure. They did so because ordered to do so by the engineer. It may be that they should not have acted upon an oral order without taking steps to have it converted to a deemed order in writing. No point, however, appears to have been taken against them on that account. I cannot conclude that the absence of writing prevented the order of the engineer from being an order under clause 51(1). . .'

8.62 Just because the variation order was not given in writing (as required under the contract) did not mean that the contractor could ignore the claims notification requirement under Clause 52(2). As the notification of a claim under Clause 52(2) was a condition precedent to payment, the contractor lost its entitlement. The fact that the employer was not seeking to take the point that no written order had been given did not excuse the lack of the claim notice.

SECTION C: THE CONTRACT ADMINISTRATOR'S AUTHORITY TO INSTRUCT VARIATIONS

8.63 A construction contract will normally provide that the employer's unilateral power to vary the works is to be exercised by way of an instruction issued by the contract administrator. Such a power must be operated in accordance with the contract provisions. Therefore, the named contract administrator must issue the instruction and not the employer or a different member of the employer's consultancy team.[57]

55. *Ibid*. at 8.
56. *Ibid*. at 7, *per* Thompson J.
57. The power to vary must be operated in accordance with the contract provisions. An employer has no implied power to vary the works: see Chapter 5, section A. However, if under a contract with no power to vary, the employer (rather than the contract administrator) directs the contractor to undertake additional works, then this may amount to a valid permission to depart from the scope, and the contractor may be entitled to payment. The employer may permit change as a concession (see Chapter 9, section B), or may agree a consensual variation (Chapter 9, section C). See Chapter 9 generally.

8.64 The contract administrator acts as the agent for the employer in exercising the power to vary.[58] It is given this power because the contract administrator will normally be the principal consultant of the employer, in charge of managing the delivery of the project, and therefore will be best placed to issue instructions of this kind.

8.65 Because it acts as agent in exercising the power, the contract administrator must act in accordance with the authority it has been given. The contract administrator, in acting as agent for the employer, has no implied power to vary the contract or waive the contractor's obligation to comply strictly with its terms. It can, therefore, only instruct in accordance with the provisions of the contract. Before discussing further the contract administrator's authority to instruct variations, it is first necessary to consider the law of agency.

The law of agency[59]

8.66 An agent may be appointed by a principal to act on its behalf in its commercial dealings with third parties. The agent may, for example, enter into contracts on behalf of the principal. The contract will be between the principal and the third party. The agent has no liability to the third party, as it agrees the contract on behalf of the principal, rather than in its own name.

8.67 In view of the potential power the agent has to act on the principal's behalf, the principal will typically limit the agent's authority. For example, the agent may be allowed to enter into contracts only up to a certain value. This will be set out in the agreement between the principal and the agent. The principal will not be bound if the agent enters into agreements on its behalf that are in excess of the authority given.[60]

8.68 However, an unsuspecting third party will often know nothing of the details of this contractual arrangement, and therefore will not know about the limits of the agent's authority. Therefore, the law provides that a third party is entitled to assume that an agent has proper authority from the principal if the agent *appears* to have authority to enter into the relevant transaction on the principal's behalf. It is this *apparent* or *ostensible* authority that is often of utmost importance is assessing whether a principal is bound by an agent's actions. If an agent has ostensible authority to act on behalf of its principal, then the principal will be bound, even though the agent did not have express authority to enter into the contract.

8.69 Whether an agent has ostensible authority to bind the principal will often depend upon the usual commercial arrangements for the role being undertaken. For example, in England an estate agent normally acts on behalf of a house-seller, with authority only to advertise and solicit offers from buyers. An estate agent does not have authority to actually sell the house on the seller's behalf. An estate agent acting in the normal course of business would not therefore have ostensible authority to effect a sale or receive money on behalf of the seller in

58. As discussed *infra*, para.10.63, the contract administrator has two roles under the contract, acting as agent of the employer in directing the works, and acting as the certifier.

59. See Watts, *Bowstead & Reynolds on Agency*, 19th Edn (2010, Sweet & Maxwell).

60. A principal may subsequently ratify agreements entered into in excess of the agent's authority.

respect of the house. The estate agent could be given actual authority to finalise the sale, but this would be out of the ordinary, and a buyer in these circumstances ought to seek evidence of such authority before relying on it. A further example is that of a solicitor conducting litigation on behalf of a client. A solicitor has ostensible authority to agree a settlement on behalf of its client, such that a third party can rely on this without needing to get evidence of whether the solicitor has actual authority.

8.70 Judicial precedent supports the finding of ostensible authority in these situations. However, it is always within the discretion of a principal not to give its agent the actual authority that an agent would normally have to carry out a particular role, for example for a solicitor's client not to give its solicitor authority to settle. The principal is still bound by the agent's actions because of the rules regarding ostensible authority, unless the principal makes known to the third party in advance the limits of the agent's authority. For example, the solicitor's client could write to the other party in the litigation, explaining that its solicitor does not have authority to settle, and that any settlement must be signed of by the principal.

8.71 The law therefore seeks to strike a balance between protecting the principal and the third party. The third party should be free to assume that an agent has authority to bind its principal where this is the typical commercial arrangement. The principal can always protect its position by ensuring that third parties are aware of the limitations on its agent's authority.

8.72 Where the agent wrongfully acts outside its authority, the principal will normally still have a remedy. The relationship between the agent and principal is a contractual one. If the agent acts beyond the scope of its actual authority and binds the principal because of the ostensible authority rule, then it will be in breach. In such circumstances the principal's remedy would be to claim against its agent.

Agency law principles in the context of variation instructions

8.73 In the context of a construction contract, the contract administrator is the agent, the employer is the principal and the contractor is the third party.

8.74 The contract administrator will have a contract with the employer setting out the terms of its appointment. Such appointment can take many forms, from a lengthy appointment agreement to an exchange of letters, or can even be oral. This will govern whether the contract administrator has actual authority to instruct variations. The parties' contract may expressly allow the contract administrator to issue variation instructions in respect of the works, but it may not even mention this role. The contract may expressly limit the contract administrator's authority to instruct variations.[61]

8.75 Irrespective of the express terms of the contract between the contract administrator and the employer, the contract administrator will have ostensible authority to instruct variations, provided that the third party (i.e. the contractor) is not otherwise on notice as to the contract

61. See *infra*, para. 8.90, in the context of the RICS Standard Form of Consultant's Appointment, as an example.

administrator's limited role. The contract administrator will have such ostensible authority as a result of the provisions of the construction contract entered into by the employer and contractor. In agreeing the contract, the employer has held out the contract administrator, in its role as agent, as having power to instruct such variations. The nature and extent of the contract administrator's authority will often depend on the provisions of the construction contract. For example, a contract may not just provide that the contract administrator can instruct variations; contracts may also provide for a process whereby the contractor can submit proposals for variations which the contract administrator is empowered to consider, negotiate and agree.[62]

8.76 The contract administrator therefore has ostensible authority to instruct or agree such variations in accordance with the provisions of the contract, even if it does not have actual authority.[63]

8.77 It should be emphasised, however, that the contract administrator's authority to vary arises because the contract provides for this role, and therefore the contract administrator's authority depends upon the power being exercised in accordance with the contract provisions.

8.78 The contract administrator does not have ostensible authority to vary the scope of the works to be undertaken under the contract, unless instructed in accordance with the express variations provisions. Nor does the contract administrator have ostensible authority to waive, on the employer's behalf, the obligations of the contractor to comply strictly with the terms of the contract.[64] If the contractor wants to rely upon the instruction of the contract administrator, it must ensure that instructions have been given in accordance with the contract mechanism.

Authority limited by the contract powers and procedures to vary

8.79 The contract administrator, therefore, only has ostensible authority to vary if it acts within the contract variations provisions and, in particular, those relating to the type of change that may be instructed and the form of the change order.

8.80 The variation must involve a change of a type authorised by the contract. For example, the contract may restrict the nature of the additional work that can be instructed. It may restrict the volume of changes that can be made, or when they can be instructed. There may be contractual restrictions on whether the method of undertaking the works can be altered.[65] The contract administrator only has authority instruct changes of a nature contemplated by the contract. The type of variation authorised by the contract will indicate to the contractor the scope of the contract administrator's ostensible authority to instruct such changes. For example, if the contract caps the value of variations that may be instructed, then this will

62. Contract processes allowing for proposals for variations and their agreement are discussed at section E of this chapter.

63. For reasons discussed later in this section, it is highly unlikely that actual authority will be wider than ostensible authority.

64. *Sharpe* v. *San Paulo Railway Co* (1872–73) LR 8 Ch App 597. See discussion later in this section.

65. These different types of change and the limitations to what is allowed are reviewed in Chapter 5.

limit the contract administrator's ostensible authority. The contractor would then need to ensure that the employer has given the contract administrator actual authority to instruct variations beyond the contractual cap.

8.81 The contract may stipulate that a variation instruction must be given in a particular form. For example, that the contract administrator must issue an instruction in writing. The contract administrator only has authority to vary provided that it acts in accordance with the procedure laid down. It does not have authority to instruct change in a manner that is different from that set down by the contract. If the contract requires variation instructions to be in writing, then the contract administrator has no authority to instruct orally.[66]

8.82 Therefore, if the contract administrator purports to instruct a variation that is beyond its ostensible authority, the employer will not be bound. In these circumstances, the employer could theoretically be bound if it has given the contract administrator actual authority that is wider than that contemplated by the variations provisions, but in practice this is highly unlikely.[67]

8.83 As such, an instruction that goes beyond the type of variation allowed for by the construction contract, or an instruction that is not in accordance with the variation procedure, is not authorised and will not bind the employer. The employer may, however, choose to ratify an unauthorised instruction given by the contract administrator.

8.84 Where the contractor implements an unauthorised change, then not only is the contractor not entitled to be paid for the varied work, but such work is unapproved and the employer can insist that it is taken down.

66. When the contract requires such instructions to be given in writing, the contract administrator cannot vary the parties' contract so as to allow himself to instruct variations orally. See *Forman & C. Proprietary Limited* v. *The Ship 'Liddesdale'* [1900] AC 190. The contractor was employed to undertake repairs to a ship in respect of damage it sustained when it ran aground. For extra work, the contractor needed to obtain the written approval of the captain, who for the purposes of this discussion was effectively the contract administrator overseeing the work on behalf of the employer. The captain gave no orders for changes in writing, but verbally requested the contractor to undertake additional work. The contractor sought to argue that, since the captain had given oral instructions for changes, it should be taken as having varied the requirement that orders needed to be in writing. The court rejected this argument as the captain did not have authority to do this. The judge stated that the captain 'had no implied authority beyond the limits which they have before stated – namely to adjust details falling within the terms of that contract which he had express authority to make. . .' (at 203). The judge went on to state that the captain '. . . could not give himself indirectly an authority to order repairs which he had been forbidden to contract directly' (at 204).

67. If the agent has been given express authority under its appointment that is wider than that provided for in the contract, then, on the basis that the agent has actual authority, the employer will be bound. As noted above, such circumstances are highly unlikely to arise in practice. The appointment would have to provide that the contract administrator can instruct changes that go beyond the limits set down by the contract. If the appointment is silent, then the contract administrator's actual authority would be interpreted by reference to what the construction contract says in respect of the authority to vary. The contract administrator would, in any event, not have the right to instruct change beyond the contract limits, and so the contractor could refuse to comply (see Chapter 5). The contract administrator could, of course, instruct the variation despite it being beyond those contractual limits, and the contractor may acquiesce by undertaking the work without objection, in which case one would have to ask whether the contract administrator had authority. However, in such a situation the contract administrator is instructing beyond the limits of the contract provisions and is, in effect, agreeing to change the scope of the works outside the variations mechanism contained in the contract. There is no reason, as such, why the appointment cannot give the contract administrator authority to vary the contract beyond the powers in the contract in this way, but it would be very unusual.

Contract administrator has no ostensible authority to vary or waive compliance

8.85 The contract administrator has authority to instruct changes under the variations mechanism where this is expressly provided for in the construction contract, but it does not have ostensible authority to vary the contract on behalf of the employer in any other manner.[68]

8.86 Neither does the contract administrator have ostensible authority to waive the employer's right under the contract to insist that the contractor complies strictly with the contract requirements.[69]

8.87 *Sharpe* v. *San Paulo Railway Co*[70] involved the construction of a railway in Brazil. The engineer had made an error in his calculation of the quantities of excavation involved, with the result that the contractor had to undertake two million cubic yards of extra excavation. The contractor took the risk of the extra quantities since it was a lump sum contract for the construction of the line between two points. However, the engineer clearly felt that this was inequitable and agreed to increase the contract sum payable to the contractor. The court found that the engineer did not have authority to make this agreement on behalf of the employer. Since the contractor was already bound to undertake the additional excavation work for the contract price, the employer was under no obligation to pay the additional sum. This amounted to a variation of the contract which the engineer did not have authority to make. Sir WM James LJ stated:[71]

> 'And then in the vaguest possible way it is said that all these promises of the engineer were known to and ratified by the company. I am of opinion you cannot in that way alter a contract under seal to do works for a particular sum of money. The Plaintiffs cannot say that the company is to give more because the engineer found he had made a mistake and promised he would give more, and the company verbally, or in some vague way, ratified that promise. To my mind it was a perfectly *nudum pactum*.[72] It is a totally distinct thing from a claim to payment for actual extra works not included in the contract.'

8.88 Where the contractor undertakes changed work without a formal instruction having been issued under the contract, it may seek to claim that approval has been given in any event. That informal approval may also give rise to an entitlement to be paid for the change. However, such approval will normally need to be given directly by the employer, since the

68. In *Cooper* v. *Langdon* (1842) 152 ER 689, an employer sued its builder for failure to construct in accordance with the drawings. The builder unsuccessfully tried to defend itself on the basis that the design had been changed by the employer's architect. However, the architect had no implied authority to vary in the absence of an express power to vary under the contract. An employer may, of course, change the normal implied position as to authority by expressly empowering its contract administrator.

69. *John Laing Construction Ltd* v. *County & District Properties Ltd* (1982) BLR 1. The contract administrator allowed the contractor's claim and waived the contractor's obligation to comply with the contractual notice provisions. The court found that the contract administrator had no authority to waive this requirement on behalf of the employer, without its principal's consent.

70. (1872–73) LR 8 Ch App 597.

71. *Ibid.* at 608.

72. *'Nudum pactum'* is a bare or naked promise, which is therefore not legally enforceable because of a lack of consideration.

contract administrator does not have ostensible authority to do so.[73] In particular, this is relevant in the following circumstances:

- Concessions:[74] the employer may give permission to the contractor to depart from the contract scope as a concession, rather than instructing the change under the variation mechanism. the contract administrator has no ostensible authority to give such permission as it constitutes a waiver of the contractor's obligations under the contract.
- Consensual variation:[75] the employer and the contractor may agree a change to the contract scope rather than the change being unilaterally instructed under the variations mechanism. The contract administrator has no ostensible authority to vary the terms of the contract.
- Waiver of the variations mechanism formalities:[76] the employer may waive the contract requirement that certain formalities, such as a written instructions, are required as a pre-condition to payment for a variation. The contract administrator has no ostensible authority to waive contract requirements.
- Collateral contract:[77] the employer may enter into a separate agreement with the contractor in respect of additional work. The contract administrator has no ostensible authority to enter into new contracts on an employer's behalf.

Limits on the contract administrator's actual authority

8.89 The contract administrator may bind the employer by instructing a variation which it has ostensible authority to issue, but which goes beyond what it is authorised to instruct under the terms of its appointment.

8.90 In such circumstances the contract administrator may be liable to the employer (its client) for having instructed a change in contravention of the limits of its authority under its appointment. For example, RICS Standard Form of Consultant's Appointment,[78] Clause 11.1 entitled 'Consultant's Authority' states:[79]

> '. . . the Consultant has no authority to do any of the following on the Client's behalf without the Client's prior written consent:
>
> (a) vary the agreed design or specification of work or materials or their quality or quantity from that described in the Building Contract;
>
> (b) subject to any greater limit of expenditure stated in the Appendix, issue any instruction or notice under the Building Contract or any Client Contract which

73. The contract administrator may be given actual authority to vary the contract or waive the need for compliance, in which case the lack of ostensible authority is irrelevant.
74. See Chapter 9, section B.
75. See Chapter 9, section C.
76. See Chapter 9, section D.
77. See Chapter 9, section F.
78. Issued in 2008.
79. The clause contains an exception at 11.2 to allow the consultant to instruct variations without the client's consent in the event of an emergency.

> either delays completion of the Project or increases the cost of the Project (per item or in the aggregate). . . '

8.91 This provision effectively requires a contract administrator, acting under this form of appointment, to obtain the employer's permission for all variations instructed. If the contract administrator does not get the employer's agreement before instructing a variation, then it will have acted beyond the scope of its actual authority. The contract administrator will have bound the employer in respect of the change even though it did not have permission, and will therefore be in breach of its appointment.

8.92 The contractor will not typically have notice of limitations on the contract administrator's authority to agree changes, which is why the contractor will normally be able to rely on the contract administrator's ostensible authority (as reflected by its powers under the construction contract). If the contractor is on notice that, firstly, the contract administrator needs to get the employer's permission, and secondly, that it does not have that permission, then such ostensible authority will not exist. However, in practice, this is unlikely to be the case. Even if the contractor is aware of limitations on the contract administrator's authority under the terms of the appointment, the contractor will be entitled to assume that permission has been obtained, subject to being put on notice to the contrary, when it receives the variation instruction.

SECTION D: PRIOR APPROVAL AND SUBSEQUENT SANCTION

8.93 Contracts can require that instructions must be issued before additional work is undertaken. Where the employer's prior approval is specifically required, this will often be treated by the courts as mandatory.

8.94 The case of *Astilleros Canarios SA* v. *Cape Hatteras Shipping Co Inc (The Cape Hatteras)*[80] related to ship repairs undertaken at a shipyard in Las Palmas in the Canary Islands. The ship repair contract required that all additional work which increased the costs beyond $3,000 would require the employer's 'prior written approval'. The court considered that such prior approval was a condition precedent to payment.[81] Equally, in the case *Lamprell* v. *The Guardians of the Poor of the Billericay Union, in the County of Essex*,[82] the architect's letters and certificates, sent after the work was undertaken, were not instructions under the contract since prior approval was needed. Subsequent approval was inadequate. The judge stated that a '. . . subsequent written approval, even if the documents in evidence amount to that, is a very different thing from a previous order to the builder'.[83]

8.95 Contracts may provide that written instructions can be given after the event. For example, the JCT Standard Form Contract 2011 provides that the contract administrator '. . . may sanction in writing any Variation made by the Contractor otherwise than pursuant to an

80. [1982] 1 Lloyd's Rep 518, QBD (Comm).
81. *Ibid.* at 523–524.
82. (1849) 154 ER 850.
83. *Ibid.* at 859.

instruction'. Clause 5.2.1 provides that the valuation of variations includes instructed variations as well as those 'subsequently sanctioned by [the contract administrator] in writing'. Therefore, under this form of contract, the contract administrator can subsequently give written approval in respect of a change implemented by a contractor, such that it will be valued as a normal pre-instructed variation. If such a provision did not exist, then the contract administrator may have no authority to subsequently approve variations.[84]

8.96 A subsequent written confirmation may amount to a concession, permitting a contractor's departure from the contract scope.[85] The employer may not have approved the contractor's change and, indeed, may not want it, but is prepared to retrospectively consent to it. Indeed, the contractor may have departed from scope for reasons that were its own responsibility.

8.97 In such circumstances the employer will not want to end up paying for the change. Consenting to the nonconformant work as a concession, rather than instructing it as a variation, will ensure that the employer avoids having to pay for it. The danger with clauses that allow for subsequent written sanction is that written approval intended as a concession may later be treated as a formal subsequent variation instruction that entitles the contractor to additional payment.

8.98 Clauses which provide for the subsequent written confirmation of oral variation instructions may allow a contractor to argue that written instructions are not a condition precedent to payment. Such a provision may be interpreted as envisaging that the contractor should comply with oral variation instructions, with subsequent written confirmation as a later administrative step.[86]

8.99 A contract may provide that the contractor may write to the employer, or the contract administrator, to confirm oral instructions. *HL Smith Construction* v. *WS Harvey (Decorators) plc*[87] concerned such a contract. It involved an appeal by HL Smith, the management contractor under a JCT Management Contract, in relation to an arbitrator's award in favour of WS Harvey, the decorating works contractor. The following passage from the judgment summarises the relevant provisions of the contract:

> 'The relevant clause of the Works contract was clause 3.5 which provides:
>
> > "If the Management Contractor purports to issue any Instruction or Direction otherwise than in writing it may be confirmed in writing by the Management Contractor to the Works Contractor or by the Works Contractor to the Management Contractor within 7 days of purported issue. If not so confirmed it shall be of no effect."

84. See section C of this chapter. The contract administrator has authority to instruct variations only if the contract procedure is followed as it has no implied authority to vary in any other manner. The employer would have to give the contract administrator actual authority to agree variations in a different manner.

85. As to concessions generally, see Chapter 9, section B. See also *supra*, paras. 8.36–8.51 and the discussion concerning concessions compared to variation instructions in the context of *Tharsis Sulphur and Copper Co* v. *McElroy* (1878) 3 App Cas 1040.

86. See *Ministry of Defence* v. *Scott Wilson Kirkpatrick & Partners and Dean & Dyball Construction Ltd* [2000] BLR 20 contract administrator, discussed *supra*, at 8.27.

87. Unreported, QBD, 16 January 2007.

> . . . the general Preliminaries. . . provided that:
>
> "All instructions, drawings, specifications, and approvals and all other information to be provided to the Works Contractor will be issued formally in writing by the Management Contractor. . .
>
> The Works Contractor shall not be entitled to be paid in respect of any work, materials, goods, costs or expenses without such written instruction . . .".'

8.100 The decorating contractor had been given oral instructions. Perhaps surprisingly, the arbitrator found that a 'rigid interpretation' should not be placed on the contractual requirement for written confirmation within seven days. He found that failure to give the notice did not preclude payment. The arbitrator gave no explanation as to precisely why this should be the case, even though it contradicted the clear wording of the contract. HHJ John Lloyd disagreed with this approach. The contract was quite clear and it was essential that written confirmation be given. The judge stated:[88]

> 'The arbitrator gave no reason for construing the words in this way. I regret that I see no alternative but to say that in my view he was wrong. The words of the clause are quite clear, confirmation in writing is required by the contract. If there is no such confirmation the instructions will be of no effect and the Contractor shall not be entitled to be paid.'

8.101 The judge, having established this general principle that written confirmation was essential, then went on to consider whether the decorating contractor had indeed issued compliant notices. It had submitted requests for information which the judge considered adequate. The court pointed out that the contractual provisions relating to confirmation of verbal instructions did not specify the form of document required. The judge emphasised that it was essential, however, that written confirmation of some description be issued within the seven days specified in the contract in order for the contractor to establish an entitlement to be paid.

SECTION E: CONTRACT MECHANISMS PROVIDING FOR THE AGREEMENT OF VARIATIONS

8.102 Changes to the work are often instructed by the employer rather than being agreed in advance with the contractor. There are two aspects to a variation that the parties may seek to agree in advance:

- The precise nature of the works to be undertaken. This will be particularly relevant in respect of design and build contracts, where the employer may instruct changes to its requirements, expressed as an alteration of the performance criteria that the works need to achieve. The contractor will be left to determine how the design will be changed to meet the revised criteria. The employer's instruction will therefore not identify the exact nature and extent of the changes to the works.
- The contractor's entitlement to money and time arising as a result of the variation.

88. *Ibid.* at 6.

8.103 A variation can be instructed and acted upon without advance agreement of these details. However, agreeing them gives both parties more certainty. In particular, the employer will often want certainty as to the exact nature of the change that will be implemented, which is why design and build contracts normally adopt procedures for agreeing such details in advance.

8.104 Contracts will often incorporate procedures to allow the parties to agree such details and entitlements in advance of the work being undertaken. Such procedures should always exist alongside the traditional instruction mechanism, allowing the employer to order change in the absence of agreement.

8.105 The contract mechanism that allows an employer unilaterally to order change is essential to give the employer the power to insist on the variations it requires. In comparison, it could be said that contract procedures that allow the parties to agree changes are unnecessary since the parties could, in any event, agree to vary the scope.[89] However, such procedures ensure that the contract administrator has authority to agree changes to the scope as the agent of the employer which otherwise it may not have. These procedures also provide a useful framework to regulate the process of agreeing change. They provide a structure for proposal and counter-proposal and may lay down guidelines for sharing the cost savings gained, which will encourage the process.

8.106 Procedures for the agreement of change come in many forms. The clause may provide for the contractor to put forward proposed value engineering improvements.[90] Other clauses allow the employer to put a proposition to the contractor concerning a possible change, asking for its proposals as to the details of the work involved and the cost.[91] The employer can therefore weigh up the costs and benefits of the change before deciding whether it wishes to proceed.

8.107 As discussed previously in this chapter, a contractor needs to ensure that the employer has formally instructed a variation, in order to establish that permission has been given for the change and that the contractual entitlements for money and time are triggered.[92] This applies to the type of instruction procedure discussed in this chapter. The contractor must ensure that the employer gives an instruction in the form provided for in the contract. As with consensual variations that are agreed outside a formal procedure, it will often be insufficient that the employer knows that changed work is being contemplated. It is important that the employer appreciates that the change will have financial implications such that payment for the change will be additional to the contract sum .[93]

8.108 The instruction from the employer may need to identify the agreed amount to be paid for the change in order for it to be valid. In *The Thames Iron Works and Ship Building Company*

89. See Chapter 9, section B, which concerns consensual variations whereby the parties agree changes to the scope, and which discusses in further detail why the agreement of a variation may be preferable to a unilateral order.
90. See, for example, FIDIC Silver Book 1999, Clause 13.2.
91. See, for example, *ibid.*, Clause 13.3.
92. See section A.
93. See *Lovelock* v. *King* (1831) 174 ER 21. Discussed *infra*, para. 9.66.

v. *The Royal Mail Steam-Packet Company*[94] the contract variations clause required that no alterations should be made without a letter, signed by the secretary of the employer company, confirming the change and specifying the precise amount that the employer would pay for such changes. Whilst the employer had issued orders to the contractor in respect of the works, the orders had not been issued by the secretary, and had not specified any agreed payment.

8.109 Ultimately, the formalities that need to be followed will depend on the stipulations in the contract as to the form of instruction. For example, the contract may provide that the details of the revised scope must be agreed as part of the variation instruction, but with the money and time entitlements left to be resolved at a later stage.

8.110 Alternatively, a contract may include a sophisticated mechanism for the price of a variation to be agreed or determined. This is illustrated by the Technology and Construction Court case of *S&W Process Engineering* v. *Cauldron Foods Ltd*.[95] The claimant contractor supplied and installed plant and machinery for the employer's food-processing factory in Bristol.

8.111 The contract included a mechanism for instructing and agreeing changes which involved, firstly, a discussion of the change at weekly project review meetings, and verbal agreement on cost, which was then minuted. Secondly, a formal authorisation certificate would be approved by the employer, confirming the agreement minuted at the meeting. Thirdly, the agreement would be recorded by the employer in monthly interim statements of account. Part way through the project the parties agreed to dispense with the second stage and so the procedure they operated was based on a minuted agreement in respect of the change and an interim statement of account.

8.112 The reported judgment relates to a preliminary issues hearing and a number of matters discussed, including comments by HHJ Peter Coulson QC on the variations mechanism, in *obiter*. The court emphasised that it would be necessary for the contractor to establish that it had complied with the procedure.[96] The court went on to consider whether a claim could be brought where the change in the scope had been authorised by the employer as a matter of principle, but there had been no agreement on price in advance of the work being undertaken:[97]

> 'In those circumstances, it would depend on the facts as to whether a claim was allowable under the Contract, given that a situation where work was done before the expenditure was known or agreed would, *prima facie*, comprise a breach by [the contractor] of the procedure identified above. However. . . I could see that there may be circumstances in which such a claim might be sustained, although, that would depend each time on the facts and the potential arguments put forward by [the contractor].'

8.113 In this type of situation it may be necessary to consider whether the employer had approved the change and waived the need to ensure advance agreement on the price.[98]

94. (1862) 143 ER 142.
95. [2005] EWHC 153 (TCC).
96. *Ibid.* at para. 45.
97. *Ibid.* at para 54.
98. See Chapter 9, section D.

CHAPTER NINE

CHANGE IN THE ABSENCE OF A VARIATION INSTRUCTION

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SECTION A: INTRODUCTION

9.1 Any change to the contract scope needs to be made with the employer's approval.[1] A variation instruction issued by the employer under the contract will, of course, constitute approval. Such an instruction will normally also give the contractor the right to payment and extra time to undertake the changed work. Such variation instructions, and the formal processes these can involve, are discussed in Chapter 8.

9.2 The employer may approve a change to the works without instructing a variation under the contract mechanism. This chapter considers the other ways in which a change can be approved by the employer, and the contractor's entitlement to money and time, in the absence of an instruction.

9.3 This introductory section considers some of the common issues relating to the different bases on which approval may be granted and/or an entitlement to money and time may arise. The remaining sections of this chapter consider each of the different means of obtaining approval and/ or entitlements, and are summarised below:

- Section B: concessions to allow the contractor to depart from the defined works. Such informal consent is not given under the contract mechanism and therefore does not trigger the entitlements that would arise were a formal instruction to be issued. A concession involves a waiver of the requirement that the contractor comply strictly

1. See Chapter 2, which not only discusses the need for employer approval, but also considers the circumstances in which this can lead to apparent unfairness for the contractor. For example, where the contractor can proceed with the project only by implementing a change, even though it has not been approved. These issues are also relevant to this chapter, because the contractor may seek to rely upon an approval outside the normal instruction mechanism to justify, and seek recompense for, the change to the works.

with the scope. It is permissive, in that it allows the contractor to depart from the scope but does not require it to. Such approval can be given prospectively or retrospectively.

- Section C: consensual variation. The parties can agree to change the terms of their contract at any time and this may involve an agreement to change the scope of works that are required to be undertaken. The contractor's entitlement to money and time will derive from the terms of the parties' ad hoc agreement.
- Section D: waiver of compliance with the requirements of the contract mechanism. This will typically mean waiver of the need for the contractor to establish that a formal written instruction was provided, as a condition precedent to payment. In addition to waiver this section also looks at the closely related categories of estoppel and implied promise to pay.
- Section E: the obligation to approve and instruct a change. An employer may be under an obligation to approve a change to the works. It may agree to the work in question being undertaken but refuse to issue the instruction which is a condition precedent to payment. A tribunal may have the power to open up the decision of a contract administrator not to issue a variation instruction if that decision was reached in the mistaken belief that the works in question were not a change.
- Section F: collateral contracts. The parties may enter into an entirely separate agreement that provides for the undertaking of the extra works.
- Section G: claims in restitution. Where the contractor has undertaken work at the employer's request, outside of any contract, then it may be entitled to payment on the basis of unjust enrichment.
- Section H: other contractual provisions compensating for changes to the works. If the contractor has to change the way it undertakes the works because of matters that are the employer's risk, then it may be entitled to compensation under other contract provisions.

9.4 There are two other instances in which the absence of an instruction will not prejudice the contractor despite its departure from the contract scope:

- The parties may settle claims for additional payment for changes despite no instruction having been issued. See Chapter 10, section F, where settlement is considered.
- The contractor may depart from the scope without approval, but the employer has no effective remedy in relation to the breach. The contractor's departure may subsequently lead to a formal dispute in which the employer asserts that the fact that the work is nonconforming entitles it to refuse a completion certificate, and to insist rectification work so as to ensure that the contract design is implemented. A tribunal may refuse to grant this remedy to the employer if the departure from the contract scope is minor. See Chapter 4.

Reasons why a change is undertaken without a formal variation instruction

9.5 There are various reasons why a change may be undertaken without a formal variation instruction being issued.

9.6 The employer may have refused the contractor's request for approval in its entirety, or the employer may have consented to the change without instructing a formal variation.[2]

9.7 If a variation is instructed under the contract procedure, the contractor will be entitled to be paid in accordance with the valuation rules and may be entitled to an extended completion date in accordance with the extension of time machinery. However, the entitlements accruing under those provisions may not be appropriate, and in such a case the employer may give its approval as a concession.

9.8 The parties may negotiate an ad hoc variation of the contract in order to change the scope of works. This approach may be favoured on the ground that such an agreement will allow them to change a number of contractual obligations, in addition to changing the scope and price. For example, there may be an agreed re-programming of the works, the employer may agree to provide additional resources, and may allow the contractor to undertake the works in a different manner and sequence.

9.9 By agreeing the impact of a change (in terms of money and time) the parties avoid the uncertainty of having such entitlements determined via the contractual procedures which apply to unilaterally instructed variations. Indeed, the entitlements that the contractor would otherwise get under the contract procedure may be thought to be inappropriate. For example, the change in question may be necessary only because of an event which is the contractor's risk under the contract. Or, the change may be requested by the contractor to help it overcome a problem which is its own responsibility to resolve.[3] Agreeing the contractor's money and time entitlement in respect of a variation will be particularly appropriate under a design and build contract, where the nature and impact of an instructed variation can be particularly uncertain.[4]

9.10 The employer may refuse to issue an instruction because it considers that the works under discussion do not constitute a variation and form part of the scope that the contractor is required to undertake to comply with its contractual obligations.[5] This can lead to a stand-off between the parties because, if the contractor thinks that the work constitutes a change, it will be reluctant to undertake it unless a formal instruction is issued.[6] This will be particularly problematic if the change to the works needs to be undertaken in order for the project to proceed.[7] The factual circumstances in a number of the cases considered in this chapter involve this type of situation.

9.11 The courts will often want to avoid the injustice of a situation where the contractor is not paid for work requested by the employer simply because no formal instruction was issued. This is especially the case where the contractor proceeds with the work, in the absence of an

2. Such consent is a concession to undertake the change: see section B of this chapter. Lack of approval will normally mean that the change represents a breach, the implications of which are discussed in Chapter 4.
3. See Chapter 7, section C.
4. See *supra*, paras. 3.218–3.223.
5. See Chapter 6, section B.
6. See Chapter 2, section C.
7. The employer may permit the contractor to make the change as a concession but this may be insufficient for the contractor, who wants to ensure that it is paid for the change. See Chapter 2, section C.

instruction, because otherwise the project will reach an impasse.[8] The courts have adopted various approaches to analysing this type of situation. In certain cases they have found that the employer has impliedly agreed to pay if it is subsequently established that the extra work was indeed a change, rather than being within the contract scope.[9] In another case, the courts found that the decision as to whether a variation instruction should be issued amounted to a determination by the contract administrator which a tribunal could subsequently open up and revise.[10]

9.12 In the US, the theory of 'constructive change' has been developed to deal with the same problem, whereby the required written instruction has not been issued under the contract, but the contractor is under pressure to implement the change anyway, because otherwise the project cannot proceed. The theory allows the US courts to find that an implied or constructive order for change had been given. The same approach has not been adopted in the English courts, albeit the same issue lies at the heart of many of the cases considered in this chapter.[11]

9.13 The lack of an instruction will often result in the contractor not being paid for additional work. The employer may simply refuse to instruct the change to the scope and there may be no basis for the implication of an agreement or pay, or a waiver of the need to comply with the contract procedures. *Amec Mining Ltd* v. *The Scottish Coal Company Ltd*[12] involved an open-cast mining project. In order for the contractor to start the main part of the works, a ground layer of peat first had to be removed. The peat was supposed to have been excavated by another contractor employed by Scottish Coal, but the work was not undertaken. Even though no formal instruction was given, the contractor removed the peat so that it could commence the mine work. The Court of Session in Scotland found that the contractor had no entitlement to be paid. The employer had allowed it to remove the peat, but a variation

8. There are means by which such an impasse can be avoided, for example by the parties reaching agreement that the works continue and the question whether the work is a change is resolved at a later stage, or that an expedited disputes process is adopted. See Chapter 2, sections C and D.

9. See *Molloy* v. *Liebe* (1910) 102 LT 616, PC, discussed *infra*, at paras. 9.126–9.133.

10. See *Brodie* v. *Corporation of Cardiff* [1919] AC 337, discussed in section E of this chapter.

11. In the US, the concept of constructive change orders initially grew out of a procedural limitation on how claims under government contracts could be brought. Until 1978, when the Contract Disputes Act 1978 was passed, the boards of contract appeals could only hear claims arising under contracts, rather than claims for breach. (See also the US cardinal changes theory, *supra*, at para. 5.32.) Contractors who wanted their claims to be heard by the boards would model them as constructive changes rather than as breaches of contract. The concept of a constructive change order was that the employer (or its agent) would force a contractor to undertake work that was different from the contract scope, but not issue the required written order. This may have occurred for various reasons; for example, because the site conditions changed, or the contractor was required to rebuild improperly rejected work, or because the employer insisted on a performance standard that was not in keeping with the specification, or indeed because of many of the types of complaint discussed above. The courts took the approach that the contractor would therefore be effectively, or constructively, ordered to make the change to the works or how they were undertaken. As summarised in *Len Co & Associates* v. *US* (1967) US 385 F (2d) 438, at para. 11: '. . . [I]f a contracting officer compels the contractor to perform work not required under the terms of the contract, his order to perform, albeit oral, constitutes an authorized but unilateral change in the work called for by the contract and entitles the contractor to an equitable adjustment in accordance with the "Changes" provision. The court has considered it to be idle for the contractor to demand a written order from the contracting officer for an extra when the contracting officer was insisting that the work required was not additional and, therefore, has often dispensed, on these occasions, with the formality of issuing a written change order under the standard clause.'

12. [2003] ScotCS 223.

instruction was a condition precedent to payment, and something that the employer had specifically refused to issue.[13]

9.14 The employer may fail to instruct the change under the contract provisions because of a lack of time to complete the paperwork, or simply because it is not aware of the procedural requirements. The employer may verbally request that the contractor change the works. Whilst the contract may stipulate that a written instruction is a condition precedent to payment, the employer's actions may amount to a waiver of the need for such an instruction.[14] Or the employer may have agreed to vary the terms of the contract itself (as a consensual variation), even though it has not effectively instructed a variation under the contract mechanism.[15] A communication that is not in accordance with the contract procedure may nonetheless amount to permission for the contractor to depart from the contract scope.[16]

9.15 The contract may incorporate limitations on the nature and scope of the changes that can be instructed. For example, there may be a cap on the value of variations that may be instructed. In those situations, the instruction may be invalid because the employer (or its contract administrator) does not have the power or the authority to issue it. If the validity of the instruction is questioned by the contractor at the time, then the work undertaken pursuant to it may not have been effectively instructed.[17]

Role of the contract administrator in authorising change

9.16 Changes to the scope are normally instigated by the contract administrator issuing variation instructions. The contract administrator acts as the agent of the employer in undertaking this role, and the contractual variation provisions ensure that it has implied authority to do so. The contract administrator does not have implied authority to vary the contract unless it exercises its power in accordance with the contract procedure.[18] Nor does it have implied authority to waive the contractor's obligation to strictly comply with the contract provisions. Therefore, unless the employer has given the contract administrator actual authority to vary the contract or the right to waive the contractor's obligation to comply with its terms, then it will not be empowered to do so. Many of the later sections of this chapter concern changes the scope as a result of waiver or variation of the contract. Such changes will therefore need to be agreed directly with the employer, or else the contractor will need to ensure that the contract administrator has express authority to agree to this sort of arrangement.[19]

13. See *supra*, para. 2.19, which quotes a key passage from the judgment of Lord Carloway, explaining the rationale of the court in this case.

14. See section D of this chapter.

15. See section C of this chapter.

16. See section B of this chapter.

17. See *Costain Civil Engineering Ltd and Tarmac Construction Ltd* v. *Zanen Dredging and Contracting Company Ltd* (1996) 85 BLR 77, discussed further in section G of this chapter. The main contractor sought to order work which was of a type that it was not empowered to instruct under the contract. The subcontractor had raised the point at the time with the main contractor and the court found that it fell to be valued on a *quantum meruit*. See also Chapter 5, section A, where the question of limitations on the work that the employer may instruct are discussed. See in particular paras. 5.35–5.43, which discuss the right of the contractor to refuse to undertake work in those circumstances.

18. A change to the scope of works that the contractor is required to provide amounts to a variation of the contract.

19. As regards the contract administrator's role as agent and authority, see Chapter 8, section C.

9.17 In addition, if the employer is approving change it will be necessary to ensure that the individual concerned has the relevant power and authorisation to bind the employer organisation.[20]

Payment for additional work

9.18 For many of the types of approval for changed works reviewed in this chapter, the contractor's right to payment will not be determined under the usual contractual variation valuation rules.

9.19 Section B considers concessions granted by the employer whereby it permits rather than instructs the contractor to change the works. As such, the contractor has no right to payment for the change.

9.20 Section D deals with situations whereby the employer has waived the requirement for an instruction in the form demanded by the contractual variations provisions. The valuation will therefore be in accordance with the contract rules for pricing variations, in the normal way. Section E deals with circumstances where the contract administrator was obliged to issue a contract variation instruction and so the pricing will be in accordance with the contract provisions, in the normal way. Chapter 11 reviews contractual valuation provisions for variations.

9.21 Section C (consensual variation), section F (collateral contract) and section G (restitution) all deal with situations where the pricing of the additional work is not in accordance with the contract provisions. Where the work scope is changed via an ad hoc consensual variation or is undertaken under a collateral contract, the price for the change may be agreed in advance. Each of these sections comment on the assessment of the sum due to the contractor for the extra work.

Limitations in relation to additional work ordered

9.22 Chapter 5 considers the employer's power to vary, and the limitations that may be placed on this power under the contract. In particular, there may be express limits on the characteristics of the additional work which may be instructed, such as the type of work, the volume of extra work and when it may be instructed. These limitations apply to work instructed under the variations provisions, and as such are not applicable to many of the other ways in which extra work can be approved. For example, the contract may limit the volume of variations that may be ordered, but such a cap will not apply to consensual variations that are agreed outside the normal contract mechanism.

20. One may need to consider whether the person representing the employer has the authority to act on behalf of the organisation, or is acting *ultra vires*. See *Royal British Bank* v. *Turquand* [1856] 6 El & Bl 326; and *Freeman & Lockyer* v. *Buckhurst Park Properties (Mangal) Ltd* [1964] 2 QB 480.

SECTION B: CONCESSION

9.23 A variation instruction will *require* the contractor to implement a change to the works. The employer may, alternatively, want to *allow* the contractor to implement a change. This may be appropriate because the variation is being instructed for the contractor's benefit – for example if the contractor wants to use a different type of material in the works because it is having difficulty procuring the material specified. The employer may be prepared to let the contractor make this change. Such a permission that allows, but does not insist upon and therefore instruct the change, is typically referred to as a concession.

9.24 The employer may agree to the concession when the change to the works is undertaken. Alternatively, the contractor may make the change without having obtained any form of agreement from the employer. But the employer may, after the event, communicate its permission to the contractor that the change is acceptable and the nonconforming work may remain.[21]

9.25 If the employer instructs a variation under the contract, the contractor will be entitled to be paid in accordance with the contract valuation provisions.[22] However, where the change is approved as a concession, the employer is doing no more than permitting non-compliant work to be built, or permitting non-compliant work to remain. Since the change is not instructed under the contract, the contractor is not entitled to be paid for it as a variation in accordance with the usual valuation rules.

9.26 Whether the employer's communication is a concession may be controversial for a number of reasons:

- It may be that the contractor wants to establish an entitlement to be paid for the change as a variation, whilst the employer's position is that the communication allowing the change is only a concession.
- The employer may insist that the contractor has to build in accordance with the original scope and that no permission to depart from that scope has been given. The employer therefore denies that any approval, be it a variation instruction or a concession, has been given.
- The employer may wish to withdraw the concession.
- A contract administrator is not normally authorised to waive a requirement of the contract, and therefore it cannot grant such a concession.

9.27 These issues are reviewed below.

21. See also Chapter 4, which explores the implications for a contractor where it departs from the scope without permission. It looks at circumstances where the contractor never receives permission for the change, and the employer's remedies in such circumstances. For example, the contractor may be denied a completion certificate by the employer, but the courts may take the view that the nature of the nonconforming work is so minor that the breach should be waived.

22. Equally, the contractor will not be entitled to other benefits accruing under the contract in relation to variations, such as additional time to complete the works.

Concession or variation instruction

9.28 An employer will normally seek to claim that it has only allowed the change as a concession where the alteration is designed to assist the contractor. It will seek to resist the direction being treated as a variation instruction because this may entitle the contractor to additional money.

9.29 In *Kirk & Kirk* v. *Croydon Corporation*[23] the contractor was employed to build a school. The specification required multi-coloured bricks to be used on external face of the building but the contractor was unable to obtain these from the supplier in time for starting this part of the works. The architect therefore allowed the contractor to build only the inner brick skin of the wall. The contractor built the facing skin of multi-coloured bricks at a later stage, once they were delivered. This change to the methodology meant that the contractor incurred additional scaffolding costs and delay. The contractor sought to claim these costs from the employer. The court rejected the claim on the basis that the architect approved the change in order to assist the contractor rather than having instructed a variation which the employer was liable to pay for.

9.30 If the employer has clearly issued a variation instruction under the contract, then in accordance with the strict terms of the contract the contractor may be due additional payment, even though this would seem an unfair outcome.[24]

9.31 It may be difficult to distinguish between the two. It will often be a matter of analysing whether the communication directs the contractor to undertake extra work, or whether the employer is simply acknowledging that the extra work has been undertaken, or allowing it to be undertaken. The distinction is discussed further in Chapter 8, section B.

9.32 Since a concession simply gives permission, the contractor is not obliged to implement the change that the employer has sanctioned.

9.33 Whilst a contractor is entitled to refuse to undertake work that has been permitted in this way, the position can become contentious if the work has to be undertaken for the project to proceed. In these circumstances, the contractor's refusal to undertake the work in the absence of a formal instruction can lead to an impasse. The employer may consider that only a concession need be given because the event which led to the need for change is the contractor's risk. Equally, the contractor may consider that the need for the change is the employer's risk, and therefore wants a variation instruction. Where the contractual and factual issues are complex it may be difficult for the parties to make a definitive assessment of their respective legal responsibilities.[25]

23. [1956] JPL 585.

24. See *Simplex Concrete Piles* v. *The Mayor, Alderman and Councillors of the Metropolitan Borough of St Pancras* (1958) 14 BLR 80, discussed in detail in Chapter 6, section B. Contracts will often expressly state that the contractor is not entitled to be paid in circumstances where the change is required because of a matter which is its own risk under the contract.

25. See Chapter 2, section B.

Establishing whether a concession has been given

9.34 A contractor's departure from the contract scope will be a breach unless it can establish that the employer has given it permission to do so. In the absence of a formal instruction, the contractor may seek to establish that the employer has indicated its consent to the change, by relying upon a different form of communication, such as a certificate.

9.35 The employer, or its contract administrator, may issue a certificate during the course, or at the end, of the project which has the effect of approving certain works. Therefore, despite the fact that the works covered by the certificate include previously unapproved changes, the certificate may be treated as indicating acceptance of those changes, such that the employer cannot subsequently complain that the work was nonconformant. It is rarely the case that interim certificates issued during the course of the work will be determinative on whether the work is compliant with the scope, although final completion certificates will often be.[26]

9.36 The employer may waive its right to insist on strict performance of the scope, or may be found to have acted in such a way that it will be estopped from subsequently rejecting the nonconforming work.[27] An interim certificate, even if it is not finally determinative as to the correctness of the work, may amount to a waiver by the employer of its right to subsequently insist on strict compliance with the defined scope.

9.37 In order to establish waiver or estoppel, the contractor will have to show that the employer has made a representation, by words or conduct, signifying acceptance of the work, and that the contractor has relied upon the representation to its detriment. If the employer indicates that nonconforming work may remain in place, then the contractor's subsequent continued progress on that part of the project may well represent detriment. This is because removing the offending work at a later date is likely to be much more expensive than remedying it at the time.

9.38 For example, in *Acme Investments Ltd* v. *York Structural Steel Ltd*[28] the contractor was building a roof structure. The employer agreed to allow a change in the structure's load-bearing requirements. The contractor, in reliance, altered the structure and the employer was therefore estopped from later complaining about it. The employer's communication or conduct that is relied upon by the contractor must be clear and unambiguous.

9.39 In *Ministry of Defence* v. *Scott Wilson Kirkpatrick & Partners and Dean & Dyball Construction Ltd*[29] the contractor, in constructing a new roof, used shorter nails than specified. After the works had been carried out, high winds blew a large section of the new roof off the building. The contractor alleged that the employer's contract administrator had agreed to the change. The Court of Appeal found that the conduct of the contract administrator was not sufficiently clear to support waiver or estoppel. The evidence was that the discussions about

26. See Chapter 10, section B, in relation to the binding nature of certificates.
27. The principles of waiver and estoppel are reviewed further at section D of this chapter. See also Chapter 4, section D, concerning the contractor's right to be awarded a completion certificate in spite of nonconformant works.
28. (1974) 9 NBR 699 .
29. [2000] BLR 20.

materials meant that the parties 'slid' into a situation where use of the shorter nails was considered appropriate, but this was 'not the "stuff" of which estoppel was made'.[30]

9.40 Under a contract for the sale of moveable goods, establishing that the buyer has accepted them is relatively straightforward. This will depend on whether the buyer has received the goods or whether it has rejected them by sending them back. Under a construction contract, where the works become attached the employer's land, assessing acceptance is much more difficult. The employer's use and occupation of the works is not sufficient to indicate acceptance, or sufficient to amount to a waiver of its right to reject works that are not in accordance with the contract specification.[31] However, circumstances may be such that the employer can be treated as having accepted nonconforming or incomplete works, for example when the nature of the work is such that it could have been rejected but the employer acted to accept instead.[32] Acceptance of nonconforming works will not necessarily mean that the employer is agreeing to pay for them. But, importantly for the contractor, acceptance of work by the employer, involving waiver of its right to reject, will mean that the employer cannot insist that nonconforming work is changed at a later stage.

Withdrawal of a concession

9.41 Even though a concession does not involve mutual consideration, the employer cannot subsequently resile from the promise where the contractor has relied upon it to its detriment.[33] However, an employer may allow the contractor to build to a changed standard in relation to one part of the project, but subsequently insist that the original contract standard is revived and achieved on a later part. Following such notice by the employer that it wants the contract standard to be reverted to, the contractor must comply. The concession will be treated as having been withdrawn. The employer is perfectly entitled to insist that the contract scope is complied with for all future work.

9.42 In *Ata ul Haq* v. *City Council of Nairobi*[34] the contract administrator accepted substandard hard core that was used for the construction of foundations for a number of housing blocks. The contract administrator had accepted this change from the specification in respect of the first 11 of 17 blocks that were built. There was then a change of contract administrator, and the new one insisted that the hard core for the remaining six blocks met the contract requirements. The Privy Council held that the employer was estopped from complaining about the first 11 blocks which had already been constructed, but could object to the use of substandard hard core for the remaining six, once the contract administrator had notified the contractor that it should revert to the required contract standard.

30. *Ibid.* at 30, para. 23.

31. *Munro* v. *Butt* (1858) 8 E & B 738 and *Sumpter* v. *Hedges* [1898] 1 QB 673.

32. See *Tannenbaum Meadows* v. *Wright-Winston* (1965) 49 DLR (2d) 386, where the contractor was required to build a sewer main and a pumping station. It abandoned the project, having built only the sewer main. The employer built the pumping station and connected it to the sewer main. The employer was found to have taken advantage of the work initially undertaken by the contractor in building the main and had therefore waived the contractor's breach, being the abandonment of the project.

33. This may be compared with a consensual variation, which is enforceable as an agreement under which both parties provide consideration.

34. [1959] PC Appeal No. 48; (1962) 28 BLR 76.

The contract administrator's authority to permit a departure from the scope

9.43 The contract administrator acts as the agent of the employer in varying the contract scope. As with any agency situation, the contractor needs to ensure that the agent has authority to bind its principal when varying agreements.[35]

9.44 The contract administrator typically has authority to issue variation instructions because this is provided for under the contract. However, the contract administrator has no implied authority to vary the contract on behalf of the employer and therefore cannot agree, without permission, changes to the scope of the works. Nor does the contract administrator have authority to waive the contractor's obligation to comply strictly with its obligations under the contract.

9.45 A concession amounts to a waiver of the requirement for a contractor to comply with its contractual obligations. As such, the contract administrator has no implied authority to agree to a concession on the employer's behalf.

9.46 The employer may give the contract administrator actual authority to waive compliance with the contract. Otherwise, the contractor needs to get the employer's agreement to the concession. Alternatively, the employer may subsequently ratify the contract administrator's waiver.

SECTION C: CONSENSUAL VARIATION

9.47 This section considers ad hoc variations that the parties may agree to the contract scope of work. In such circumstances the parties will not use the formal contract mechanism which is generally used for instructing change.

9.48 It is much more common for the scope of works to be changed by the employer unilaterally ordering a change using the contract mechanism. However, there are many reasons why agreeing a variation may be preferable to triggering the unilateral mechanism under the contract. It may be of particular attraction when a very significant change is contemplated that has far-reaching ramifications which need to be carefully agreed and regulated.

9.49 A negotiated variation to the contract will allow the parties to ensure that their respective obligations are changed in a more sophisticated way than would be the case if the variation clause were operated.

9.50 For example, the planned variation may mean that the programme needs to be changed and the contractor needs additional time to complete the works. The contractor may be given more time via the contractual extension of time mechanism if the variation is instructed. But a negotiated agreement can allow an agreed reorganisation and re-sequencing of the works, which may not be taken into account in a more straightforward extension of time assessment.

35. See Chapter 8, section C, for a detailed review of the contract administrator's role as agent and the nature and extent of its authority to vary or waive compliance with contracts.

As part of the agreement, the employer may give more than just additional payment for the change. For example, it may agree to make additional resources available, or allow a change to the working hours or build methodology in order to help a proposed re-sequencing.

9.51 A negotiated variation agreement allows the parties to break out of the rigid compensation system governing instructed variations, and provides an avenue to improve project delivery in a more practical and imaginative way.

9.52 Negotiating the terms of a variation will also give the parties more certainty as to their respective entitlements. If the contract administrator unilaterally determines the contractor's entitlement to money and time under the contractual mechanisms for assessing the effects of variations, there will always be some uncertainty – for both the employer and the contractor. This is compounded by the fact that the contract administrator's determination could be opened up and revised at the final account stage, perhaps years later.

9.53 From the employer's perspective, agreeing the impact of a variation may avoid a future claim for delay and disruption costs. The employer may be concerned that instructing a large variation will give the contractor an opportunity to avoid culpability for delays which are already its responsibility. The employer may be of the view that the new variation work should be programmed so that it takes place concurrently with other activities, such that no critical delay is caused. The way in which the critical delay and costs are treated by a contract administrator, or subsequent tribunal, will be uncertain. A negotiated variation to the contract affords the parties an opportunity to agree such re-programming, and therefore avoids the uncertainty of a third-party assessment of the entitlements (and liabilities) that flow from the change.

9.54 Uncertainty as to the contractor's entitlement to money and time is a particular problem under design and build contracts, because of the nature of the risk allocation. This is why express contract mechanisms for pre-agreement are especially common under such contracts.[36]

9.55 It may be the case that the change the employer wants to introduce is of such a type and magnitude that it may be uncertain whether the employer is entitled to instruct it under the variations clause. Chapter 5 considers the limitations on the employer's power to instruct variations, such as restrictions on the volume of variations, and the type of change. Whilst some limits are clear, such as express caps on the value of variations that can be ordered, much of the case law in this area is quite uncertain in its application. It may be a matter of some debate whether or not the proposed variation falls within the parameters of what the employer is entitled to instruct. A negotiated variation sidesteps such problems and uncertainties.

9.56 With large variations, the employer may want to negotiate the price as a one-off item. Not only may pricing via the contract machinery be uncertain, but the employer may be able to negotiate a discount against contract rates for significant additional work. Indeed, the

36. See *supra*, paras. 3.218–3.223.

commercial viability of an additional project phase, as represented by the variation, could be highly dependent on price.

9.57 Contracts sometimes contain clauses that specifically require negotiation of the terms under which variations are undertaken, whereby the parties agree design changes and prices.[37] Some contracts refer to the contractor being entitled to make value engineering proposals. Others may operate such that the employer may request a price for a proposed change. This type of procedure has all the ingredients of a consensual variation process rather than the usual unilateral variation mechanism where the employer orders the change which is then valued in accordance with predetermined rules. However, a contract procedure will enable the contract administrator to agree change which, as discussed below, it would otherwise lack authority to do.

9.58 Whilst a one-off variation to a project may be set down in a formal written agreement which is then executed by the parties, in much the same way as the original contract, such formalities are not essential. As discussed below, there are no specific requirements, such as the need for the variation agreement to be recorded in writing. A contractor may claim that an ad hoc variation to the contract scope has been agreed when a change has been informally ordered, but not instructed in accordance with the formal contract procedure – for example, when a change is requested orally rather than in writing.

9.59 The existence of a variation agreement is dependent on essentially the same factors as apply to the formation of a new contract, i.e. offer and acceptance evidencing consensus, supported by consideration. These requirements are reviewed below.

Mutual agreement

9.60 In order for a contract to be varied, the parties must reach a consensus concerning the changes they want to make to the existing contract.[38]

9.61 The requirement for mutual consent means that one party cannot unilaterally insist that a contract be varied. The reason a unilateral variation can be ordered via the contractual mechanism is that the parties have given consent under the terms of the original contract.[39]

9.62 Whether an agreement has been reached will be judged by the courts using the same form of analysis that is applied when considering whether the parties have entered into a new contract.[40] There must be a communicated offer and acceptance. Consent by both parties must be freely given and the terms of the agreement must be sufficiently clear.

37. Such clauses are discussed further in Chapter 8, section E.

38. A valid contract must be subsisting in order for the parties to be able to agree a variation of it. If the contract has been terminated, then clearly it cannot be varied. The only possible exception arises from the limited judicial support for the proposition that there can be a variation to a contract which is yet to come into existence. See *Brikom Investments Ltd* v. *Carr* [1979] QB 467.

39. See *supra*, para. 1.42.

40. See *Chitty*, para. 22-032 *et seq*.

9.63 The House of Lords case *Woodhouse AC Israel Cocoa SA* v. *Nigerian Produce Marketing Co Ltd*[41] concerned a situation where a consensual variation to a contract could not be established because the parties had not reached agreement. It involved a Nigerian company that had a long-standing agreement to sell cocoa to a London-based association. A variation to the contract was proposed by the sellers by a letter dated 20 September 1967, but the buyer's response was to propose something different. Lord Cross stated:[42]

> 'The truth, as I see it, is that the parties were not "*ad idem*" – the buyers meaning one thing by their request and the respondents another by their acceptance of it. If the letter of 20 September was an offer to make or vary a contract and the letter of 30 September a purported acceptance of the offer the result would be that neither side could say that any contract had come into being.'

9.64 As with the formation of a new contract, the offer and acceptance required to reach agreement does not need to be communicated in writing. As discussed below, the original contract cannot restrict or limit the formalities that need to be adopted in order to vary the agreement.

9.65 In a construction context, the fact that an employer knows a contractor is undertaking different work is not sufficient to show that the employer has agreed to vary the contract. The employer may quite reasonably suppose that the change being undertaken will not cost more, or in any event is covered by the contract sum. It may be the case that the contractor is changing the works because it has encountered problems constructing in accordance with its original design. Just because the employer knows that the contractor is undertaking additional work, and consents to the change, does not mean that the employer is also agreeing to pay more, as would be required to establish an agreed variation to the contract scope.[43]

9.66 The issue of informed consent to a change is illustrated by a number of nineteenth-century cases. In *Lovelock* v. *King*[44] a carpenter working under a fixed sum contract had undertaken certain alterations. The nature of the changed work was such that it did not necessarily increase the price. Therefore, whilst the employer consented to the changes, it was not liable for the extra cost, because it could not have appreciated that the changed work would cost extra. The 1859 case of *Johnson* v. *Weston*[45] involved similar facts. Again, the alterations that the builder made were not of a type that the employer, who was the owner of a house being refurbished, would have expected to cost extra.

9.67 This is not to say that the price for varied works always has to be agreed. As with a new contract, it is not necessary for the parties to agree everything, but there needs to be sufficient certainty of terms. Whilst a price for the change may not be agreed, the parties can be taken to have agreed that a reasonable price will be paid. Determining what a reasonable price is,

41. [1972] AC 741.
42. *Ibid.* at 767. For an example of a case where the court found that a variation had been agreed, see *WJ Alan & Co Ltd* v. *El Nasr Export & Import Co* [1972] 2 QB 189.
43. Compare variations to the contract as discussed in this section to section D of this chapter, which considers situations where the employer waives the requirement that the contractor follows the scope and therefore agrees to such a change but on the basis that no additional payment is made.
44. (1831) 174 ER 21.
45. (1859) 175 ER 910.

in those circumstances, may involve reference to the original contract-pricing information, although contract rates will not automatically apply.[46]

9.68 In addition to payment for extra works, it is necessary to consider the contractor's entitlement to additional time to complete the project. It will have to be determined whether an agreement as to time has been reached as part of the ad hoc variation agreement.[47]

9.69 As with the negotiation of any agreement, parties wishing to vary their contract should, of course, ensure that the agreement is clearly recorded. Issues such as the price for the extra works and the impact on the time ought to be included in a variation agreement. For the reasons discussed below, the agreement should also be signed off by the parties themselves, rather than by the contract administrator.

The contract administrator's authority to agree a consensual contract variation

9.70 The contract administrator acts as the agent of the employer in varying the contract scope. As with any agency situation, the other party to a contract needs to ensure that the agent it is dealing with has authority to bind the principal when varying the agreement.[48]

9.71 Typically, the contract administrator's authority to issue variation instructions is provided for under the contract. As discussed previously in this section, contracts sometimes contain clauses that provide for change proposals to be given by the contractor, often associated with value engineering. Where the contract provides that the contract administrator will manage such changes, and will then negotiate and agree them, the contract administrator is equally given authority. Such contractual arrangements show that the employer is holding the contract administrator out as having authority to agree variations. As a result, the contract administrator will have ostensible authority.

9.72 However, the contract administrator has no implied authority to vary the contract on behalf of the employer, otherwise than as is set out in the contract. The contract administrator therefore has no authority as the employer's agent to agree ad hoc variations to the contract.

9.73 This lack of implied authority is one of the reasons why construction contracts incorporate a mechanism for instructing variations. The employer's chief consultant would otherwise have no authority on a day-to-day basis to alter the scope of works on the employer's behalf.

9.74 The employer may give the contract administrator actual authority to enter into and/or vary contracts on its behalf. A contractor should therefore ensure that it has confirmation from the employer that the contract administrator has actual authority to vary the contract if a change is being negotiated. Alternatively, it should agree variations to the contract directly with the employer.

46. See Chapter 11, section D.
47. See Chapter 12, section E.
48. See Chapter 8, section C, for a detailed review of the contract administrator's role as agent and the nature and extent of its authority to vary the contract scope on the employer's behalf.

9.75 If the contract administrator agrees contract variations on behalf of the employer in the absence of actual or implied authority, the employer will not be bound unless it subsequently ratifies the agreement.

The form of the variation agreement

9.76 Unless expressly prohibited by statute, a contract can be varied in any manner the parties choose.[49] Even a deed can be varied by a simple written document, or even an oral agreement.[50] Once the contract has been varied by the parties, it will include the new varied agreement, and as such the contract may then be partly written and partly oral.[51]

9.77 Contracts themselves sometimes seek to stipulate the manner in which they may be varied; for example, by requiring that variations to the contract must be made in writing. Indeed, whilst there may be some logic to a system that insists on changes to the scope being agreed and recorded via a specified process, current English case law suggests that such stipulations are unenforceable.[52] As the following review of recent cases indicates, the courts have generally been inclined towards the view that the parties to a contract cannot place restrictions on their future power to vary.

9.78 *World Online Telecom UK Ltd (formerly Localtel Ltd)* v. *I-Way Ltd*[53] involved consideration of these issues. I-Way was an internet service provider with a written agreement with World Online to provide a hardware platform affording internet access to World Online's customers in return for a 20 per cent share of the rebate from the telephone operator. I-Way contended that, after the formal agreement was entered into, it became apparent that I-Way would need to provide additional equipment to undertake its work. As a result it was orally agreed that its remuneration would increase to a 30 per cent share.

9.79 The written contract between the parties contained the following Clause 21.1:[54]

> '. . . no addition, amendment or modification of this Agreement shall be effective unless it is in writing and signed by or on behalf of both parties'.

49. If a contract is required by statute to be made in writing, then it must be varied in writing. For example, the sale of an interest in land or a regulated consumer credit agreement is required by statute to be in writing. A contract of guarantee is required to be in writing by virtue of Statute of Frauds (1677), s.4 (as amended). No such restriction applies to construction contracts.

50. *Berry* v. *Berry* [1929] 2 KB 316. This is an equitable rule which now has statutory status: Supreme Court Act 1981, s.49(1).

51. This is not considered to conflict with the parol evidence rule, which concerns the submission of evidence as to the intention of the parties when entering into the original agreement, and not in relation to the variation, which amounts to a new agreement.

52. Whilst clauses to this effect may be unenforceable such that a variation of the contract can be agreed without having to comply with the stipulated formalities, this is not to say that provisions of this type will be of no relevance. As a question of fact, a party will need to establish that a variation of the contract has been agreed. This may be more problematic if the contract stipulates that a particular procedure needs to be followed. If the parties were contemplating variations only being agreed using a particular procedure, then from an evidential perspective failure to comply with the procedure may be relevant.

53. [2002] EWCA Civ 413.

54. *Ibid.* at para. 6.

9.80 An application for summary judgment was made on the basis that this clause prevented oral variations of contracts. Mitting J rejected this application, though the decision was appealed.

9.81 The Court of Appeal rejected the appeal, but did not finally determine whether the pleaded oral variation could be effective in the light of Clause 21.1. They found the argument that there was an oral variation sufficiently strong that it should not be dismissed summarily. The comments of Sedley LJ in the passage below are of interest. In considering the arguments of World Online's advocate (Mr Nasir), that the US Commercial Code supported its position, and that Clause 21.1 should be upheld because the parties' freedom to contract should be respected, the judge stated:[55]

> 'A consensual oral variation, after all, is also an exercise of freedom of contract. In his skeleton argument Mr Nasir has relied on the United States Uniform Commercial Code, section 2-209(2), which provides:
>
> > "signed agreement which excludes modification or rescission except by signed writing cannot otherwise be modified or rescinded".
>
> The previous position at common law in the United States, we are told, did allow the informal overriding of a written clause excluding any unwritten modification. Although this appears in its time to have been an American and not an English doctrine, it does to my mind illustrate well enough, in the absence of decisive English authority, that there is room for debate and movement on the question. Indeed, [I-Way] has been able to deploy both textbook and judicial support for a markedly more flexible approach than that taken by United States code.
>
> In my judgment it was a sufficient justification of the refusal of Mitting J to give summary judgment on the counterclaim that the law on the topic is not settled. Mr Nasir's invitation to this court on what is an interlocutory appeal to declare the law of England and Wales to be the same as that of the United States is an essay in optimism which is doomed, I am afraid, to disappointment.'

9.82 The judgment indicates that no authorities on this point were put before the court and none is cited. However, the Court of Appeal judgment of *United Bank Limited* v. *Masood Asif*[56] had briefly considered the point a few years earlier, and indicated that a clause requiring variations to be in writing was enforceable, provided it had not been waived.

9.83 The discrepancy between these two judgments was commented upon in the 2011 case, *Spring Finance Ltd* v. *HS Real Co LLC*, before HHJ Mackie QC. Whilst his comments on this point were *obiter* because of other aspects of his decision, the judge stated:[57]

55. *Ibid.* at para. 10.
56. (2000) WL 456.
57. *Spring Finance Ltd* v. *HS Real Co LLC* [2011] EWHC 57 (Comm) at para. 53. See also the comments of HHJ Mackie QC in *Globe Motors Inc, Globe Motors Portugal – Material Electrico Para A Industria Automovel LDA* v. *TRW Lucasvarity Electric Steering Limited* [2012] EWHC 3134 (QB) at paras. 33–36.

> 'If I had formed a different view I would then have been required to consider whether an oral variation could have been effective given the requirement of the guarantee that variations could only be in writing. This would have required addressing the somewhat differing guidance given by the Court of Appeal in two decisions, *World Online Telecom Limited* v. *I-Way Limited* [2002] EWCA Civ 413 and *United Bank Limited* v. *Asif*, unreported, CA 11/2/00. My first impression, having heard the submissions of Counsel, was that there could in theory be an oral variation, notwithstanding a clause requiring that to be in writing, but that the court would be likely to require strong evidence before reaching such a finding. But it is unnecessary and inappropriate for me to express a considered view.'

9.84 The point was also commented upon by the Court of Appeal in 2009, but again without considering any authorities, in *Westbrook Resources Ltd* v. *Globe Metallurgical Inc*.[58] Moore-Bick LJ, in commenting on the submissions of the appellant's counsel stated:[59]

> 'Mr Mallin submitted that the only way in which the parties' rights could have been modified in this case was by a variation of the contract and that since the contract itself provided that no variation was to be effective unless made in writing, there could have been no effective modification of those rights. I do not agree that the parties' rights could only be modified by variation, in the sense of a further agreement, for the reasons mentioned earlier, but there is no reason why the contract, including the clause requiring variations to be in writing, could not have been varied orally.'

9.85 Whilst, therefore, there have been a number of recent cases on this point, and most decisions have come out in favour of the parties not being constrained, it cannot be said that the position has been clearly and finally settled.

9.86 The position is complicated by the fact that in many of these cases the party seeking to rely on the variation also claimed that the other party had waived the requirement that a variation should be in writing, or was estopped from relying on the clause. Indeed, if the facts are such that the parties had agreed to vary the contract, then it will also typically be the case, in most situations, that the 'in writing' requirement has been waived. Equally, there is no principle which prevents the parties to a contract from expressly restricting the operation of the doctrine of waiver.[60]

9.87 A construction contract may stipulate that any variation of the scope under the contract mechanism needs to follow the specified procedure, such as requiring a formal written instruction or notice of claim. Such an approach will not be caught by, or invalidated as a result of, the issues identified above. If the contract contains such provisions, then the contractor is entitled to the financial and other entitlements triggered by the contract mechanism only if the procedures are followed. The above cases concern the quite distinct situation where the parties seek to agree a variation of their contract without going through the

58. [2009] EWCA Civ 310.
59. *Ibid*. at para 13.
60. *State Securities Plc* v *Initial Industry Ltd* [2004] All ER (D) 317 (Jan). See also *Chitty*, para. 22-045.

contractual instruction mechanism, and whether the contract can require such consensual variations to be in a specific form.

Consideration

9.88 In order for there to be a binding agreement to vary a contract, consideration needs to be provided in much the same way as when an initial contract is being formed. Parties agreeing to vary their contract are renegotiating their original bargain. In order for this to be nothing more than a unilateral promise, consideration needs to support the agreement.

9.89 The case of *Stilk* v. *Myrick*[61] is often quoted in support of this principle and involved the renegotiation of sailors' wages part way through a sea voyage. A number of sailors had deserted and remaining crew members threatened to leave also, unless their wages were increased. The captain agreed to the increase but then refused to pay at the end of the voyage. The court found that his agreement to increase the wages was not binding as it was a unilateral promise. It could not be treated as a binding variation of the contract between the captain and the sailors because they were not agreeing to do anything extra that they were not already obliged to do under their existing contracts. It was not an effective variation of the contract as it was not supported by mutual consideration.

9.90 This strict requirement that consideration be provided has been somewhat watered down in recent years by a series of cases which have taken quite a liberal view on what may amount to consideration. This weakening of the *Stilk* v. *Myrick* principle in the context of construction contract variations is illustrated by *Williams* v. *Roffey Bros & Nicholls (Contractors) Ltd.*[62] The claimant was a carpenter undertaking work at a block of flats being built by the defendant. The carpenter was experiencing financial problems and asked for an increase in the contract prices for his work part way through the project. The main contractor was concerned that if the carpenter stopped work there would be significant delay and increased costs. However, having agreed the price increase, the main contractor later refused to honour it, saying that since no consideration had been provided it did not amount to a binding agreement to vary.

9.91 The Court of Appeal upheld the first instance decision[63] in finding that consideration had been provided by the carpenter and that therefore the agreement to vary the prices was binding. The carpenter, in agreeing to proceed with the works, had provided the main contractor with a benefit in the form of certainty that the carpenter would proceed with the works which it might otherwise have been unable to continue with. The Court of Appeal also briefly considered whether a party might be able claim economic duress as a basis for finding that such an agreement to vary was voidable. This could form the basis for avoiding what would otherwise amount to an enforceable variation of a contract. Taking these factors into account, Glidewell LJ stated:[64]

61. (1809) 2 Camp 317.

62. [1991] 1 QB 1. See also the Privy Council cases of *New Zealand Shipping Co. Ltd* v *AM Satterthwaite & Co Ltd* [1975] AC 154 and *Pao On* v. *Lau Yiu Long* [1980] AC 614, which involve the same principles but relate to shipping contracts and share transfers.

63. The first instance decision was given by Mr Rupert Jackson QC, sitting as an assistant recorder at Kingston-upon-Thames County Court in January 1989.

64. [1991] 1 QB 1 at 15.

'. . . the present state of the law on this subject can be expressed in the following proposition: (i) if A has entered into a contract with B to do work for, or to supply goods or services to, B in return for payment by B; and (ii) at some stage before A has completely performed his obligations under the contract B has reason to doubt whether A will, or will be able to, complete his side of the bargain; and (iii) B thereupon promises A an additional payment in return for A's promise to perform his contractual obligations on time; and (iv) as a result of giving his promise, B obtains in practice a benefit, or obviates a disbenefit; and (v) B's promise is not given as a result of economic duress or fraud on the part of A; then (vi) the benefit to B is capable of being consideration for B's promise, so that the promise will be legally binding.'

9.92 In the context of the facts of this case and whether consideration had been provided in respect of the variation of the contract, Purchas LJ stated:[65]

'. . . [T]here was clearly a commercial advantage to both sides from a pragmatic point of view in reaching the agreement. . . The defendants were on risk that as a result of the bargain they had struck the plaintiff would not or indeed possibly could not comply with his existing obligations without further finance. As a result of the agreement the defendants secured their position commercially. There was, however, no obligation added to the contractual duties imposed upon the plaintiff under the original contract. *Prima facie* this would appear to be a classic *Stilk* v. *Myrick* case. It was, however, open to the plaintiff to be in deliberate breach of the contract in order to "cut his losses" commercially. In normal circumstances the suggestion that a contracting party can rely upon his own breach to establish consideration is distinctly unattractive. . .

. . . I consider that the modern approach to the question of consideration would be that where there were benefits derived by each party to a contract of variation even though one party did not suffer a detriment this would not be fatal to the establishing of sufficient consideration to support the agreement. If both parties benefit from an agreement it is not necessary that each also suffers a detriment. In my judgment, on the facts as found by the judge, he was entitled to reach the conclusion that consideration existed and in those circumstances I would not disturb that finding.'

9.93 The line of cases reviewed above concern the consensual variation of a contract. A contract mechanism that allows the employer unilaterally to order a variation is quite different. Such a mechanism entitles the employer to order the variation because the parties have pre-agreed this arrangement. Therefore, consideration to support that bargain was given via the original contract. Strictly speaking, no consideration needs to be given when unilaterally ordering a variation, although, for other reasons, it will almost always be the case that the contract mechanism provides for this.[66]

65. *Ibid*. at 22.

66. In theory, therefore, there is no reason why a unilateral variation could involve the contractor being paid nothing for extra work if this is what the contract provided for. In practice it is unlikely that the parties will agree to this, which is why it is said that a unilateral mechanism is likely to involve a mutual exchange.

In certain situations the employer may consent to the contractor departing from the scope whilst not agreeing to pay extra. Such an arrangement may be unenforceable as a consensual variation of the contract due to a lack of consideration. However, the employer will not be able to resile from this arrangement where the contractor has then relied on the representation by undertaking the change. In these circumstances the employer will have waived the need to follow the scope. **9.94**

Third-party restrictions on variations

The Contracts (Rights of Third Parties) Act 1999 allows the parties to a contract to grant rights to third parties in relation to certain terms within their agreement. The parties to a construction contract may choose, for example, to grant such a right to a party that will have an interest in the facility that the contractor is going to build; for example, a future tenant or a funder. By giving third-party rights, the contractor may avoid the need to give those parties collateral warranties instead. If such rights are granted, therefore, this may act as a constraint on the parties' ability to vary their contract subsequently. **9.95**

Equally, it may be inadvisable for an employer to agree to vary its contract where this may lead to a guarantee becoming unenforceable as a result. A guarantor's liability relates to the terms of the underlying contract, and if it does not give consent to a variation to that contract it will no longer be bound.[67] **9.96**

Legislation may also restrict an employer's right to agree a significant increase in the works to be undertaken under a contract.[68] **9.97**

SECTION D: WAIVER OF CONTRACTUAL VARIATION MECHANISM FORMALITIES

This section considers the circumstances in which the employer can be said to have waived the need for compliance with the requirements of the variation provisions in the contract. **9.98**

The contract will often set down certain formal requirements for the ordering of a variation. If those formal requirements have not been followed, the change cannot be said to have been sanctioned under the clause and therefore the payment that would be triggered will not be due. The most common formal requirement is, of course, the need for a prior written instruction.[69] **9.99**

The employer may waive the need for a formal instruction to be issued as a condition precedent to its entitlement to payment and any other contractual benefits accruing, such as additional time. **9.100**

67. *Holme* v. *Brunskill* (1878) 3 QBD 495. See Chapter 5, section F.
68. See *supra*, paras. 5.201–5.204.
69. Whether the contract does actually require a formal written instruction, or indeed any other formal requirement to be established as a condition precedent to payment, depends on its terms. See Chapter 8, section B, for a discussion on what those formal requirements may amount to.

9.101 If the contractor undertakes work without an instruction, the employer may be prepared to waive the breach and allow the work to remain on the basis that it does not pay for the change. Such a waiver is considered as part of section B of this chapter, dealing with concessions.

9.102 As discussed in section C of this chapter, the parties to a contract may agree a variation to the scope of works to be undertaken under the contract in the same way that they may agree to vary any of the terms of the contract. The facts of some of the cases considered in this section could equally be seen as involving a consensual variation of the contract.[70]

9.103 This section briefly reviews the principles of waiver and estoppel, before examining the cases where these principles have been applied in relation to the variations. It goes on to consider the widely referred to case of *Molloy* v. *Liebe*,[71] which, whilst it talks in terms of an 'implied promise to pay', involves many of the same characteristics of waiver. This section concludes by considering some of the difficulties that a contractor will face in seeking to establish that compliance with the requirements of the variations mechanism has been waived.

Principles of waiver and estoppel

9.104 Waiver arises where one party abandons a legal right and the other party relies on this, such that the right cannot subsequently be reasserted. A party that has the benefit of a right under a contract can always waive the benefit. If that party tells the other that it is not going to insist on the right, and this is relied upon to the other's detriment, then it cannot later go back on that decision. It has waived its right to rely on the entitlement.

9.105 Waiver may therefore arise where an employer indicates to a contractor that it should undertake extra work, without a formal instruction being given in accordance with the contract, but that the absence of the instruction will not prejudice the contractor's entitlement to payment.

9.106 The following aspects and requirements of waiver are of particular relevance in the context of variations:

- The party waiving the right must communicate this to the other party. That communication can be express or implied by conduct.
- The other party must have altered its position in reliance on the waiver. For example, a contractor has undertaken work without insisting on a written order in circumstances where it was led to believe that the written order would not be insisted upon as a condition precedent to payment.
- Waiver can be terminated upon reasonable, but not necessarily formal, notice. A party may waive its right under a contract for a period of time but then decide to reinstate the

70. Many of the cases reviewed in this section date from the nineteenth century and involved deeds which could not be varied other than by deed. As discussed in section C, no such formalities restrict how modern contracts may be varied. Therefore, it may be the case that situations which in the past gave rise to a contractor basing its claim on estoppel and waiver may now be better pleaded as a consensual variation.

71. (1910) 102 LT 616, PC.

right. The waiver, after all, does not amount to a variation to the contract provisions. It is only a temporary indication that a party will not insist on compliance with them. An employer who has waived the requirement for written instructions may reinstate that requirement for future work.

- Waiver must be given by a party to the contract or by someone with due authority. An agent acting for a principal must have authority to bind. A contract administrator has no implied authority to waive a right of the employer under the contract.[72]

9.107 Estoppel is a legal principle which prevents a party, which has led another by its actions to believe in a particular state of affairs, from going back on its representations where this would be unjust. The person that has made the representation will be 'estopped' from subsequently denying it, or going back on its word. It is, therefore, a principle which allows one party to prevent the other from going back on its promise. It can be seen as closely related to waiver and covers many of the same factual circumstances.

9.108 The principles of three types of estoppel that are relevant to the issues considered in this section are summarised below.

9.109 Firstly, estoppel by representation, in respect of which the following principles are of particular relevance:

- There must have been a representation given by the person being estopped to the person claiming to rely on it. The representation may involve an express statement, or conduct. Such conduct can amount to silence[73] when there is an obligation to disabuse someone of a misunderstanding. Conduct must be clear and unequivocal.
- There must be both reliance on the representation and an intention by the person giving the representation that it would be relied upon in this way. Reliance is therefore a fundamental aspect of estoppel, not only because the representation must be relied upon to the detriment of the other, but also because the person who gives the representation must have intended it to be relied upon in the manner that it was.
- Since estoppel depends upon reliance, the party that has made a representation can adjust its position going forward; i.e. the representation can be withdrawn. Therefore, whilst an employer can be estopped from insisting that the formal contractual mechanism is followed, it may subsequently reinstate the procedure. Following reinstatement, the contractor would have no grounds for establishing reliance.
- The estoppel must be made by the employer or by its agent with due authority. The contract administrator has no implied right to change the employer's rights under the contract.

9.110 Secondly, estoppel by convention, in respect of which the following principles are relevant:

- This estoppel can be raised where two parties operate a contract, and regulate their dealings, on the basis of a mistaken factual or legal assumption. They are both then bound by that mistaken assumption or belief and as a result estopped from going back

72. The contract administrator's authority, or lack of it, is discussed later in this section.
73. *Covell* v. *Sweetland* [1968] 1 WLR 1466.

on it. The court will give effect to that assumption only if it would be unconscionable not to do so. As with other forms of estoppel, it cannot give rise to a cause of action but may be raised by means of defence.

- The assumption must have been communicated by one party to the other, in a clear and unambiguous way, either by words or conduct.
- As with other forms of estoppel, there must be reliance on the false assumption. The party relying on the estoppel must have acted to its detriment.
- The communication giving rise to the estoppel must be given by the principal to the contract or an agent with due authority. Again, an employee must have authority to act and bind.

9.111 Thirdly, promissory estoppel, in respect of which the following principles are particularly relevant:

- This form of estoppel arises where one party has made an unequivocal promise which was intended to affect the parties' legal relations.[74] It cannot then go back on the promise so as to reassert the basis of the previous legal relations between them. The promise is treated as a binding representation that the promisor will not enforce its strict legal rights.
- The unequivocal promise may be written or demonstrated by conduct.
- The person raising the estoppel must have relied on the promise to its detriment. It must be considered to be unconscionable for the promisor to resile from the promise. The promisor may revert to its original contractual position. There must be reasonable notice such as to give the promisee a proper opportunity to resume its position. The promisor cannot revert where the promisee is not able to resume its position.
- The communication must be given by the principal to the contract or an agent with authority.

9.112 From this brief review of these three different forms of estoppel it can be seen that they share many similar characteristics.

9.113 In a situation where a contractor claims that the employer is estopped from insisting that the requirements of the contractual variations mechanism are followed, estoppel by representation is likely to be of most relevance. The employer may have represented that a formal instruction was not required in order to trigger entitlement under the contract. The contractor will need to show that the representation was made prior to its acting to its detriment, i.e. prior to its carrying out the additional work. Promissory estoppel may also be relevant in such a context. Estoppel by convention may be relevant where there is no valid instruction because limitations on the unilateral power to vary have been exceeded.[75]

74. The modern basis of promissory estoppel is regarded as having been established by Denning J in *Central London Property Trust* v. *High Trees House Ltd* [1947] KB 130, although the comments on the principle there are only *obiter dictum* in a first instance decision. His judgment drew on a principle of equity set out in the case of *Hughes* v. *Metropolitan Railway* (1877) 2 App Cas 439.

75. For example, where the parties have acted on the mistaken belief that there was no cap on the value of variations that could be instructed under the contract, or that the stated cap had not been exceeded. If it is subsequently found that the cap had been exceeded, such that an instruction for additional work could be said to be invalid, then estoppel by convention may arise. See Chapter 5, where these limitations are reviewed. They are primarily limitations as to the scope, amount and timing of variations.

Cases applying waiver and estoppel

9.114 There are a number of nineteenth-century cases which rely on principles of waiver and estoppel to defeat an employer's assertion that the lack of a formal variation instruction results in the contractor having no right to be paid for change. As will be seen, these cases typically involve situations where the employer has directly informed the contractor that it requires the additional work to be undertaken but has not issued the formal instruction.[76]

9.115 In *Meyer* v. *Gilmer*[77] no variations were to be paid for unless ordered in writing by the architect. The employer required alterations and discussions took place between employer, architect and contractor following which the contractor was instructed to make changes. This happened on several occasions and no question was ever raised as to the need for written instructions. Some of the additional work that had been instructed in this way was paid for. The court found that the employer must be presumed to have known the terms of the contract and the requirement for the instructions to be in writing. Therefore, when the instructions were given by the architect verbally, the owner must have been taken to know that this was not in compliance with the terms of the contract. The employer could be taken to have waived the requirement for a written instruction.

9.116 In the Canadian case of *Melville* v. *Carpenter*[78] the variations clause again required a written instruction from the architect. The employer specifically asked the contractor to undertake extra work and also told the contactor's labour on site to take orders directly from him rather than from the architect. Robinson CJ, sitting in the Canadian Court of Queen's Bench, stated:[79]

> 'The condition referred to that the architect shall certify, was inserted for the protection of the defendant himself, who might waive if he pleased by interfering personally and giving directions.'

9.117 The very fact that the employer is aware of the work that the contractor is undertaking does not, of course, mean that it knows that it is extra. In *Brown* v. *Lord Rollo and others*[80] a contractor was employed to build a road in Perthshire. Under the contract no additional work was to be paid for unless sanctioned in writing by the surveyor acting for the trustees. No such written approval was obtained for the additional work allegedly undertaken by the contractor. However, the trustees for the scheme, one of whom was Lord Rollo, lived near the route of the new road and would frequently ride out to review progress. Lord Rollo appeared satisfied with the contractor's work, and the contractor claimed that this intimated consent to the changes it was introducing such as to waive the need for written orders. The court rejected the contractor's claim since Lord Rollo could not be taken to have known the precise scope of the defined works and therefore the degree to which they were being altered. Lord President stated:[81]

76. Compare to consensual variations. See section C of this chapter.
77. (1899) 19 NZLR 129.
78. (1853) 11 Up Can QB 128.
79. *Ibid.*
80. (1832) 10 Ct of Sess. Cas. (1st ser.) (Shaw) 667.
81. *Ibid*. at 646.

> 'I think it impossible to supply the want of a written order by the averment that the road trustees frequently saw the progress of the work, and took an interest in it and must be, therefore, barred from objecting now to the additional works and cuttings claimed, since they did not challenge them at the time. They were not bound to suppose that Brown was working without reference to his contract or was performing extra work, so long as they were aware that he had no written order to do so.'

9.118 The language used in a number of the older cases refers to 'fraud' in the sense that it would be unconscionable to allow the employer to have gone back on its previous inconsistent conduct. *Hill* v. *South Staffordshire Railway Co*[82] is often quoted as authority for the application of estoppel to such situations.[83] The case involved a railway company that had instructed additional work via its engineer. The orders were not given in writing as required under the contract and on this basis the railway company sought to refuse payment for the work. Turner LJ in the Court of Appeal stated:[84]

> 'I do not think that their case would be materially assisted by it, for, whatever might be the effect at law, I think there has been such conduct on the part of the company as would raise an equity against them entitling the plaintiff to payment for the alterations, additions and omissions. In my opinion, companies must, no less than individuals, be answerable to the jurisdiction of this Court in cases of fraud; and I think that, in the eye of this Court at least, it would be a fraud on the part of this company to have desired, by their engineer, these alterations, additions and omissions to be made, to have stood by and seen the expenditure going on upon them, to have taken the benefit of that expenditure, and then to refuse payment on the ground that the expenditure was incurred without proper orders having been given for the purpose.'

9.119 A more recent example of this principle being applied is the 1996 Canadian case of *Redheugh Construction Ltd* v. *Coyne Contracting Ltd and British Columbia Building Corporation.*[85] It was heard by the Court of Appeal for British Columbia and related to the construction of a correctional centre. The facts involved three tiers of contractors: Kraft, the main contractor; Coyne, its subcontractor; and Redheugh, the sub-subcontractor. All additional work undertaken by Redheugh had to be approved by advance written notice by Coyne as a precondition to payment. Redheugh did, however, undertake extras without such prior written notice but claimed that the requirement had been waived by Coyne.

9.120 The circumstances of the case were quite unusual. Mr Basnett, the managing director of Redheugh, was also acting as the site project manager for Coyne. Mr Basnett, in his role as the Coyne project manager, would receive change orders through from the main contractor, Kraft. Strictly speaking, in order to ensure that Redheugh received the formal written orders required under the contract he would then have had to issue such orders to himself

82. (1865) 12 LT 63.
83. The case is referred to in the later cases of *Astilleros Canarios SA* v. *Cape Hatteras Shipping Co Inc (The Cape Hatteras)* [1982] 1 Lloyd's Rep 518 and *S.C. Taverner and Co Ltd* v. *Glamorgan County Council* (1941) *Times Law Reports* 24 January 1941.
84. (1865) 12 LT 63 at 65.
85. (1996) 29 CLR (2d) 39.

(in his other role as director of sub-subcontractor, Redheugh). Mr Basnett apparently stated in evidence that he did not produce these orders because he did not think that they were necessary. Cumming J stated:[86]

> 'Contracting parties may in certain circumstances be excused from strict compliance with contractual preconditions. The party entitled to require performance of a precondition may waive compliance with the precondition. As a result, that party will not be heard later to rely on that provision as a basis for asserting a breach of contract.'

9.121 The court in this case found that Mr Basnett (acting as agent for Coyne) had authority to waive compliance with the contract conditions requiring prior written notice.[87]

9.122 Another comparatively recent example of the principle, this time in the context of variations required under a ship repair contract, is the case *Astilleros Canarios SA* v. *Cape Hatteras Shipping Co Inc (The Cape Hatteras)*.[88] The contract provided that prior written approval was required for additional repairs. The ship owner claimed that such approval had not been given, and therefore no payment was due. The ship builder argued that principles of estoppel meant that the owner was not entitled to rely on the clause. Staughton J stated:[89]

> 'I readily accept that estoppel or waiver may, in some circumstances, circumvent a clause in a contract which requires that variations to it shall be in writing. Furthermore, I would have been very much inclined to find, if it had been necessary to decide the point, that such circumstances existed in the present case.'

9.123 The judge went on to conclude that the only element of work he would disallow, on the basis of a lack of prior written instruction, was work where it could not have been said that the owner 'stood by and took the benefit'.

9.124 The cases above involve situations where the employer can be said to have waived the requirements of the unilateral variation mechanism, which would otherwise have required a formal instruction as a condition precedent to payment. However, such a mechanism also serves to authorise the change as well as trigger payment. A contractor may seek to claim that the procedures required under the mechanism have been waived simply because it needs to establish that the change has been approved, irrespective of payment. The following case is an example of this.

9.125 In *Acme Investments Ltd* v. *York Structural Steel Ltd*[90] the contract provided that no changes should be made without the prior written authority of the employer. The employer's project manager and the contractor agreed to a reduction in the roof loadings as part of a cost-saving exercise. The contractor had both design and build responsibility and so, when

86. *Ibid.* at para. 19.
87. See discussion later in this section in relation to a contract administrator's authority as agent.
88. [1982] 1 Lloyd's Rep 518.
89. *Ibid.* at 524.
90. (1974) 9 NBR (2d) 699.

the roof failed, the employer sued for breach. The contractor defended the claim on the basis that the parties had agreed to reduce the loadings, whereupon the employer argued that there had been no effective change to the design as it had not been approved by it in writing. The New Brunswick Appeal Division court found that it would be inequitable to allow the employer to enforce its claim without recognising that it had expressly agreed to change the design.[91]

Implied promise to pay: *Molloy* v. *Liebe*

9.126 The rationale used by the court to circumvent the lack of a formal instruction in the case of *Molloy* v. *Liebe*[92] shares many of the same characteristics as the above cases citing waiver and estoppel.

9.127 This 1910 Privy Council case involved the construction of a theatre in Perth, Australia. The employer refused to pay for the additional work on the basis that the contract required a prior written order. However, at the time the contractor undertook the extra work, the employer had refused to give the order not because it did not want the work to be carried out but because it thought that the work requested was not additional. The employer thought it was within the contract scope. The dispute was referred to an umpire who came to the view that, whilst Molloy had refused to give the order, there was an implied promise to pay for the work if it was subsequently established that it was, in fact, extra. The court's reasoning was that if there were no such implied promise, then the only other conclusion one could come to was that the employer was refusing to give the order, simply as a means of unjustifiably avoiding payment.

9.128 Following the umpire's decision, the case went through several levels of appeal. It finally ended up before the Privy Council which stated:

> 'Molloy insisted on the works being done, maintaining that they were not extras. The contractor on the other hand maintained that they were. As Molloy insisted on the works being done, in spite of what the contractor told him, the umpire naturally inferred (and it was for him to draw the inference) that the employer impliedly promised that the works would be paid for either as included in the contract price or, if he were wrong in his view, by extra payment to be assessed by the architect. It is difficult to see how the umpire could have drawn any other inference from the facts as found by him, without attributing dishonesty to Molloy.'

9.129 The case has been cited with approval in a number of subsequent cases. However, it is not entirely clear whether the precedent should be considered to give a party wider right than would be otherwise available to it under the principles of waiver and estoppel.

91. The court applied the principles in *Hughes*. See the earlier review of promissory estoppel: *Hughes* is the 1874 case relied upon by Denning J in *High Trees House* as setting out equitable principles that he would rely upon in developing the principle of promissory estoppel.

92. (1910) 102 LT 616, PC.

9.130 The approach in English cases seems to treat *Molloy* as an expression of principles of waiver and estoppel.[93] The case is referred to in the 1941 case of *S.C. Taverner and Co Ltd* v. *Glamorgan County Council*.[94]

9.131 In *Taverner*, Humphreys J cites both *Molloy* and the earlier referred to case of *Hill* v. *South Staffordshire Railway Co*[95] on the apparent basis that they are mutually supportive.[96] The judgment also refers to the following passage from *Hudson on Building Contracts* (6th edition):[97]

> 'When there is a condition in the contract that extras shall not be paid for unless ordered in writing by the architect. . . and the employer orders work which he knows, or is told, will cause extra cost, a jury or an arbitrator may find that there was an implied promise by the employer that the work should be paid for as an extra, and especially so in cases where any other inference from the facts would be to attribute dishonesty to the employer.'

9.132 Humphreys J stated that this proposition was based on the decisions in both *Molloy* and *Hill*. The passage of Turner LJ in *Hill*, that was quoted earlier in this section, referred to 'fraud' being perpetuated by the employer.[98] This language has parallels with the language used in *Molloy*, which referred to 'dishonesty'. In this sense there seems superficially to be a similarity in the reasoning adopted in the two decisions. However, it may be questioned whether, on the facts of *Molloy*, the employer can be said to have made a representation that it would not seek to rely on, or that it would waive, its legal rights. *Molloy* does not, therefore, seem to be a case that can be explained on the basis of waiver or estoppel.

9.133 The key aspect of the rationale in *Molloy* would seem to be that the employer refused to give the instruction because it mistakenly thought that the work in question was actually within the contract scope already. In this sense the rationale reflects many of the same characteristics of *Brodie* v. *Corporation of Cardiff*,[99] which is discussed in detail in section E of this chapter.

Difficulties in establishing waiver and estoppel

9.134 It will often be difficult for a contractor to establish that a representation has been made which it has relied on to its detriment.

93. See also the commentary in the Australian cases of *Rozelle Childcare Centre* v. *Update Constructions* (1988) 17 ACLR 31 and *Trimis* v. *Mina* (2000) 2 TCLR 346 CA (NSW) in relation to *Molloy*. See, in particular, paras 60–62 of *Trimis*. It should be noted, however, that *Trimis* comments on the earlier High Court decision of *Molloy* which was overturned, rather than the Privy Council decision. The principles of the *Molloy* referred to in *Trimis* do not correspond to the rationale of the decision of the Privy Council.

94. (1941) *Times Law Reports* 24 January 1941.

95. (1865) 12 LT 63.

96. (1941) *Times Law Reports* 24 January 1941 at 360–361. The *Taverner* case involved a contractor's claim against the County Council where no written orders had been given in advance of additional work being undertaken. Humphreys J was only considering a limited point of law as a preliminary issue. Because he was not being asked to assess the facts, he was unable to come to a conclusion as to the reasons why the Council had not given the orders.

97. (1941) *Times Law Reports* 24 January 1941 at 245.

98. The passage from *Hill* referring to fraud is also quoted by the court in *Taverner*.

99. [1919] AC 337.

9.135 In a number of cases on this subject the contractor has sought to argue that a document issued by the employer was, alternatively, an instruction under the variation mechanism, or a representation on which waiver or estoppels could be based. The contractor's case will fail because such a document is equally deficient as an instruction and as a representation.

9.136 In *Lamprell* v. *The Guardians of the Poor of the Billericay Union, in the County of Essex*[100] the contractor sought to rely on certificates which, because they were issued after the work was carried out, could not be said to have been relied upon. In *Tharsis Sulphur and Copper Co* v. *McElroy*[101] the contractor sought to rely on monthly valuation certificates. These recorded the amount of work undertaken by the contractor but could not be said to have involved directions or representations as to the operation of the mechanism. Both cases are reviewed further in Chapter 8, section B, in the context of considering written instructions for work.

9.137 In *Royston Urban District Council* v. *Royston Builders Ltd*[102] the contractor unsuccessfully sought to claim that interim certificates could be relied upon as representations to support an estoppel. The builder in this case was employed to construct a number of houses on a new development. During contract negotiation there had been discussion about incorporating a schedule which would allow the contractor to claim for index-linked price increases akin to a fluctuations provision. The court found that the fluctuations schedule was not incorporated into the contract. There were a number of other arguments that the contractor raised in order to maintain its claim for additional payments based on this fluctuations schedule. One such argument was based on the fact that the contract administrator had, during the course of the project, certified sums due based on the fluctuations schedule because it had understood that the contractor was entitled to such fluctuations payments. Ashworth J found that whilst the contract administrator may have erroneously certified sums due under the contract in interim valuations, this was not binding on the employer and did not create any sort of waiver or estoppel. The following passage sums up his findings on this point:[103]

> 'I have asked myself over and over again: Where is the representation, and in what sense can the builders be said to have acted upon it? On one view it is a case of creditors putting in in perfect good faith claims for extras to which they were not entitled, and the debtor, the council, inadvertently but in good faith, paying them. But in my view that course of conduct does not give rise to any representation that the amounts so claimed are due. The consequences of a doctrine of that sort, as I pointed out to Mr Hallis, might be alarming. There was, in my view, nothing in the nature of a representation which would bind the council in this case to the effect that they accepted the director's wishes in regard to all materials. It is true that, for those three years, if my judgment is right, the parties were proceeding on an erroneous basis. But that, of itself, does not give rise to an estoppel precluding the council from now setting up what is, in my judgment, the correct basis. I am quite unable to find any materials here sufficient to give rise to an estoppel.'

100. (1849) 3 Ex 283.
101. (1878) 3 App Cas 1040.
102. (1961) 177 EG 589.
103. *Ibid.* at 595.

9.138 The contractor was undertaking work it was obliged to carry out under the contract. The interim certificates may have suggested to the contractor that it was to be paid an index-linked uplift for this work. However, certificates issued on an interim basis are not finally determinative of what the employer is due to pay under the final account.[104] If the contractor is required to undertake such work anyway, then it cannot be said that it has acted in reliance on them.

9.139 It may, however, be argued that a contractor seeking to rely on interim certificates, as a basis for establishing that the strict written notice requirements need not be followed, is in a different position. A contractor may argue that where interim certificates include sums for variations where that extra work has not been the subject of a prior written order, this amounts to a representation that such written orders will not be required in future. In *Royston* the contractor could not rely on the value in the interim certificates being correct (since they were interim) and therefore they could not be treated as amounting to a representation that the contract allowed for index-linked increases. However, the argument as it relates to a requirement for written instructions is subtly different. In certain instances, the fact that a valuation has been issued could be taken as a representation that a written instruction is not required in order for a sum to become due, albeit that the certificate may not be finally determinative of the sum due.

The contract administrator's authority to waive compliance

9.140 The contract administrator acts as the agent of the employer in varying the contract scope. As with any agency situation, the contractor needs to ensure that the agent has authority to bind its principal when varying agreements or waiving compliance.[105]

9.141 The contract administrator has no implied authority to waive, on behalf of the employer, the contractor's obligation to comply strictly with its obligations. The employer may give the contract administrator actual authority to waive compliance with the contract. Otherwise, the contractor needs to get the employer's agreement to the waiver.

SECTION E: THE OBLIGATION TO APPROVE AND INSTRUCT A CHANGE

9.142 Chapter 7 of this book considers the employer's duty to vary the works. A contract may place an express duty on the employer to agree to a change.[106] In certain limited circumstances an implied duty may arise. The cases reviewed in Chapter 7 principally involve situations where the employer refuses to agree a change despite the fact that an alteration to the contract scope

104. See Chapter 10, section B.

105. See Chapter 8, section C, for a detailed review of the contract administrator's role as agent and the nature and extent of its authority to waive compliance with contractual provisions.

106. See, for example, ICC Measurement Contract 2011, Clause 51(1)(a), which should also be considered in conjunction with Clause 13(1) which provides that a contractor is not under an obligation to construct where this is not legally or physically impossible and provides for the engineer to issue instructions (see also Clause 13(3)). These provisions are discussed at Chapter 7, section B.

is necessary if the works are to proceed. In such situations a contractor may need to establish that its departure from the scope should not be penalised and in some cases that it should be entitled to additional money and time. In *Yorkshire Water Authority* v. *Sir Alfred McAlpine & Son (Northern) Ltd*,[107] a case which concerned the contractor's right to an instruction based on an express provision to this effect in its contract, the judge concluded:[108]

> 'If the variation which took place was necessary for the completion of the works because of impossibility within clause 13(1), then, in my judgment, the [contractors] were entitled to a variation order with the consequent entitlement to payment of the value of such variation as is provided in clause 51. . . .'

9.143 Therefore, an employer's refusal to issue an instruction may be open to review by the courts.

9.144 Whilst Chapter 7 examined the situation where the employer is not prepared to sanction certain changed work being undertaken, the employer may instead refuse to issue an instruction because it does not agree that the work in question amounts to a variation to the scope. This subtly different position arises where the employer (or its contract administrator) has an opinion which is different from that of the contractor as to whether or not the piece of work in question is inside or outside the defined contract scope. This topic is the subject of this section.

9.145 An employer may want certain work to be undertaken but its decision whether or not to issue a variation instruction will turn on whether it considers that the work in question forms part of the contract scope.[109] The parties may disagree, with the employer taking the view that the work forms part of the scope and therefore no instruction is required, and the contractor taking the opposite position. The employer may inform the contractor that it must proceed but refuse to issue a variation instruction on the basis that one is not due. The contractor will be placed in a difficult position, because it may be difficult to establish contemporaneously, and with any certainty, whether the work is within scope.[110] The contractor may reluctantly proceed without an instruction because otherwise the project may come to a standstill.[111] The lack of variation instruction may subsequently debar the contractor's claim for payment for the work in question, even though the contractor may be able to establish that the work was not part of the contract scope.

9.146 The House of Lords case of *Brodie* v. *Corporation of Cardiff*[112] considered such a situation. The approach of the court in this case was to treat the contract administrator's decision not to issue an instruction as something that could be revised by an arbitrator, in much the same way as any decision by the contract administrator under the contract could be opened up and revised.

107. (1985) 32 BLR 114.
108. *Ibid*. at 126.
109. In practice, the decision may be made by contract administrator.
110. See Chapter 2, section D.
111. See Chapter 2, section C.
112. [1919] AC 337.

This section considers in detail the reasoning of the decision in *Brodie*, before considering its wider application and how the approach adopted allows a tribunal to assess entitlement. **9.147**

Brodie: basis of the dispute

A contractor[113] was employed by the Corporation of Cardiff for the building of the Llyurgon Reservoir in the Taff Fawr Valley. After construction commenced, the engineer issued orders that the contractor should use "Cyfartha clay" rather than the "Neath clay" that it had planned to use. The engineer insisted that Cyfartha clay was required under the contract and therefore no written variation instruction needed to be issued. The contractor's interpretation of the contract was that it was entitled to use Neath clay and that this was therefore a variation. **9.148**

The dispute went to arbitration. The arbitrator found that the work was within the contract scope and that the engineer had improperly refused to give the written instruction. He also found that the engineer did not act fairly or impartially, although he had no dishonest motive. **9.149**

The arbitrator's decision was appealed to the court on points of law. The key issue was whether the arbitrator had the power to award that the sums should be paid, notwithstanding the absence of written orders from the engineer. **9.150**

The variations clause read:[114] **9.151**

> 'The engineer. . . may. . . order any further and other works not contemplated by this specification or the contract. . . and for the purpose of preventing doubts, disputes, and litigation, it is to be distinctly understood that the corporation shall not become liable to the payment of any charge in respect of any such additions, alterations, or deviations unless the instruction for the performance of the same shall have been given in writing by the engineer.'

Since the engineer refused to issue a written order, the employer argued that it had no obligation to pay for the disputed variation. The court found that the engineer's decision not to issue the instruction was a matter that the arbitrator was entitled to open up. The arbitration clause read:[115] **9.152**

> 'In case any dispute or difference shall arise between the corporation, or the engineer on their behalf, and the contractor. . . as to the construction of the contract, or as to any matter or thing arising thereunder. . . or as to any objection by the contractor to any certificate, finding, decision, requisition, or opinion of the engineer. . . then either party shall forthwith give to the other notice of such dispute or difference, and such

113. The contractor was actually Louis Philip Nott. He died, and the action was brought by Mr Brodie, his executor.
114. [1919] AC 337 at 343.
115. *Ibid.* at 344.

dispute or difference shall be referred to the arbitration and final decision of a single arbitrator. . . '

9.153 The House of Lords effectively treated the engineer's decision not to issue the instruction as being a 'matter or thing' on which there was a dispute. Its approach was to treat the 'decision' of the engineer not to issue the instruction as something that could be reviewed and revised.

9.154 The following passage from the judgment of Lord Wenbury illustrates the reasoning of the court:[116]

> '. . . [the employer] say that. . . [they] can refuse repayment by reason of their own wrongful act committed by their engineer – that the arbitrator can award, and has awarded, that the engineer was wrong, but that neither the arbitrator nor any Court can enforce payment of the amount which but for the wrongful refusal of the corporation's agent would beyond question have been payable. My Lords, I cannot accept that view. The arbitration clause extends to any dispute between the corporation or the engineer on their behalf, and the contractor. The question whether the engineer ought to have given a written order is within those words. It extends to "any matter or thing arising" under the contract. The right to payment under the contract is a matter arising under it. Of course so far as that right depends upon the true construction of the contract that is matter of law. But assuming that as matter of law upon the construction of the contract it is possible that payment is due, it is for the arbitrator to say whether upon the facts it is due or not. In other words, if the arbitrator can – as he can – review the action of the engineer in refusing an order in writing it must be that in reviewing he is by the contract empowered so to do, not idly and without result, but that he can as arbitrator give effect to that review by finding that the money is due, because the engineer was, as he finds, wrong in refusing the order which he was contractually bound to give. . . .'

9.155 Clearly, a contract administrator is not 'contractually bound to give' a variation instruction in the sense that it (or rather the employer) is not obliged to vary the works. An employer is not obliged to change the materials required to build the works from that identified in the specification if it does not want to.[117] However, if the contract administrator insists that the work is changed, and if that change adds to the scope, then the contract administrator is contractually bound to issue the instruction.

9.156 In this context, the House of Lords also considered whether the contractor could simply refuse to undertake the work unless and until a valid instruction had been issued, the implication being that if the contractor should, and could, have refused to do the work, then this was its proper strategy and remedy rather than seeking a subsequent retrospective instruction. The conclusion of Lord Atkinson[118] was that it was impractical and unreasonable to expect the contractor to follow this strategy because the potential delay, disruption and wasted cost would be enormous. In such situations it is much better that the contractor

116. *Ibid.* at 365.
117. Subject to the limited obligations to vary identified in Chapter 7.
118. [1919] AC 337 at 357–358.

undertakes the work as directed and required by the employer. Whether such work is additional to the contract scope can be determined later.[119] The court may also have been influenced by the fact that the contract included an expedited dispute review procedure which could have been used to determine whether the work was extra during the progress of the project, as reviewed further below.

Brodie: the arbitration provisions

9.157 As noted above, the arbitration clause allowed a dispute concerning 'any matter or thing' or a contractor's objection to any 'certificate, finding, decision, requisition, or opinion of the engineer' to be referred to an arbitrator. The contract also contained an expedited arbitration process that allowed an arbitrator to be appointed to give an immediate determination on the point in dispute. However, the expedited process needed the consent of both parties, which if not given would have resulted in the dispute being left over until the end of the project. This clause read:[120]

> 'If either party desire to have such dispute or difference determined forthwith, such party shall give written notice to that effect to the other party, and the arbitrator shall, with the consent in writing of the other party, proceed with the arbitration. In the event of the other party failing within seven days of such notice, to give to the first-named party an assent in writing to the immediate determination of such dispute or difference, the arbitrator shall, after written notice to the non-assenting party of a time and place of hearing, decide whether such dispute or difference shall be immediately determined, or whether such determination shall await the completion or alleged completion of the work, and the same shall be determined at such time or times as the arbitrator shall decide.'

9.158 There was no immediate arbitration during the course of the project in order to resolve the dispute. Instead the parties expressly agreed to hold over the point, in order for it to be arbitrated at a later date. The Lords considered that an arbitration on the point would have resolved the issue during the project. The fact that the point was held over for resolution at a later stage could only have been agreed on the basis that the arbitrator had jurisdiction to resolve substantive issues.[121] The fact that the parties agreed to hold off the arbitrator's appointment was consistent with this being a dispute about whether or not the required work was within scope.

9.159 Clearly, the *Brodie* case does not entitle a contractor to have the decision of an employer or its contract administrator not to instruct a variation reviewed in all circumstances. The employer is not obliged to instruct extras if it does not want them. What the case indicates is that an arbitrator may treat the contract administrator's decision not to issue an instruction, on the erroneous view that the work is within scope, as something that can be opened up

119. The issue of the impasse situation, where the contractor may refuse to undertake work unless and until it gets a valid instruction, is discussed further in Chapter 2, section C.

120. [1919] AC 337 at 345.

121. See Lord Finlay's comments on this point: *ibid.* at 350–351.

and revised. It suggests that such a decision can be reassessed in the same way as any other decision-making or certifying power of the contract administrator.

9.160 It is also worth briefly considering why the principle established in *Brodie*, that an arbitrator may revise the contract administrator's decision in these circumstances, has never been applied by the courts.

9.161 The House of Lords' decision in *Beaufort Developments (NI) Ltd* v. *Gilbert-Ash (NI) Ltd*[122] gives guidance on the approach that should be taken in analysing whether certificates issued under a construction contract are conclusive. The case is reviewed in detail in Chapter 10, section B. As discussed there, clear and unequivocal wording is required if the inherent jurisdiction of the court is to be excluded. The fact that contracts commonly give an arbitrator the express power to open up, review and revise the contract administrator's certificates and decisions does not mean that the court does not inherently possess such powers where no arbitration clause is incorporated. The court will be unable to use its inherent powers to review and revise a contract administrator's certificates and decisions only if the contract uses very clear language that expressly states that such certificates and decisions are final, binding and not open to revision by the court.[123]

9.162 As noted above, *Brodie* does not involve the opening-up and revision of a certificate. Rather, it relates to whether the contract administrator's decision not to issue an order can be reviewed. However, it is apparent from the judgment in *Beaufort Developments* that their Lordships considered that the 'decision' of the contract administrator not to issue the formal instruction is something that falls to be reviewed in the same way, and is therefore within the court's jurisdiction. Indeed, Lord Hoffmann refers to *Brodie* in his judgment as well as to *Neale* v. *Richardson*[124] (a case which applied *Brodie*) in support of the contention that the court had an inherent power to review and revise certificates.[125] The following passage from the judgment of Lord Hope also indicates that the decision of a contract administrator not to issue a variation order is a matter which falls to be revised under the court's inherent powers:[126]

> 'Decisions have to be taken from time to time about such essential matters as the making of variation orders, the expenditure of provisional and prime cost sums and

122. [1999] 1 AC 266.

123. As noted in the *Beaufort Developments* case it is of course possible that the contract provides for a certificate or decision to be final and binding, but subject to review in arbitration only.

124. [1938] 1 All ER 753.

125. [1999] 1 AC 266 at 278. Lord Hoffmann placed emphasis on the 1905 Court of Appeal case of *Robins* v. *Goddard* [1905] 1 KB 294, pointing out that at the time that case was decided the use of the 'open up, review and revise' wording in arbitration clauses in construction contracts was relatively new. It is clear from the *Robins* judgment that the Court of Appeal considered that this wording was used to emphasise the interim nature of the decisions made by the contract administrator rather than the wording being intended to empower an arbitrator with jurisdiction to revise certificates and decisions which the court did not possess. Lord Hoffmann reviewed cases since 1905 where a similar approach was taken, and in this context refers to *Brodie* and, in particular, *Neale*.

126. [1999] 1 AC 266 at 290. It is worth noting that contrary views as to whether the court has the power to issue an instruction were expressed by the first instance judge in the earlier case of *Holland Hannen & Cubitts (Northern) Ltd* v. *Welsh Health Technical Services Organisation* (1981) 18 BLR 80. This case is reviewed further at Chapter 7, section D.

> the extension of time for carrying out the works under the contract. Decisions also have to be taken from time to time as to the adjustments which may have to be made to the contract sum on account of these matters and on the amounts to be paid to the contractor by way of instalments towards a final settlement of the sums to which he is entitled under the contract. But in taking their decisions on all these matters the duty of the architect or the arbitrator is to give effect to the contract, not to alter or modify it. Variations can only be made to the contract within the limits which the parties themselves have agreed. From time to time in order to exercise these functions the architect or the arbitrator must apply the provisions of the contract to the facts. But in this regard their position in the resolution of disputes between the parties is no different from that enjoyed in the exercise of its ordinary powers by the court.'

9.163 It may therefore be the case that the same principle that was applied in *Brodie* to allow an arbitrator to open up the contract administrator's decision could also be considered to be within the inherent jurisdiction of the courts.

Obtaining payment for variations: court dispensing with the need for instruction

9.164 The *Brodie* judgment does not deal in detail with how a tribunal may come to an award of monies in respect of the extra work. It is clear that the House of Lords considered that the decision of the tribunal would override the need for the formal order; or, as Lord Finlay stated,[127] '. . . the finding of the arbitrator is to take the place of the order in writing which ought to have been given'.

9.165 Lord Wenbury did indicate that, if the tribunal finds that an instruction is due, the consequent payment will also be due:[128]

> '. . . if the arbitrator can – as he can – review the action of the engineer in refusing an order in writing it must be that in reviewing he is by the contract empowered so to do, not idly and without result, but that he can as arbitrator give effect to that review by finding that the money is due. . .'.

9.166 Subsequent cases that have applied *Brodie* have come to the view that the tribunal should determine sums properly due to the contractor on the basis that the deficiency of the missing order or certificate can simply be dispensed with. In *Prestige & Co Ltd* v. *Brettell*[129] Slesser LJ stated:[130]

> 'I read *Brodie* v. *Cardiff Corpn*. where this matter was very fully considered, in substance to mean this. Where an arbitrator having jurisdiction has to decide that something ought to have been done by the architect or engineer which was not done, if the terms of reference are wide enough to enable him to deal with the matter, he may by that decision

127. [1919] AC 337 at 351.
128. *Ibid*. at 366.
129. [1938] 4 All ER 346.
130. *Ibid*. at 350.

himself supply the deficiency, and do that which ought to have been done, and produce the result which ought to have been produced, if in his view what was not done is the only reason why the result of doing what ought to have been done does not follow. In that case, an engineer, who had authority under the contract to authorise the payment of extras in writing, declined to give the necessary written authorisation. It is not necessary here to consider the grounds on which he so refused. It is sufficient to say that the arbitrator held that the extras ought to have been authorised. . .

. . . As I have said, that case, to my mind, seems to indicate quite clearly. . . that the view of the House of Lords was that, if the reference was sufficiently wide to cover the matter, the arbitrator could, by his award, cover it. That is to say, applying the principle to the present case, if, in this case, on a general consideration, apart from the actual scope of this reference, the arbitrator were to come to the conclusion that the certificate ought to have been granted, he could act as if it had been granted, and order the sum of £10,667 11s. – or, as he ultimately came to a conclusion in this case, the lesser sum which he actually ordered on this head of £7,500 – to be paid.'

9.167 This passage was cited in the Court of Appeal in the *Henry Boot Construction Ltd* v. *Alstom Combined Cycles Ltd*,[131] which concerned whether a certificate may be a condition precedent to payment. Dyson LJ in that case went on to comment on the approach taken:[132]

'It is clear that in the *Prestige* case the Court of Appeal was purporting to apply *Brodie*'s case [1919] AC 337, which for the reasons I have given does not support [the Respondents'] argument. Moreover, Greer LJ explicitly acknowledged that certificates were a condition precedent to payment, but said that the arbitrator and the court had power to dispense with the condition where a certificate ought to have been issued.'

9.168 As this passage indicates, if the employer's defence to a money claim is simply that nothing is due because the certificate, which is a condition precedent to payment, has not been issued, then the arbitrator can dispense with this condition precedent. In light of the approach of the court in *Beaufort Developments*, it would appear that the court would have the same power.

9.169 It is worth noting, finally, that the decision of the contract administrator not to issue a variation instruction may be due to the undue influence of the employer. In those circumstances the court may dispense with the need for a certificate. This subject is considered further in Chapter 10.

SECTION F: COLLATERAL CONTRACTS

9.170 Rather than additional work being undertaken as a variation to the parties' original contract it may instead be undertaken under a second, collateral, contract.[133] A contractor may seek

131. [2005] 1 WLR 3850.
132. *Ibid.* at 3866.
133. The overlap between the law relating to collateral contracts and restitution needs to be borne in mind when considering some of the older cases in which the courts talk in terms of quasi contract and recovery under an implied contract (see section G of this chapter). See, for example, *Olanda Stoomvaart Maatschappij Nederlandsche*

to establish that a collateral contract governs the additional work because the formalities for instructing changes under the original contract have not been followed, or in order to establish an entitlement to higher rates.

9.171 It will, however, often be difficult for a contractor to establish that the principal contract does not govern the legal relationship between the parties to the project in its entirety. It will also be necessary for the contractor to establish sufficient certainty of terms in respect of this second contract.

9.172 Many of the leading cases on collateral contracts arise from circumstances where the claimant is seeking to establish a contractual right or entitlement that is not expressly allowed for in the principal contract. A typical example is *Wake* v. *Renault (UK) Ltd.*[134] Renault entered into a dealership arrangement with a garage and on this basis Mr Wake made a further investment in the company that owned the dealership. Mr Wake had had discussions with Renault's representatives to the effect that Renault would not terminate its arrangement with Mr Wake's company. The formal agreement did not provide for this and there was nothing stopping Renault, under the contract, from bringing the dealership arrangement to an end. In due course, it did terminate. The court found that Mr Wake and Renault had entered into a collateral contract which effectively limited Renault's right to terminate the principal contract.

9.173 The parol evidence rule will typically prevent a claimant from being able to claim that the parties' written contract does not encapsulate the totality of their bargain. The rule is described by Lord Memis in *Bank of Australasia* v. *Palmer*s:[135]

> '. . . parol testimony cannot be received to contradict, vary, add to or subtract from the terms of a written contract, or the terms in which the parties have deliberately agreed to record any part of their contract.'

9.174 The rule applies equally to oral and written evidence and is intended to avoid the uncertainty of parties referring to separate discussions or negotiations in order to detract from the contract wording. The rule is, however, subject to certain exceptions. A party may be able to show that the finalised contract was not intended to set out the whole of the agreement reached – for example, that the contract was intended to be partly oral and partly written.

9.175 A party may seek to establish that a collateral contract was entered into as a means of effectively sidestepping the parol evidence rule. As a result, the courts will be very wary of finding that a collateral contract has been agreed.

Lloyd v. *General Mercantile Co Ltd* [1919] 2 KB 728, which is referred to in the much more recent case of *Mowlem Plc (t/a Mowlem Marine)* v. *Stena Line Ports Ltd* [2004] EWHC 2206 (TCC), which specifically refers to the history of restitution being based in theories of implied contract. Modern cases expressly distinguish restitution from the law of contract, stating that entitlement arises because of unjust enrichment rather than via an implied contract: see, for example, the comments in the Australian High Court case of *Pavey & Matthews Proprietary Limited* v. *Paul* (1990) 6 Const LJ 59.

134. (1996) 15 Tr LR 514.

135. [1897] AC 540 at 545.

9.176 The House of Lords case of *Heilbut Symons & Co* v. *Buckleton*[136] is often referred to as the leading authority on the question of establishing a collateral contract, and the following passage of Lord Moulton has regularly been quoted in subsequent cases:[137]

> 'Such collateral contracts, the sole effect of which is to vary or add to the terms of the principal contract, are therefore viewed with suspicion by the law. They must be proved strictly. Not only the terms of such contracts but the existence of an animus contrahendi on the part of all the parties to them must be clearly shewn. Any laxity on these points would enable parties to escape from the full performance of the obligations of contracts unquestionably entered into by them and more especially would have the effect of lessening the authority of written contracts by making it possible to vary them by suggesting the existence of verbal collateral agreements relating to the same subject-matter.'

9.177 The Court of Appeal case *Strongman* v. *Sincock*,[138] in applying the *Heilbut Symons* test, established that a collateral contract had been entered into. Strongman, a local Cornish builder, undertook work to develop properties belonging to Mr Sincock at Mylor on the Fal estuary in Cornwall. Under legislation in force at the time it was necessary to have licences to undertake this work. Sincock, also being an architect, undertook to get the licences required but then failed to apply for them. Sincock then refused to pay the builder on the basis that, since the licences had not been obtained, the work undertaken was illegal. The Court of Appeal accepted that, on the basis of the particular licensing laws in place at this time, it was established law that a builder doing work without the necessary licence had no contractual entitlement to be paid. The court found, however, that a collateral contract had been entered into by the parties under which the employer agreed to obtain the licences. The employer was in breach of that contract and the contractor was entitled to damages equal to the price for the work. The court specifically stated that it was applying the test for collateral contracts as set out in *Heilbut Symons*.

9.178 In the *Strongman* case it appears that the bargain struck by the parties was in danger of being defeated because of the failure to obtain the licences for which the employer was, after all, solely responsible. The concern in *Heilbut Symons* is that the collateral contract argument will be raised by a party to avoid the terms of the agreement by effectively adding additional provisions to an otherwise clear arrangement. The Court of Appeal case of *Gilbert & Partners* v. *Knight*[139] is an example of where a collateral contract argument was rejected on this basis.

9.179 Gilbert, an architect's firm, was employed by a Mrs Knight in 1965 to undertake work in relation to the renovation of her house at Cavendish Road, Balham, in south London. The architect agreed an inclusive fee of £30 and this was set out in a letter which was also found to incorporate the terms of the parties' contract. It was anticipated at the time that the renovation work would cost around £600. However, the full extent of the work undertaken grew

136. [1913] AC 30.
137. *Ibid.* at 47.
138. [1955] 3 WLR 360.
139. [1968] 2 All ER 248.

considerably, to around £2,300. The architect never raised the issue of his fees again until the end of the job, when he submitted an increased fee claim for £135. The court noted that the most attractive way that the case could be put was that the first contract related to the first element of work (up to the £600 mark) and that the additional, subsequent work was undertaken under a new contract.[140] However, this flew in the face of the words of the agreement, which did not limit the architect's services to designing and supervising just £600 of construction work. Davies LJ stated:[141]

> '. . . in this case the cardinal point is that there had been this previous agreement to do some work for a lump sum of £30, and I for myself cannot see that there is any necessary implication that, when the work was going to be extended, or increased, in the absence of any express mention of it the defendant should be liable to make any further payment to the plaintiffs.'

9.180 The evidence indicated that a contract had been agreed on unambiguous terms. It may be that the architect in this case should have expressed his fee as a percentage of the total cost of the building works rather than a lump sum. Additionally, the architect should perhaps have sought the employer's agreement to change the fee part way through the project. However, the terms of the express contract were clear and the price was said to include all work undertaken by the architect in connection with the project. In such circumstances a court will be highly reluctant to allow a party to be paid on the basis of a collateral contract as an artificial means of avoiding a clear agreement.

Additional work undertaken under a collateral contract

9.181 In the reported cases where a contractor has claimed that work has been instructed under a collateral contract, the principal contract typically contains constraints on the variations that may be ordered. Reliance on a collateral contract can be used to avoid such constraints.

9.182 For example, the principal contract may require that variations are instructed in writing. If no written instruction has been given, the contractor may seek to establish that the additional work was undertaken under a collateral contract.

9.183 Where the additional work in question is quite distinct from the scope under the principal contract, it will be easier to establish that it is governed by a new collateral contract. However, the more closely associated the work is with the original scope, the more likely it will be that a contractor's case that it is under a new contract will be perceived as an artificial construct which infringes the approach outlined by Lord Moulton in the above passage from *Heilbut Symons.*

140. The case is one of those which could be seen as an analysis of a restitutionary claim based on implied contract. It quotes from the passage of Lord Dunedin in *The Olanda*, on the necessity for a contract to be got rid of in order for a new contract to be established in its place. However, it is clear from the judgment that the pleaded claim was based on an implied contract.

141. [1968] 2 All ER 246 at 251.

9.184 In *Taverner & Co Ltd* v. *Glamorgan Country Council*[142] the contract required prior written variation instructions. These were not given in relation to the contractor's additional work, which involved using higher quality stone facings for the building under construction The contractor argued, among other things, that it was entitled to payment outside the contract. Humphreys J dismissed such an argument, stating:[143]

> 'It is quite clear that that cannot apply to this case. The terms of the plaintiffs' own claim is that it is the alteration from an agreement to dress with one sort of stone to an agreement to dress with a different and more expensive sort of stone; that is all. It is quite clear to my mind that it cannot be said that the extras are outside the contract.'

9.185 In this case the additional work was very similar to the original scope and the change to the quality of the work could have been ordered as a variation under the original contract. As such it was artificial to talk in terms of the upgrade being undertaken under a new contract.[144]

9.186 Establishing that new work has been undertaken under a collateral contract will have more credibility if the principal contract contains limits on the type of work which can be instructed, for example if a certain type of work cannot be instructed under the principal contract.

9.187 In *Blue Circle Industries plc* v. *Holland Dredging*[145] the contractor had been employed to undertake work on a dredging project. During the course of the project the parties agreed that the contractor would undertake additional work, constructing an island from the dredged material. The contract was found to contain limits as to the type of additional work that could be constructed, such that the island construction work could not be treated as a variation.[146] Purchas LJ stated:[147]

> 'Could the employer have ordered the work required by it against the wishes of the contractor as a variation under clause 51? If the answer is "No" – then the agreement under which such work is carried out cannot constitute a variation but must be a separate agreement. . .
>
> . . . The only alternatives were dumping at sea or the creation of an artificial bund with the formation of an island. Either of these two solutions was wholly outside the scope of the original dredging contract. . .
>
> . . . collateral negotiations were in hand for the solution to the problem of discharging the dredged material and the creation of an island. In contrast, however, in the case

142. (1940) 164 LT 357.
143. *Ibid.* at 360.
144. See also *Goodyear* v. *Weymouth and Melcombe Regis Corpn* (1865) 35 LJCP 12. The contractor built a market house in Weymouth and during the course of the works was instructed to construct, in addition, a pump and drains. The contractor therefore sought to argue that the extra work was undertaken outside the principal contract, but this was rejected on the basis that the work was closely connected with the original scope. Williams J concluded that the pump and drains were closely connected with the original contract works and therefore should be treated as a variation rather than entirely separate work.
145. (1987) 37 BLR 40.
146. See Chapter 5, section B.
147. (1987) 37 BLR 40 at 52.

of the island creation contract the official order form contains in considerable detail aspects of the contract under confirmation. In my judgment, [Blue Circle's] submission that the island contract is separate from the dredging contract is correct.'

9.188 In comparison to the type of work which was the subject of the disputed variation in the *Taverner* case above, the additional work in this case was of a type quite distinct from that contemplated by the principal contract.

9.189 In *Russell* v. *Viscount Sa Da Bandeira*[148] a similar point arose, but this time the contractual constraint related to the point in time at which the variations could be ordered.[149] Changes had been ordered after practical completion which were not permitted under the contract. The extra work was treated as having been undertaken under a separate contract.

9.190 In *McAlpine Humberoak Ltd* v. *McDermott International Inc (No. 1)*[150] the contractor at first instance was successful in establishing that the parties' original contract had been frustrated and that a 'substituted' contract came into existence via which they were entitled to be paid a reasonable sum for all work undertaken. The Court of Appeal overturned the decision, finding that the original contract had not been frustrated. The first instance finding allowed the contractor to establish entitlement even though it had not sought to assess entitlement by reference to each item of extra work. The Court of Appeal stated that the contractor needed to comply with the contract procedures and could not have the works effectively remeasured under a new contract.[151]

The contract administrator's authority to agree a collateral contract

9.191 If the contract administrator seeks to agree a collateral contract with the contractor, it will be acting in this role as agent of the employer. As with any agency situation, the contractor needs to ensure that the agent has authority to bind its principal.[152]

9.192 A contract administrator has no implied authority to enter into new contracts on behalf of an employer.[153]

9.193 The employer may give the contract administrator actual authority to enter into contracts on its behalf. However, a contractor should ensure that it has confirmation from the employer that the contract administrator has actual authority to bind it in respect of the new contract.

148. (1862) 143 ER 59.
149. See Chapter 5, section D.
150. (1992) 58 BLR 1.
151. See Chapter 11, section D.
152. See Chapter 8, section C, for a detailed review of the contract administrator's role as agent and the nature and extent of its authority to vary a contract on the employer's behalf.
153. See paragraph 8.65.

9.194 If the contract administrator agrees to the contract variations on behalf of the employer in the absence of actual or implied authority, then the employer will not be bound, although the employer may subsequently ratify the agreement.

Entitlements under a collateral contract

9.195 If a new collateral contract governs the arrangements between the parties in relation to the additional work, that agreement will cover the contractor's entitlement to be paid. If a price has not been expressly agreed, the contractor will be entitled to a reasonable sum for undertaking the work. The assessment of what is reasonable may need to take account of the prices under the original contract.[154]

9.196 It will often be necessary also to consider the amount of time that the contractor is entitled to in order to undertake the work. The collateral contract may allow the contractor a reasonable period to undertake the new work, but this will not affect the time periods for undertaking the work under the principal contract.

SECTION G: RESTITUTION, UNJUST ENRICHMENT AND *QUANTUM MERUIT* CLAIMS

9.197 The law of restitution governs claims based on the principle of unjust enrichment.[155] This may arise where a benefit is given by one party to another and it would be unjust for that benefit not to be returned or paid for by the party in receipt. For example, where a person mistakenly pays money into a stranger's bank account, the law of restitution can be invoked in order to claim its return. There is no contract between the parties but there is an obligation to account for the benefit given. Importantly, therefore, this is a body of law that operates where there is no contractual relationship between the parties.

9.198 It is important to consider the terms used in relation to this type of claim. Claims in restitution often seek a '*quantum meruit*'. This expression means fair remuneration. The owner of a building who has been unjustly enriched by work undertaken by a builder on its property may be obliged to pay a *quantum meruit* for this work. The term can often lead to confusion because it is not just used in the context of a restitutionary claim. Where there is a contract in place between the employer and contractor with no agreed price, but an express or implied obligation to pay a reasonable sum, the contractor's entitlement is often said to be for a *quantum meruit*. The term, when used in this second context, denotes an approach to the assessment of the sum due rather than denoting a cause of action.[156] Despite this, the term '*quantum meruit*' is sometimes also used as shorthand to refer to a claim in restitution.

154. See Chapter 11, section D.

155. For the purposes of this book, the broad principles only are reviewed prior to looking at the application in the context of construction contract variations. For a full and very comprehensive analysis of this area of law, see Mitchell, Mitchell and Watterson, *Goff & Jones: The Law of Unjust Enrichment*, 8th Edn (2011, Sweet & Maxwell) (hereafter '*Goff & Jones*')

156. See Chapter 11, section D, which considers the assessment of sums due for additional work under a contract where that contract does not contain provisions for valuing the extras. In those situations the assessment will typically be on the basis of fair remuneration, and the term '*quantum meruit*' is therefore also often used in that context.

9.199 In order to establish a claim in restitution, a benefit must have been conferred on the defendant at the claimant's expense in circumstances where it would be unjust to allow the defendant to retain the benefit.

9.200 Restitution is partly founded on 'quasi-contract'. Many of the older cases reflect the fact that the courts historically conceptualised such claims as being on the basis of implied contracts.[157] It is now, however, clearly recognised by the courts that restitution is quite separate from the law of contract. As noted in the Australian High Court case of *Pavey and Matthews Proprietary* v. *Paul*[158] (which in turn has been regularly quoted with approval by the English courts), such a claim:[159]

> 'rests not on implied contract but on a claim to restitution of a claim based on unjust enrichment, arising from the respondent's acceptance.'

9.201 Where the benefit supplied involves services (as will normally be the case with building contract variations), the work must have been 'freely accepted' in order for the enrichment to be considered 'unjust' by the courts. The beneficiary (the employer) must therefore, as a reasonable person, have known that the provider (the contractor) expected to be paid for the services, and yet did not take advantage of a reasonable opportunity open to him to reject the offered services.

9.202 This requirement, that the beneficiary must have known that it was going to pay, is illustrated by the case of *R.* v. *Vale of White Horse DC.*[160] Sewerage services had been supplied by the council to the defendant football club. It was necessary for the club to have these services and therefore the council supplying them had saved the club an inevitable expense. However, the council had led the club to the reasonably held belief that it would not have to pay for these services. There was therefore no free acceptance, knowing that it would have to pay.[161]

No restitution claim under a subsisting contract

9.203 The law of restitution is subordinate to the law of contract. A party to a contract is bound to use its contractual remedies and cannot revert to an action in restitution. If the parties have entered into a contract, that agreement should regulate their relationship. One party cannot therefore seek to sidestep those provisions and rely upon the law of restitution. If the receipt of a benefit is governed by the terms of the contract, the enrichment can hardly be considered to be unjust.

157. See, for example, *Thorn* v. *London Corporation* (1876) 1 App Cas 120 and *The Olanda Stoomvaart Maatschappij Nederlandsche Lloyd* v *General Mercantile Company* [1919] 2 KB 728. Older cases make no distinction between quasi-contract and collateral contracts: see section F of this chapter.

158. (1990) 6 Const. LJ 59.

159. *Ibid.* at 60.

160. [2003] EWHC 388 (Admin).

161. See also the passage from *S&W Process Engineering* v. *Cauldron Foods Ltd* [2005] EWHC 153 (TCC) quoted below, which also states that free acceptance cannot occur in those circumstances.

9.204 Cases have arisen whereby a contractor has undertaken extra work without an instruction and has sought to claim in restitution as a means of recovering in the absence of a formal order. In such circumstances the claim will fail because the parties' contract should govern entitlement. In *Robert Taylor* v. *Motability Finance Limited*, Cooke J, in considering a claimant's argument that it could have concurrent contractual and restitutionary claims, stated:[162]

> 'In the context of contract and restitution, it is clear that the parties, in agreeing a contract, intend that to apply and there is therefore no room for restitution at all where there is full contractual performance by one party and, even on the Claimant's own case, part performance by the other.'

9.205 The issue of whether a claim can be brought in restitution where a contract already existed was considered in the construction case, *Mowlem Plc (t/a Mowlem Marine)* v. *Stena Line Ports Ltd*.[163] Stena argued that a contract had been entered into between the parties via a letter dated 4 July 2003, and that this must govern any related claims between the parties. It said that any alternative claim in restitution could therefore not proceed. HHJ Richard Seymour QC, commenting on the point, stated:[164]

> 'A consequence of the fact that the parties had made a contract in the terms of the letter dated 4 July 2003, submitted [Stena's counsel], was that there was just no question as a matter of law of Mowlem being able to claim payment on a *quantum meruit* basis for work which was covered by the contract. In support of that submission [Stena's counsel] relied upon a passage in *The Law of Restitution*, 6th edition, 2002, by Lord Goff of Chieveley and Professor Gareth Jones. . . In that passage there was reference to the speech of Lord Dunedin in *The Olanda*. . . in which Lord Dunedin had said:
>
> > "As regards quantum meruit where there are two parties who are under contract quantum meruit must be a new contract, and in order to have a new contract you must get rid of the old contract."
>
> That passage was referred to and applied by the Court of Appeal in *Gilbert & Partners* v. *Knight* [1968] 2 All ER 248. Lest those authorities might be thought to have been tainted in their references to the necessity for a new contract,[165] if there was to be an entitlement to payment on a *quantum meruit* basis, by the former theory of the justification for a *quantum meruit* being an implied contract, [Stena's counsel] drew to my attention a decision of the Court of Appeal of New South Wales, *Trimis* v. *Mina*.'

162. [2004] EWHC 2619 (Comm) at para. 23.
163. [2004] EWHC 2206 (TCC).
164. *Ibid.* at para. 40.
165. As noted in the introduction to this section on restitution, a number of older cases use the language of quasi or implied contract in the context of claims for restitution. *The Olanda* is a good example where the court talks in terms of the contract having to come to an end before a new implied quasi contract under which a restitutionary claim can be brought. On the other hand, *Gilbert & Partners* v. *Knight* [1968] 2 All ER 248, which is commented upon further *supra* at para. 9.178, appears, in fact, to be a situation where a separate standard collateral contract was pleaded by the plaintiff rather than it being a restitutionary claim.

9.206 The judgment then went on to quote from a passage from the judgment of Mason P in the Australian case of *Trimis* v. *Mina*[166] (see below) and concluded:[167]

> 'At all events, I am satisfied that the law as stated by Mason P does accurately represent the law of England and Wales and that the principle so stated is applicable in the present case.'

9.207 *Trimis*, which is a decision of the New South Wales Court of Appeal, is of particular relevance because it is a construction case involving a claim for payment for additional work in the absence of a formal instruction.

9.208 Mr and Mrs Trimis had employed Mr Mina, a builder, to construct a house for them. The contract required that variations be instructed in writing and this was a condition precedent to payment. Mr Mina had undertaken additional work which had not been instructed in accordance with these contract provisions and so he sought to claim in restitution. The court decided that it was not open to the contractor to claim in restitution when there was an inconsistent contractual promise in place between the parties as regards the subject matter of the restitutionary claim. The following passage from the judgment of Mason P was quoted in its entirety in the *Mowlem* judgment, as noted above:[168]

> 'The starting point is a fundamental one in relation to restitutionary claims, especially claims for work done or goods supplied. No action can be brought for restitution while an inconsistent contractual promise subsists between the parties in relation to the subject-matter of the claim. This is not a remnant of the now discarded implied contract theory of restitution. The proposition is not based on the inability to imply a contract, but on the fact that the benefit provided by the plaintiff to the defendant was rendered in the performance of a valid legal duty. Restitution respects the sanctity of the transaction, and the subsisting contractual regime chosen by the parties as the framework for settling disputes. This ensures that the law does not countenance two conflicting sets of legal obligations subsisting concurrently. As Deane J explained in the context of the *quantum meruit* claim in *Pavey & Matthews* (at 256), if there is a valid and enforceable agreement governing the claimant's right to payment, there is "neither occasion nor legal justification for the law to superimpose or impute an obligation or promise to pay a reasonable remuneration".'

9.209 The 2005 Technology and Construction Court case of *S&W Process Engineering* v. *Cauldron Foods Ltd*[169] considered the same issues. The contractor, S&W, had supplied and installed processing equipment at Cauldron's premises. One of the issues that arose was whether S&W could maintain a claim in restitution if it was found that formal instructions had not been issued. HHJ Peter Coulson QC stated that it was 'trite law' that a claim in restitution

166. (2000) 2 TCLR 346.
167. [2004] EWHC 2206 (TCC) at para. 40.
168. (2000) 2 TCLR 346 at para. 54.
169. [2005] EWHC 153 (TCC).

could not arise where there was also an existing contract.[170] In commenting on whether a claim for a variation could be made on such a basis, he made the following observations:[171]

> 'That leaves what the contract letter of 21 June 2002 calls "increases to the scope of supply" and what in the building industry are more commonly called variations. It seems to me that, *prima facie* S&W would not be able to make an alternative claim for a *quantum meruit* in respect of an item of allegedly varied or additional work if they had already failed to demonstrate, under the contract, that that item of varied or additional work had been instructed and/or requested and/or authorised by Cauldron. In other words, if the claim under the contract for that item of allegedly varied or additional work failed because the necessary instruction/request/authorisation could not be proved, then it seems to me that, at least *prima facie*, such an omission would also be fatal to any alternative claim for a *quantum meruit*. Even leaving aside the difficulty created by the existence of the contract itself, S&W's alternative claim would have to demonstrate that, in some way, Cauldron freely accepted services in circumstances where they should have known that S&W would expect to be paid for them, and that might be difficult where the item of extra work in dispute was not clearly requested/instructed/authorised. . . .'

Relevance of restitution to variations

9.210 As *Trimis* v. *Mina* illustrates, a contractor may base its claim for extra work in restitution because the lack of a formal variation instruction makes a claim under the contract problematic. As discussed above, the existence of a contract is likely to prove fatal to such a claim.

9.211 A claim in restitution may also be attractive to a contractor because it will allow the assessment of the payment due for the works to be undertaken by reference to the benefit gained by the employer rather than using the contract rates.[172]

9.212 Because a claim in restitution cannot be brought where the contractor can claim under a contract, the only situations in which it is likely to arise are where, firstly, the work in question cannot be undertaken under the contract that is in existence; or secondly, where no contract is in existence in the first place. These two situations are discussed in turn below.

The extra work cannot be undertaken under the subsisting contract

9.213 Even though a contract is in existence, it may be the case that the extra work that is the subject of the claim cannot be undertaken under the contract. The parties' agreement may provide that only a certain type of work is allowed to be undertaken under the contract, leaving the claimant free to bring a separate claim for the extras in restitution.

170. *Ibid.* at para. 51.
171. *Ibid.* at para. 53.
172. See *Costain Civil Engineering* v. *Zanen Dredging and Contracting* (1996) 85 BLR 77, which is discussed below, in this section. See later discussion regarding the quantification of such claims.

9.214 In *Costain Civil Engineering* v. *Zanen Dredging and Contracting*[173] a subcontractor was employed to carry out dredging works. The main contractor wanted significant extra works undertaken which involved transforming a casting basin into a marina. The court found that this work was not within the contemplation of the original contract and therefore could not be instructed as a variation under it. HHJ Humphrey Lloyd QC found that the contractor was entitled to be paid for this work as a claim in restitution, as the work could not be instructed under the contract. Whilst some of the older cases are not entirely clear as to whether the assessment of a *quantum meruit* is based on an implied contractual valuation or restitution, this distinction is at the heart of this judgment:[174]

> 'A distinction is recognised between a *quantum meruit* arising out of an implied term for payment and situations where there is no contract as in this case and where the basis of the assessment is based upon restitution and unjust enrichment. See *Pavey & Matthews Proprietary Ltd* v. *Paul* (1987) 162 CLR 221, High Court of Australia, judgment of Mason J and Wilson J at page 227.'

9.215 The same situation can potentially arise whenever the extra work cannot be undertaken under the contract. This may arise not only because of the type of work undertaken, but also because of other factors such as the timing of the work.[175]

Claims for restitution: no contract subsisting between the parties

9.216 A contractor may be able to establish an entitlement to be paid in restitution for the work it has undertaken because no contract is in existence. This situation, where a contractor is undertaking work on a project in the absence of a contract, may arise for various reasons; for example, no agreement was concluded between them or it was repudiated. The principal reasons why such a situation may arise in the context of a construction project are considered below.

Contract not finalised by the parties

9.217 In *British Steel Corp* v. *Cleveland Bridge & Engineering Co Ltd*[176] the parties' negotiations did not result in a finalised agreement. Robert Goff J concluded that the employer was therefore bound to pay on a *quantum meruit* basis in restitution for the work undertaken:[177]

> 'Both parties confidently expected a formal contract to eventuate. In these circumstances, to expedite performance under that anticipated contract, one requested the other to commence the contract work, and the other complied with that request. If thereafter, as anticipated, a contract was entered into, the work done as requested will be treated as having been performed under that contract; if, contrary to their expectation,

173. (1996) 85 BLR 77.
174. *Ibid.* at 93–94.
175. See Chapter 5 which deals with the various limitations which can apply to variations that may be instructed.
176. [1984] 1 All ER 504.
177. *Ibid.* at 511.

> no contract was entered into, then the performance of the work is not referable to any contract of which the terms can be ascertained, and the law simply imposes an obligation on the party who made the request to pay a reasonable sum for such work as has been done pursuant to that request, such an obligation sounding in quasi contract or, as we now say, in restitution.'

9.218 Where the contractor starts on site under a letter of intent, it may only be sanctioned to undertake work up to a defined value. Once that level is exceeded, the contract between the parties, as represented by the letter of intent, may fall away. In *ERDC Group Ltd* v. *Brunel University*,[178] the letter of intent was effectively renewed on four occasions, each time with a new letter being issued by the employer, raising the authorised project price ceiling. After the final one fell away, the contractor wrote saying that it was not prepared to sign the draft contract documents because it considered that the project had changed substantially from that originally conceived, but that it was prepared to continue, and that it should be paid on a *quantum meruit* basis. The court found that, for the period after the expiry of the last letter of intent, the parties' relationship was no longer governed by contract and the contractor was therefore entitled to compensation on a restitutionary basis. It is important to recognise that the expiry of a letter of intent will not always have this result. It depends on the terms of the letter and the broader factual matrix such as the discussions that took place when the letter lapsed. It may well be that a new contract will come into being at this stage or the terms of the letter will continue to apply.

9.219 It is sometimes the case that a contract does not come into being because the advance work is speculative and does not therefore lead to an entitlement to payment. Such were the circumstances in *Stephen Donald Architects Ltd* v. *King*.[179] Stephen Donald was a personal friend of King, who was seeking to develop property he owned into residential flats. Donald undertook a certain amount of work, including obtaining outline planning permission. However, King had always made it clear that he wanted the development to proceed on the basis of both parties operating a joint venture, through which Donald would take a share of the profits, and in this way would be recompensed for its work.

9.220 HHJ Richard Seymour QC found that no contract had been finalised by the parties. Whilst work undertaken in such circumstances may fall to be paid in restitution, this was not the case here as King was always proceeding on the basis that Donald would be paid via the profits of the venture at a later stage. The party in receipt of the benefit must freely accept the services provided. It must reasonably expect to know that the provider expects to receive payment for such services and purposely give up the chance to disabuse them as regards any misunderstanding. This was not the case in this situation and therefore a claim in restitution did not succeed.

9.221 The question whether the work undertaken by the contractor or consultant is intended to be speculative will often turn on the particular facts. In *William Lacey (Hounslow) Ltd* v.

178. [2006] EWHC 687 (TCC).
179. [2003] EWHC 1867 (TCC).

Davis[180] the contractor was requested by the employer to prepare detailed estimates for the cost of undertaking the restoration of war-damaged buildings. The information it produced was used by the employer to negotiate with a government body in order to obtain funding, and a number of revisions to this information was produced. The employer then sold the building to another developer which planned to undertake the work. The court found that whilst there was no contract between the contractor and employer, the work that had been undertaken went beyond what could reasonably be expected to be carried out by a tendering contractor and it was therefore entitled to payment.

9.222 The case of *Hallamshire Construction Plc* v. *South Holland District Council*[181] is another example of a situation where a party unsuccessfully sought to claim recovery in restitution by claiming that no contract had been finalised.

9.223 The contractor commenced work on the project and completed phase one without a formal contract ever being finalised. The parties then agreed that the contractor would undertake the second phase. This second phase work was governed by an instruction document the terms of which the parties agreed.

9.224 The employer argued that the instruction amounted to a new stand-alone contract, the terms of which governed the phase two work. The contractor argued that the instruction document was not sufficiently clear as to what would be paid for the works, and therefore the parties were not fully in agreement.

9.225 It would appear that the contractor's case was motivated by the fact that recovery on a restitutionary *quantum meruit* basis would be more advantageous than that due under the instruction, which in turn would have entitled the contractor to payment by reference to the rates in the unexecuted draft principal contract document. HHJ Thornton QC preferred the employer's analysis and found that the instruction amounted to an enforceable contract.

Frustration

9.226 Where a contract becomes frustrated, both parties are discharged from their obligations[182] and payment for the work undertaken by the contractor will be governed by the Law Reform (Frustrated Contracts) Act 1943. Section 1(3) of the Act reads:

> 'Where any party to the contract has, by reason of anything done by any other party thereto in, or for the purpose of, the performance of the contract, obtained a valuable benefit (other than a payment of money to which the last foregoing subsection applies) before the time of discharge, there shall be recoverable from him by the said other party such sum (if any), not exceeding the value of the said benefit to the party obtaining it, as the court considers just, having regard to all the circumstances of the case and, in particular —

180. [1957] 1 WLR 932.
181. [2004] EWHC 8 (TCC).
182. Frustration will very rarely occur in relation to modern construction contracts: see *supra*, paras. 2.51–2.56.

> the amount of any expenses incurred before the time of discharge by the benefited party in, or for the purpose of, the performance of the contract, including any sums paid or payable by him to any other party in pursuance of the contract and retained or recoverable by that party under the last foregoing subsection, and
>
> the effect, in relation to the said benefit, of the circumstances giving rise to the frustration of the contract.'

9.227 The entitlement to be paid is therefore on what is essentially a restitutionary basis, in that it is necessary to look to the benefit derived by the recipient and have regard to what the court considers to be just. Difficulties in establishing such a benefit may arise where a project that is part-built and has to be stopped because of a frustrating event. If it cannot be completed, the benefit derived by the employer may be non-existent.

Repudiation

9.228 If an employer repudiates a contract, the contractor's claim will normally be formulated as damages for breach.[183] Such a claim will only compensate the contractor for entitlements that would have arisen under the contract. Therefore, if a claim for extra work could not be made under the contract because it was not formally instructed, then no such claim can be brought based on breach following repudiation.

9.229 There are a number of historic cases which indicate that a party may instead elect to recover compensation on a restitutionary basis.[184] More recently, the Australian courts have strongly supported such an approach: see in particular *Renard Construction (ME) Pty Ltd* v. *Minister for Public Works*[185] in which Meagher JA stated:

> 'The law is clear enough that an innocent party who accepts the defaulting party's repudiation of a contract has the option of either suing for damages for breach of contract or suing on a *quantum meruit* for work done.'

9.230 The current position, in English law at least, is far from clear as there is a significant body of case law that takes the opposite view. It would seem that, on balance, under English law

183. See *Morrison-Knudsen Co Inc* v. *BC Hydro & Power Authority* (1978) 85 DLR (3d) 186, where a contractor who sought to make a claim for the recovery of the cost of extra work in restitution failed because the contractor did not act upon the repudiatory actions of the employer and instead continued working. In such circumstances, the contract could not be held to have been repudiated and the action failed.

184. See Julian Bailey, 'Repudiation, Termination and Quantum Meruit' (2006) 22 Const LJ 217, which makes out the case for the existence of this option. The authorities in support include: *Planche* v. *Colbourn* (1831) 8 Bing 14, 131 ER 305; *De Bernardy* v. *Harding* (1853) 155 ER 1586; *Lodder* v. *Slowey* [1904] AC 442; and *Heyman* v. *Darwins Ltd* [1942] AC 356, where at 397–398 Lord Porter stated that a party may sue on the contract or '. . . he may in certain cases neglect the contract and sue upon a *quantum meruit*. In the former case he is still acting the contract. He requires to refer to its terms at least to ascertain the damage, and he may require to refer to them also if the repudiation of the contract is in issue. In the latter case he is not proceeding under it but on quasi contract'.

185. (1992) 26 NSWLR 234 at 276.

at least, no such right of election arises.[186] In the recent case of *Robert Taylor* v. *Motobility Finance Ltd*, Cooke J stated:[187]

> 'Not only is it true to say that, historically, restitution has emerged as a remedy where there is no contract or no effective contract, but there is no room for a remedy outside the terms of the contract where what is done amounts to a breach of it where ordinary contractual remedies can apply and payment of damages is the secondary liability for which the contract provides.'

9.231 If a party is able to elect to claim for compensation on a restitutionary basis, it may have the opportunity of being paid more following repudiation than it would have received under the contract. A restitutionary claim would be assessed by reference to the benefit gained by the employer, such that extra work undertaken with the employer's knowledge in the absence of variation instructions may be compensated even though no claim would arise under the contract. Where a contract is repudiated, the parties are discharged from future performance but a party retains the rights it has obtained under the contract. The implication must therefore be that the contract should direct and dictate the nature and extent of the parties' recoverable losses following repudiation. If not, a repudiated party may be in a position of being able to recover significantly more than would have been due had the contract continued to full term.[188] This may incentivise a party under an uneconomic contract to agitate and seek to manufacture a basis for claiming repudiation.

Quantification of entitlement

9.232 The basis of a claim in restitution is to restore to the claimant the value received by the defendant:[189]

> '[T]he law of restitution is the law of gain-based recovery, just as the law of compensation is the law of loss-based recovery.'

9.233 If the parties enter into a contract but no agreement is reached as to price, the employer will be obliged to pay a reasonable sum. In assessing a reasonable sum where there is no agreement as to price, it will be necessary to consider the cost to the contractor of undertaking the work, or the market price. However, the starting point for a claim in restitution is different, as the following passage from *Costain* v. *Zanen* illustrates:[190]

> 'A distinction is recognised between a *quantum meruit* arising out of an implied term for payment and situations where there is no contract as in this case and where the basis of the assessment is based upon restitution and unjust enrichment. . .

186. See *Ranger* v. *Great Western Railway* 10 ER 824, (1854) S HL Cas 72 QB; and *Trident Engineering Company* v. *Manson Holdings* [2000] HK CFI 1.

187. [2004] EWHC 2619 (Comm) at para. 23.

188. As noted previously, recovery on a restitutionary *quantum meruit* basis may allow a contractor to claim for variations work which would be disallowed under the contract because of notices acting as condition precedents to payment had not been provided.

189. *Sempra Metals Ltd* v. *Inland Revenue Commissioners and another* [2008] 1 AC 561 at 585.

190. (1996) 85 BLR 77 at 93–94.

. . .*Hudson's Building and Engineering Contracts* (11th edn) volume 1, at page 144, paragraph 1-264 speaks of the distinction between the implied promise to pay cases and those depending on quasi contract or restitution:

> "The distinction is of great practical importance since the principle of restoration of benefit which is at the heart of true quasi contract means that the resulting obligation of the defendant is not to pay a reasonable price or remuneration based on cost incurred by the plaintiff, but to reimburse him for the value of the advantage, if any, received by the defendant as a result of the work done or services performed.'"

9.234 In *Costain* the main contractor had ordered its subcontractor to perform additional work which fell outside the scope of the subcontract such that it was not governed by the parties' agreement and payment was due in restitution. The court considered certain points of law arising out of an arbitration award including how the additional work should be valued. One question it was asked to determine was whether the arbitrator could take into account the profit which the main contractor had made under its agreement with the employer as a result of undertaking the extra work. The judge found that it was acceptable to take this into account because restitution is concerned with the gain received by the defendant.

9.235 Such an approach has two drawbacks in cases involving a commercial environment where a contract has fallen away, does not apply to the work in question, or despite initial intentions has not been entered into. Services may have been undertaken which, once supplied, leave no benefit being owned by the defendant (as opposed to the supply of goods, which does). Even if the services, such as those undertaken under a construction contract, do leave a lasting product, it may have no market value. For example, a contractor may only partially complete certain works and the value to the employer of a part-completed project may be only nominal.[191]

9.236 It is therefore the case that when services have been provided the assessment of the benefit will not simply focus on the end product. The benefit to the defendant may be analysed as the undertaking of those services irrespective of the final end product.[192] *Goff & Jones* states:[193]

> '. . . in many construction cases where the claimant undertakes work at the defendant's request, the parties clearly conceptualise the benefit as the services: the benefit received from the claimant is not the building (or part of the building), but the claimant's labour.'

9.237 As the above paragraph indicates most construction cases seek to assess the contractor's entitlement by looking at the value of the services undertaken rather than looking at the benefit

191. In *BP Exploration Co (Ltd)* v. *Hunt (No. 2)* [1979] 1 WLR 783, Robert Goff J gave the example of the situation where a claimant redecorates a house for a defendant with bad taste with the result that the market value of the property is reduced.

192. *Goff & Jones*, para. 5-24: 'The best approach is for the court to keep an open mind, and to take all the circumstances into account, including whether the parties themselves thought that the benefit being transferred was the services or their end-product.'

193. *Goff & Jones*, para. 5-25.

gained by the recipient.[194] This assessment typically involves the courts seeking to assess a reasonable remuneration or a fair market value.

9.238 In restitution cases of the type discussed in this section, a contract document will often be in existence albeit that it has not been agreed, or has fallen away. Inevitably therefore, any discussion about the assessment of entitlement will involve a consideration of the commercial terms of the contract documents. The terms of such an agreement will not be determinative. In *Serck Controls Ltd* v. *Drake & Scull Engineering Ltd*[195] the court considered whether the tender price that had been under discussion between the parties should form the basis for the assessment even though the conditions and specification of works had not been agreed and no contract had come into existence:[196]

> 'It cannot be the starting point, subject to adjustment up or down for "variations"; first because that would be to treat it as contractual, which it is not, and secondly because there is no accessible specification, programme, terms and conditions to which it applied and from which departures can be priced. Its most likely value, I think, may be as part of a check whether the total arrived at by other means is so surprising, in all the circumstances, as to cast doubt on the route by which it was reached.'

9.239 As the above passage illustrates, in cases where the claim is in restitution, because no contract has been entered into, it would be quite wrong to assess the parties' entitlements on the basis of draft but unagreed contract conditions.

9.240 The cases typically refer to assessing 'reasonable remuneration'[197] or 'fair commercial rate'[198] or '*fair value*'.[199] In practice, such an assessment can either consider the contractor's costs (reasonably incurred)[200] with an uplift for profit or can consider evidence as to what the market price is for the work in question, by considering either open market tenders, expert evidence or published price books.[201] For example, in *ERDC Group Ltd* v. *Brunel University*[202] the contractor continued to undertake work after the expiry of a letter of intent. The work under the letter of intent was valued on the contract rates but the court needed to

194. *Costain* v. *Zanen* (1996) 85 BLR 77 is an exception in considering the issue from the other perspective. Clearly, in this case the circumstances suited this form of analysis because the defendant main contractor had been paid for the same work by the employer. In most situations the defendant will be an employer and looking at the value of the work from its perspective, which would involve considering the capital or income-generating value of the final facility, raising difficulties of the type considered above.

195. (2000) 73 Con LR 100.

196. *Ibid.* at para. 43.

197. *Pilgrim Shipping Co Ltd* v. *State Trading Corp of India Ltd* (*The Hadjitsakos*) [1975] 1 Lloyd's Rep 356 at 369.

198. *Greenmast Shipping Co SA* v. *Jean Lion et Cie* (*The Saronikos*) [1986] 2 Lloyd's Rep 277 at 279.

199. *Sanjay Lachhani* v. *Destination Canada* (1997) 13 Const LJ 279, Recorder Colin Reese QC.

200. In *ibid.*, Recorder Colin Reese QC expressed the view that cost rather than assessment of market value was the appropriate methodology: 'If, instead of ascertaining a "market value", it is thought appropriate to calculate a "fair value" from the costs actually incurred by the person or organisation which carried out the works, then the three words highlighted above ["reasonably", "necessarily", "properly"] would provide the key to the necessary effective control over the level of reimbursable costs if the legitimate interests of the owner are also to be respected . . . .'

201. The same issue arises when considering the assessment of a 'fair valuation' under the third limb of a typical valuation clause where the contract rates are not applicable. See *infra*, paras. 11.78-11.79.

202. [2006] EWHC 687 (TCC).

assess the entitlement in restitution from the point in time when that contract fell away.[203] HHJ Humphrey QC, in commenting on the approach to making the assessment, stated:[204]

> 'It has rightly been said that there are no hard and fast rules for the assessment of a *quantum meruit*. All the factors have to be considered. This is not a case in which there was no contract. In such circumstances the assessment of a *quantum meruit* is usually based on actual cost (which will include on and off site overheads, with in the latter case some estimates or extrapolations being required), provided that it was reasonable (which can frequently be checked by the use of standard rates and prices such as Spon) and as reasonably and not unnecessarily incurred, plus an appropriate addition for profit.'

9.241 In this case the judge concluded that the assessment in restitution should be based on the contract rates that had previously been in place under the letter of intent. Importantly, however, he applied the contract rates because he deemed them to be fair based on the evidence presented, and not simply because they had formed part of the parties' agreement. He makes reference to the fact that the contractor's tender price was not abnormally low but close to the others, that the evidence of the forensic expert 'convincingly demonstrated that EDRC's tender was commercial' and the rates and prices were supported by the Spons Price Book.

9.242 Since the work undertaken in these circumstances is not governed by contract, the question of the contractor having to undertake the work in a particular period of time does not arise. The contractor simply has a right to be paid because otherwise the owner would be unfairly enriched. However, the inefficiencies of the contractor may be taken into account in making the assessment of the degree to which the owner has been enriched. In this sense the contractor's culpable delay may depress its entitlement.[205]

SECTION H: OTHER CONTRACTUAL PROVISIONS THAT COMPENSATE FOR CHANGE

9.243 A variations clause gives the employer the right to order a change to the works which may involve an alteration to the permanent works or alternatively a change to the method of construction.

203. The facts of this case are set out in more detail earlier in this section.

204. [2006] EWHC 687 (TCC) at para. 42. Where the judge states 'this is not a case in which there is no contract', he is referring to the fact that there had been a contract prior to the letter of intent coming to an end.

205. *Serck Controls Ltd* v. *Drake & Scull Engineering Ltd* (2003) 73 Con LR 100 at para. 55: 'If the value is being assessed on a "costs plus" basis, for example from time sheets and hourly rates for labour, then deductions should be made for time spent in repairing or repeating defective work, and for inefficient working or (as is one of the allegations here) excessive tea-breaks and the like.' However, *Crown House Engineering* v. *Amec Projects* (1990) 48 BLR 32, an earlier Court of Appeal case, indicated that the point was still undecided: Slade LJ at 54: 'I am not convinced that [any of the authorities cited] affords a clear answer to the crucial question of law: on the assessment of a claim for services rendered based on a *quantum meruit*, may it in some circumstances (and, if so, what circumstances) be open to the defendant to assert that the value of such services falls to be reduced because of their tardy performance. . . .' This case reflects the understandable view of the courts that a claimant in restitution does not owe reciprocal rights to the defendant because there is no contract, and therefore cannot be liable for breach of a duty to complete within a requisite period. However, the fact that the work is late may mean that the level of enrichment enjoyed by the defendant is lower because of the delay in a manner akin to abatement.

9.244 Contracts will often contain provisions entitling the contractor to compensation for changes to its method of construction where this has been caused by unexpected site conditions or the occurrence of certain events. A variation to alter the method of working may not, therefore, have been instructed, but the employer may nonetheless be required to pay for the change.[206]

9.245 Unexpected site conditions and events may cause the contractor to change its method of working or stop work entirely. If in these circumstances it was necessary to wait for the employer to issue a variation instruction, then this could delay progress, or lead to a situation where the contractor had no right to be paid for an unapproved departure from the contract scope.[207] Contracts will therefore often seek to provide a means by which the contractor is compensated for having to change its method of working in the absence of an instruction.[208] There will often be a tension between this type of provision and the stipulation that the contractor may not depart from the scope without approval.[209]

9.246 This section considers two common contract provisions that compensate contractors for changes to the way that the works are undertaken because of unexpected site conditions or events: ground conditions clauses, and clauses providing for loss and expense. It can therefore be the case that with certain changes the contractor will have the opportunity to claim its additional costs under more than one clause. For example, certain costs may be recovered under either the valuation of variation clause or the loss and expense provision.[210]

9.247 A contract may be structured so that all events entitling the contractor to additional payment, be they variations, unexpected ground conditions or other employer risk events, are processed under the same contract mechanism. This is the approach adopted by NEC3 which treats them all as 'Compensation Events'.

Ground conditions clauses

9.248 Contracts drafted for civil engineering projects, where ground conditions can be a particularly significant factor, will often contain provisions that compensate the contractor for unexpectedly bad ground conditions.

9.249 The relevant clauses in the FIDIC and ICC suites follow a similar pattern. The contractor is required to give notice to the contract administrator when it encounters unforeseeable ground conditions.[211] Although the contractor proceeds with the work, albeit possibly

206. The contract may equally contain provisions which give the employer the option to change the way the works are carried out, such that there is no variation and the contractor has no right to compensation. See *supra*, para. 5.13.

207. Such a standstill, or impasse, is considered further in Chapter 2, section C.

208. Certain provisions, such as ground conditions clauses, may even provide for the contractor to be paid for implementing changes to the permanent works.

209. See Chapter 2, section A.

210. See Chapter 11, section F.

211. What amounts to unforeseeable is, inevitably, a common source of dispute. Ground conditions will typically be defined to include both natural and man-made sub-surface obstructions, such as service ducts. Weather is typically excluded, albeit that the extent to which the weather has created an obstruction, such as ground water, can be a ground of contention. In relation to weather as an event requiring a variation, see *infra*, para. 9.264.

employing different methods, the contract administrator may give instructions as to how the adverse conditions should be dealt with, and may certify a corresponding entitlement to additional money and time. It is often the case that this type of clause will somewhat fudge the difficult question of how the contractor should proceed with the works when the effect of the adverse conditions is that the contractually specified method cannot be followed. Such a fudge is almost inevitable because of an attempt to balance, on the one hand, the stipulation that change should be approved by the employer. And on the other hand, a desire to ensure that the contractor is not required to stop every time it hits bad ground. After all, from a practical perspective, it is important that the contractor be allowed to adapt its working method as it proceeds with the work, and that it should be compensated for this.

9.250 Clause 4.12 of the FIDIC Red Book 1999 provides that, having given notice to the engineer of the adverse physical conditions:

> 'The Contractor shall continue executing the Works, using such proper and reasonable measures as are appropriate for the physical conditions, and shall comply with any instructions which the Engineer may give. If an instruction constitutes a Variation, Clause 13 [the variations clause] shall apply.'

9.251 This clause, in stating that the contractor will use proper and reasonable measures appropriate for the conditions, seems to contemplate that the contractor may need to adopt working methods different from those envisaged by the contract scope. But, equally, it states that the contractor will continue executing 'the Works' which, prior to any variations being instructed, will mean the originally defined contract scope.[212] This suggests that no changes may be implemented unless and until a variation is instructed.

9.252 The clause also contemplates that the engineer may give variation instructions as to how to deal with the adverse conditions. Under this contract a variation includes changes to levels and dimensions, changes to plant and resources, as well as changes to the sequence of the works. Suppose the contractor is in the process of excavating a trench and unexpectedly came across rock. In those circumstances the engineer may direct changes to the method of excavating, the plant to be used and the line and levels of the work, all of which would constitute variations. The contractor may have implemented these changes already, if this was the only way of excavating the trench in the rock conditions encountered, and this represented 'proper and reasonable measures' appropriate for the conditions. But if the engineer does not issue a variation instruction, the question then arises whether the contractor is nonetheless entitled to compensation.

9.253 The clause goes on to read:

> 'If and to the extent that the Contractor encounters physical conditions which are Unforeseeable, gives such a notice, and suffers delay and/or incurs Cost due to these conditions, the Contractor shall be entitled subject to Clause 20.1 [Contractor's Claims notice/records clause] to:

212. The 'Works' under this contract are defined to include Temporary Works.

(a) an extension of time for any such delay, if completion is or will be delayed. . .

(b) payment of any such Cost. . .

After receiving such notice and inspecting and/or investigating these physical conditions, the Engineer shall proceed. . . to agree or determine (i) whether and (if so) to what extent these physical conditions were Unforeseeable, and (ii) the matters described in sub-paragraphs (a) and (b) above related to this extent.'

9.254 This clause entitles the contractor to be paid the costs it incurs in dealing with the adverse conditions without being dependent on a variation instruction first being issued. Having said this, there is nothing in the clause which indicates that the contractor may depart from the contract scope without approval.[213] It could be said that the clause is seeking only to allow (and compensate for) changes to the way the works are undertaken. However, it does not appear that this is the case. After all, the clause, in referring to the contractor being required to proceed, refers to the 'Works', and this defined term 'Works' includes temporary works.[214]

9.255 ICC Measurement Contract 2011, Clause 12 contains similar provisions. The contractor is required to give a notice to the engineer and:[215]

'. . . as soon as practicable thereafter the Contractor shall give details of any anticipated effects of the condition or obstruction the measures he has taken is taking or is proposing to take their estimated cost and extent of the anticipated delay. . .'

9.256 On receipt of this information the engineer is to give instructions[216] and the contractor will be entitled to its costs of dealing with the unforeseeable obstructions.[217]

9.257 Clause 12 contemplates that the contractor will be in the process of, or may even have completed, the implementation of measures to deal with adverse conditions. These could involve changing the method of working or increasing resources, but there is nothing to suggest that this may not include changing the permanent works. Taking the example of encountering unexpected rock during trench construction, the contractor may alter the line and level of the trench to mitigate the impact, and in doing so will alter the permanent works.

9.258 Clause 12 therefore envisages that the contractor will be entitled to the cost of undertaking measures to deal with obstructions, albeit that these may have been implemented without the prior instruction of the employer.

213. As noted above, the clause states that the contractor should continue executing the 'Works'.
214. In addition, it should be noted that the definition of variations in the contract includes changes to the way the permanent works are delivered.
215. Clause 12(3).
216. See Clause 12(4).
217. See Clause 12(6).

Loss and expense provisions

9.259 A construction contract will normally provide that the contractor is entitled to additional payment where the employer has delayed and/or disrupted the contractor, or certain named events have occurred in respect of which the employer has assumed the risk under the contract.[218]

9.260 A contract may contain a standalone clause dealing with loss and expense. For example, JCT Standard Building Contract 2011, Clause 4.23 states:

> 'If in the execution of the Contract the Contractor incurs or is likely to incur direct loss and/or expense. . . because the regular progress of the Works or of any part of them has been or is likely to be materially affected by any of the Relevant Matters, the Contractor may make an application to the Architect/Contract Administrator.'

9.261 'Relevant Matters' are defined to include variations,[219] and also:[220]

> 'any impediment, prevention or default, whether by act or omission, by the Employer, the Architect/Contract Administrator, the Quantity Surveyor or any of the Employer's Persons. . .'

9.262 This approach of using a standalone loss and expense clause can be contrasted with the approach adopted by other contracts whereby the contractor is entitled to be compensated for additional costs incurred by reference to individual clauses. For example, the FIDIC Red Book 1999 includes a number of clauses giving such an entitlement, such as Clause 2.1 which allows the contractor additional costs if the employer fails to give it proper site access.[221]

9.263 General loss and expense provisions, of the type included in the JCT contract referred to above, compensate the contractor for the costs of delay and disruption in the undertaking of the works as a result of named risks. Such a provision does not compensate the contractor for the additional cost of implementing changes to the permanent works themselves. However, it may compensate for changes to the way the works are undertaken. For example, an employer may limit the contractor's access such that it has to change the plant and cranes that it brings on to site, and therefore the method of working. This change to the construction method could have been instructed as a variation, but in the absence of an instruction, the loss and expense provision may provide compensation.

9.264 The same applies to events which cannot be said to have been caused by the employer but which are identified as named events for which the employer takes the risk, thus entitling the contractor to loss and expense – for example exceptionally bad weather, which may result in

218. The relationship between the entitlement to the direct cost of variations and loss and expense is discussed at Chapter 11, section E.

219. See Clause 4.24.1. Variations are not defined under this contract as being limited to changes that are instructed by the contract administrator. See *infra*, paras. 12.27–12.32.

220. Clause 4.24.4.

221. See also FIDIC Red Book 1999, Clause 4.12 (ground conditions), discussed earlier in this section.

the contractor having to undertake additional temporary waterproofing works to protect the site so that progress can be made. The presence of a protected animal species on site may also be a factor requiring the contractor to adopt a different method of working.

9.265 In these circumstances the contractor may need to undertake changes to the way in which it undertakes the works. This could be the subject of an instructed variation, but the employer may be unwilling to instruct or, alternatively, may not have the time to instruct before the contractor needs to implement the changes to its method of working.

9.266 A loss and expense provision therefore ensures that the contractor is compensated for changes to the way that the works are implemented as a result of identified employer risk events. The contractor does not have to get the employer's formal instruction prior to implementing the change as a variation, and this should in turn prevent a possible standstill to the works which could otherwise occur.[222]

222. See Chapter 2, section C.

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CHAPTER TEN

VALUATION PROCESS

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SECTION A: INTRODUCTION

10.1 This chapter considers the process by which variations are valued and the degree to which a contract administrator's valuation can be challenged. This, in turn, requires consideration of the duties of both the contract administrator and the employer in relation to the exercise of the valuation and certification function.

10.2 The process of valuation demands good communication between the contract administrator and the contractor's team. On a busy project it will often be a challenge to ensure that variations are accurately valued at the time they are undertaken. The contract administrator may need additional supporting details to supplement the information initially provided by the contractor. In the meantime, it may be that only an initial interim assessment can be made. Whilst this fluidity may be acceptable during the course of a project, it is important that by the end there is a final assessment which gives certainty as to the parties' respective financial positions.

10.3 Both parties will therefore need to be alive as to whether a certificate issued on a project is final and binding, or whether it remains subject to being opened up and reviewed by an independent tribunal. Whilst it is more commonly the case that the contractor will challenge certificates, the employer may also be dissatisfied with the contract administrator's assessment. The question whether a certificate will be treated as binding is considered in section B.

10.4 Whether a certificate can be challenged may depend on whether the contract administrator has acted improperly in undertaking its duties. Such duties are considered in section C of this chapter. Since the contract administrator will normally have no contractual relationship with the contractor, it may have limited recourse if the valuation has not been undertaken correctly, albeit the contractor's remedy will normally be to have the certificate opened up and reviewed.

10.5 The role of the employer in the valuation process is considered in section D. The employer may undertake the certifier's role itself and the implications of this are considered in this section. This section also considers the contractual responsibilities that the employer has to the contractor in relation to the contract administrator's exercise of its duties.

10.6 The final section of this chapter considers the way in which the parties may seek to agree the valuation of variations during the course of the project.

SECTION B: REVIEW OF VALUATIONS AND THE OPENING UP OF CERTIFICATES

10.7 This section considers the degree to which the valuation of variations may be challenged, which primarily concerns whether certificates issued under a contract can be opened up and reassessed by a tribunal. Either party to the construction contract may wish to open up the valuation. The challenge may concern the value which has been placed on the relevant variation item. Alternatively, it may be the case that the item has been valued at zero because the contract administrator considers that the work in question is not a variation at all, and therefore the dispute concerns liability rather than quantification.

10.8 It is first necessary to consider the approach that is commonly applied to interim and final certificates. This section goes on to consider the circumstances in which certificates that would normally be binding can still be opened up because they suffer from deficiencies in form or procedure, such as dealing with matters they should not deal with, or having been prepared by a contract administrator that is guilty of improper conduct.

Contractual basis for the binding nature of certificates and the right of challenge

10.9 Whether a certificate is binding depends on the terms of the contract. The contract can give the contract administrator the power to issue a certificate which is finally binding as to the parties' respective contractual entitlements such that it cannot subsequently be opened up and revised by a tribunal. There is nothing to stop the parties agreeing to such an arrangement.[1] As stated by Lord Denning MR in *Campbell* v. *Edwards*:[2]

> 'If two persons agree that the price of property should be fixed by a valuer on whom they agree, and he gives that valuation honestly and in good faith, they are bound by it. Even if he has made a mistake they are still bound by it. The reason is because they have agreed to be bound by it.'

10.10 In practice, most construction contracts provide that the monthly interim certificates issued during the project are not conclusive and can be challenged by the parties and revised by a tribunal. They also normally provide that the final certificate issued at the conclusion of a project will become final and binding unless challenged within a specific period of time. This type of arrangement is normally adopted because it represents an effective and commercial

1. The case law discussed in this section regarding the binding nature of monthly certificates pre-dates the Housing Grants, Construction and Regeneration Act 1996 (as amended by the Local Democracy, Economic Development and Construction Act 2009). A contract providing for a final and binding monthly certificate could be in breach of the provisions of the Act (as amended). If this is the case, it will be substituted by the provisions of the Scheme for Construction Contracts (as amended).

2. [1976] 1 WLR 403 at 407.

balance between giving both parties the opportunity to review the certifier's determination and final certainty as to the income or cost on the project.

10.11 Whilst it will normally be the case that a construction contract will provide that a third-party contract administrator values variations, it is possible for a contract to allow the employer to make this assessment instead.[3]

10.12 A contract administrator's certificate can be binding, not only in terms of its assessment of the price due for additional work undertaken, but also in relation to the more fundamental question whether the work is extra, and therefore whether any monies at all are due. This is however, an extremely uncommon arrangement under modern contracts.[4]

Opening up and revising a contract administrator's certificate

10.13 The leading case on this issue is the House of Lords' judgment in *Beaufort Developments (NI) Ltd* v. *Gilbert-Ash (NI) Ltd*.[5] This case famously overruled the decision in *Northern RHA* v. *Derek Crouch Construction Co Ltd*,[6] the effect of which had been to rule that the court had no inherent jurisdiction to open up, review and revise certificates issued under a construction contract.

10.14 The court in *Crouch* had decided that only the arbitrator had such a power, and then only because of the express power conferred under the contract to open up, review and revise certificates. In *Beaufort Developments* the House of Lords overturned that approach, finding that the courts did have such inherent powers. The judgment gives a very clear exposition as to the approach to be taken in assessing the extent to which certificates may be conclusive and also the power of tribunals to review and revise them.

10.15 The court emphasised that there would need to be very clear wording in order for a certificate issued by the contract administrator to be binding. Lord Hoffmann stated:[7]

> 'The contract provides for the issue by the architect of certificates or statements in writing as to his opinion on various matters. . . In the absence of express words, the parties are highly unlikely to have intended that some of these statements of opinion should be binding and others not.'

10.16 Following this passage from the judgment, Lord Hoffmann goes on to look at a number of examples of statements of opinion or certificates that need to be issued by the architect under the contract.[8] These included interim certificates and determinations of extensions of time. He points out that the final certificate is specifically stated to be conclusive evidence as to certain matters set out in it. The final certificate does therefore have 'final and binding' status

3. See section D of this chapter.
4. See *infra*, paras. 10.44–10.47.
5. [1999] 1 AC 266.
6. [1984] QB 644.
7. [1999] 1 AC 266 at 275.
8. The case involved the standard JCT 1980 form, Private with Quantities.

but this is expressly conferred via the express words of the contract.[9] The contract does not use the same wording for the other certificates. Such certificates are therefore clearly not intended to be finally conclusive as to the matters set out in them. Lord Hoffmann describes such certificates that are not finally conclusive as having a provisional validity, the purpose of which is to ensure that determinations are made so as to keep the project ticking over, but which can be reviewed at a later stage:[10]

> 'If the certificates are not conclusive, what purpose do they serve? If one considers the practicalities of the construction of a building or other works, it seems to me that parties could reasonably have intended that they should have what might be called a provisional validity. Construction contracts may involve substantial work and expenditure over a lengthy period. It is important to have machinery by which the rights and duties of the parties at any given moment can be at least provisionally determined with some precision. This machinery is provided by architect's certificates.'

10.17 The court therefore recognised that, for the efficient operation of a project, the parties may agree a process of having determinations made on an interim basis, which can be opened up at a later stage. However, it also recognised that they could agree, under the contract, that such certificates can be binding, but that this needs to be clearly spelt out.

10.18 If a decision or certificate is to be treated as 'final and binding', the contract needs to make this absolutely clear. In this context Lord Hoffmann points out that making a certificate conclusive could easily cause injustice. In addition, he recognises that whilst such an approach was quite common in the nineteenth century, it is very unusual today and therefore caution must be exercised. He states:[11]

> 'I think that today one should require very clear words before construing a contract as giving an architect such powers.'

10.19 If, contrary to the norm, a contract administrator's certificate is 'final and binding', the contract itself may include provisions allowing it to be reviewed. However, in the absence of such express provisions, the court will not be able to review and revise such a conclusive certificate. A contract can specify that only an arbitrator may review and revise such certificates.[12]

10.20 In terms of the court's powers to review and revise certificates, a distinction therefore needed to be made between those that were 'final and binding', which 'provisional validity', the court had inherent powers to review and revise. As Lord Hope stated:[13]

9. A 'final and binding' certificate can be opened up and revised if there is a deficiency in the form or procedure surrounding it, such as dealing with matters it should not. See *infra*, paras. 10.48–10.62.
10. [1999] 1 AC 266 at 275–276.
11. *Ibid.* at 276.
12. See *Sharpe* v. *San Paulo Railway Co* (1872–73) LR 8 Ch App 597, where the certificate was said to be final and conclusive with no right of appeal but nonetheless subject to review by an arbitrator. Very clear language is required to give the arbitrator jurisdiction to review a contract administrator's decision but exclude the court's right to review.
13. [1999] 1 AC 266 at 289.

> 'The powers which the court ordinarily has to determine and give effect to the rights and obligations of the parties to a contract differ from the additional powers which, in the typical building or engineering contract, are given to the architect or the engineer and, in the event of any dispute about their exercise, to the arbitrator. The purpose of these additional powers is not to deprive the court of its ordinary powers to determine their rights and obligations under the contract.'

10.21 The court will give effect to the parties' agreement that the contract administrator finally determines issues under the contract, if indeed that is what has been agreed. The contract may give the employer itself the right to determine the valuation in its sole discretion with no right of review.[14]

10.22 Depriving a party of recourse to the court, however, requires very unequivocal language:[15]

> 'It seems to me that the discussion in the Hosier & Dickinson case put the matter on the correct basis. On the one hand there is the principle which was expressed by Lord Diplock in *Modern Engineering (Bristol) Ltd* v. *Gilbert-Ash (Northern) Ltd* [1974] AC 689, by which clear unequivocal words must be used to deprive a party to a contract of recourse to the court for the ordinary exercise of its powers and the granting of the ordinary remedies. On the other there is the principle that the court must give effect to the contract which the parties have made for themselves. If the contract provides that the sole means of establishing the facts is the expression of opinion in an architect's certificate, that provision must be given effect to by the court. But in all other respects, where a party comes to the court in the search of an ordinary remedy under the contract or for a remedy in respect of an alleged breach of it, the court is entitled to examine the facts and to form its own opinion upon them in the light of the evidence. The fact that the architect has formed an opinion on the matter will be part of the evidence. But, as it will not be conclusive evidence, the court can disregard his opinion if it does not agree with it.'

Interim certificates

10.23 Whilst, therefore, the conclusiveness of a certificate depends on the status given to it under the contract, it is highly unlikely that periodic payment certificates will be finally binding because the contract would need expressly to provide for this.[16] The purpose of a periodic valuation is principally to maintain the contractor's cash flow. It will also provide for the valuation of variations to be reviewed and resolved contemporaneously. However, such an interim valuation will not normally finally resolve entitlement. This is important because it may well not be possible to finally establish the contractor's proper entitlement at the time the interim valuation is undertaken. For example, the final valuation of variations

14. See *WMC Resources Ltd* v. *Leighton Contractors Proprietary Ltd* (2000) 2 TCLR 1, discussed *infra*, at paras. 10.38–10.43.

15. [1999] 1 AC 266 at 291.

16. As noted above, Lord Hoffmann stated in *Beaufort* that very clear wording is required in order for a certificate to be binding. Contracts normally expressly state that interim certificates are not finally binding.

may depend on the contractor providing further documentation to support certain costs. The interim valuation may simply include provisional figures based on certain assumptions made by the contract administrator while it waits for such additional back-up. However, if no allowance was included in interim valuations unless and until all supporting documentation was provided, cash flow would be severely affected. Hobhouse J in *Secretary of State for Transport* v. *Birse-Farr Joint Venture*[17] described the approximate and provisional nature of the exercise:

> 'Certification may be a complex exercise involving an exercise of judgment and an investigation and assessment of potentially complex and voluminous material. An assessment by an engineer of the appropriate interim payment may have a margin of error either way. . . At the interim stage it cannot always be a wholly exact exercise. It must include an element of assessment and judgment. Its purpose is not to produce a final determination of the remuneration to which the contractor is entitled but is to provide a fair system of monthly progress payments to be made to the contractor.'

10.24 Whilst the degree of support needed in order to justify for sums to be certified on an interim basis depends on the contractual provisions, the above passage describes the approach typically followed in practice.

10.25 The House of Lords case of *Tharsis Sulphur and Copper Company* v. *McElroy & Sons*[18] concerned payments to a contractor under interim certificates which depended on the certified weight of the iron girders it was constructing.[19] It transpired towards the end of the project that the girders were thicker than specified in the contract. The employer therefore sought effectively to readjust the payments retrospectively. The contractor had built thicker girders but the nature of the change was such that the employer was not obliged to pay extra for it. The court found that just because the employer had paid at a higher per girder price in the interim certificates, this was not binding on the employer. The employer could not be taken to have admitted liability to pay for the thicker girders as the certificates were interim and subject to adjustment later. Lord Cairns described the interim certificates as follows:[20]

> 'The certificates I look upon as simply a statement of a matter of fact, namely, what was the weight and what was the contract price of the materials actually delivered from time to time upon the ground, and the payments made under those certificates were altogether provisional, and subject to adjustment or to readjustment at the end of the contract.'

10.26 Lord Blackburn stated:[21]

> 'It is very common, and in this case it exists, that although the contractors are not to be paid in advance, yet they are not to be kept out of their money until the whole work

17. (1993) 62 BLR 36 at 53.
18. (1878) 3 App Cas 1040.
19. This case is considered in further detail *supra*, at para. 8.41.
20. (1878) 3 App Cas 1040 at 1045.
21. *Ibid.* at 1051.

> is done, and therefore it is generally provided, and here it is provided, that as the work goes on they shall be paid proportionate sums according to the contract – more or less according to the work actually done. And for that purpose a survey must be made. . . .'

10.27 He went on to conclude his judgment:[22]

> 'They were made out with a view to regulating the advances, and shewing how much should be paid on account, not at all as shewing how much was to be paid ultimately upon the final account and reckoning.'

10.28 When it comes to the valuation of variations, monthly certificates do not normally provide a finally conclusive assessment of entitlement. Pollock CB in *Lamprell* v. *The Guardians of the Poor of the Billericay Union, in the County of Essex*:[23]

> 'When the payments were from time to time made on the certificates of the architects, the obvious meaning of both parties was, that . . . [t]hey were to be treated as sums paid on account of whatever the plaintiff might eventually be entitled to recover from the defendants, whether for the original or additional works.'

10.29 Monthly or other periodic certificates are therefore normally subject to subsequent adjustment in later periodic certificates and then also under the final certificate.[24] The sum at which a variation is valued will be a provisional assessment, and will remain so throughout the project. The position may be different if it can be said that the parties have agreed a valuation figure such as to bind themselves by way of settlement.[25]

10.30 Whilst the valuation in a periodic certificate is subject to future adjustment, the certificate itself will typically be binding on the parties during the currency of the project unless challenged.[26]

Contractor's applications for payment: timing and subsequent adjustment

10.31 A contractor may need to give notice of claims for payment of extras within specified time periods and failure to do so may mean that the contractor loses any entitlement.[27]

22. *Ibid.* at 1054.
23. (1849) 154 ER 850 at 860.
24. See also *Royston Urban District Council* v. *Royston Builders Ltd* (1961) 177 EG 589 discussed *infra*, at para. 10.115.
25. See section E.
26. Contracts caught by the Housing Grants, Construction and Regeneration Act 1996 (as amended by the Local Democracy, Economic Development and Construction Act 2009) will be subject to provisions restricting an employer's ability to refuse to pay the sum due under an interim certificate (defined by the Act as a Payment Notice). Unless the employer serves a valid Pay Less Notice within the requisite period after the Payment Notice, the sum identified under the Payment Notice will be due, without deduction. The contractor is then entitled to the Payment Notice sum. The employer cannot resist payment on the basis that the sum stated in the Payment Notice is incorrect. This, in short, will cover contracts that are for the carrying out of, or providing labour for the carrying out of, construction operations. See precise details of what is a qualifying construction contract at ss.104 and 105 of the Act.
27. See *supra*, paras. 8.52–8.62.

10.32 In addition to giving notice of a claim, the contractor may also be required to provide subsequent detailed particulars. In the Court of Appeal case of *Tersons Ltd* v. *Stevenage Development Corp*[28] the employer sought to argue that not only could the contractor lose its right to be paid for a variation if it failed to give the notice, it could also lose its right if it failed to provide the subsequent substantiation. The case is considered in a separate chapter, in the context of whether the lack of a notice is fatal,[29] but is discussed here in relation to the provision of particulars. The relevant clause reads:[30]

> 'The contractor shall send to the engineer once in every month an account giving full and detailed particulars of all claims for additional expense to which the contractor may consider himself entitled and of all extra or additional work ordered by the engineer which he has executed in the preceding month and no claim for payment for any such work will be considered which has not been included in such particulars. Provided always that the engineer shall be entitled to authorise payment to be made for any such work notwithstanding the contractor's failure to comply with this condition if the contractor has at the earliest practicable opportunity notified the engineer that he intends to make a claim for such work.'

10.33 The clause is reasonably typical of this type of provision in that it requires the contractor to provide the contract administrator with substantiation whilst also entitling it to undertake the valuation irrespective of whether or not it has the particularisation requested. Willmer LJ commented:[31]

> 'I think that [counsel for the contractor] was well founded when he submitted that the requirement in clause 52(4) of a monthly account giving full particulars of additional work is related only to the contractor's right to be paid month by month, that is, it goes to time of payment and not to the contractor's general right to be paid. Some confirmation of this view is, I think, to be found in clauses 60, 61 and 62, which make it clear that until the final maintenance certificate has been issued, the contractor's right to be paid remains open.'

10.34 Whilst the contractor's failure to provide particularisation may have meant that the contract administrator could not properly assess the contractor's entitlement, this did not bar the claim and the contractor was entitled to provide it at a later stage. As the above passage makes clear, this right to provide the substantiation remained open until the final certificate stage.[32]

Final certificates

10.35 Construction contracts commonly provide for a final certificate to be issued by the contract administrator at the very end of a project, following a period for checking and rectifying

28. (1963) 5 BLR 54.
29. See *supra*, para. 8.53.
30. (1963) 5 BLR 54 at 59. The contract was based on the ICE 2nd edition.
31. *Ibid.* at 61. See also *ibid.* 72–73, and the comments of Upjohn LJ on the same point.
32. See also the case of *Mears Construction Ltd* v. *Samuel Williams (Dagenham Docks) Ltd* (1977) 16 BLR 49, discussed further in section E.

defects. Such a certificate will set out the sum finally due for the works, taking account of the all sums due as between the parties, including the contractor's entitlement for variations.

10.36 The status and binding character of the certificate will, of course, depend on the provisions of the contract. However, contracts commonly provide that such certificates becomes final and binding unless challenged during a specified period of time, in a particular manner.[33] The parties will normally, therefore, have a period of time in which to consider whether the contract administrator's valuation in respect of variations is correct or whether they wish to challenge it and have the certificate reviewed by a tribunal.

10.37 Such conclusive status ensures finality and allows both parties certainty as to their liabilities and entitlements for a project. However, even then, 'final and binding' certificates can be opened up and reviewed in certain limited circumstances, where there are deficiencies in form or procedure, as discussed further below.

Certificates that are binding because the contract requires discretionary assessment

10.38 Most contracts contain valuation rules that set out how the value of a variation should be assessed. Where a certificate can be opened up then those rules will be applied by the tribunal undertaking the review. In *WMC Resources Ltd* v. *Leighton Contractors Proprietary Ltd*[34] the Supreme Court of Western Australia found that the subsequent tribunal could not open up a valuation where the contract provided that the assessment of variations was in the sole discretion of the certifier, who in this case was the employer.

10.39 The relevant clause provided that the parties should seek to agree the value of variations but that, if agreement could not be reached, the employer 'shall. . . determine such value in its sole discretion'.[35] The court made a distinction between variation clauses that used objective criteria and those, such as this one, which gave the certifier complete discretion. If a contract contained rules for the assessment of variations, such as a schedule of rates or rules as to determining the cost of changes, then a tribunal could review the valuation against such objective criteria. However, if the contract gave the certifier the power to assess entitlement by reference to its sole discretion, there were no criteria by which to judge the determination. The discretionary judgment of the certifier amounted to the only criteria against which the parties had agreed that the variations should be valued. The distinction is explained in the following passage from the judgment of Ipp J:[36]

> 'Generally, the contract concerned will provide detailed fixed and objective criteria as to how the value of amounts to be certified under interim and final certificates is to be

33. As to the issues to be considered in determining whether a certificate is final and binding, see the earlier commentary on *Beaufort Developments (NI) Ltd* v. *Gilbert-Ash (NI) Ltd* [1999] 1 AC 266. For an example of a case dealing with a standard form where the final certificate was found to be final and binding, see the case of *Crown Estate Commissioners* v. *John Mowlem & Co Ltd* (1994) 70 BLR 1, which related to a JCT form of contract.

34. (2000) 2 TCLR 1.

35. *Ibid*. at para. 14.

36. *Ibid*. at paras. 16–18.

determined. These fixed and objective criteria are usually in the form of detailed schedules of rates or bills of quantities or specifications. The criteria so laid down enable the certifier, when assessing the value of the work and the amount of certificate concerned, merely to measure an item of work, assess its quality, and apply the rate provided by the contract for that item. In this sense. the valuer does not exercise a discretionary judgment in valuing the work. It is a mechanical exercise.

In these circumstances, if the certifier wrongly fails to issue an interim or final certificate in respect of the value of the work done, or issues an incorrect certificate of that kind. . . the court will set aside the certificate and order the correct amount to be paid. In so doing, the court will come to a judgment as to the correct amount owing, and make an order accordingly. . .

Ordinarily, in cases of this kind, where a certified valuation is to be made by reference to fixed, objective, criteria (such that there is no discretionary element in the valuation) there will only be one uniquely correct value. If the certifying valuer, in these circumstances, arrives at the incorrect value, the valuation will be in breach of the contract. It is for that reason that an incorrect certificate will also be set aside. The court will then have the jurisdiction to determine the correct amount owing in terms of the contract.'

10.40 The judge went on to state:[37]

'. . . the [employer] is the sole person empowered to make the discretionary judgment necessary to value the variations. If that is right, then by the contract, no other party can make such a judgment.'

10.41 The court emphasised that the reason the valuation could not be opened up was not that the certifier was the employer. The same logic would apply if an independent contract administrator had been appointed to undertake the valuation using the same criteria.[38] The valuation could not be reviewed because the contract required that the assessment should be made by the certifier in accordance with 'its sole discretion'. The contract could have specifically provided for an arbitrator or other tribunal to have the power to open up and revise such a discretionary valuation, but this was not the position under this contract.[39]

10.42 This is not to say that such a discretionary valuation could not be revised by the courts, but this would occur only if it had not been produced in accordance with the terms of the contract. This would not allow the valuation to be reviewed, because it was 'correct'. After all, since the certifier was entitled to use its absolute discretion, there was no basis on which to judge that it was incorrect.[40] However, the certifier will be obliged to produce its valuation in accordance with certain standards as to independence and honesty. In this case the court

37. *Ibid.* at para. 71.
38. *Ibid.* at para. 14.
39. See *ibid.* at paras. 50–52 of the judgment. If interpreting the contract in this way, then the fact that the employer is the certifier may be of some relevance: see para. 60 of the judgment.
40. See *ibid.* at paras. 36–38 of the judgment.

considered that the employer had an implied duty to act 'honestly, bona fide and reasonably' in undertaking the valuation, but that it had no obligation to act with 'due care and skill'.[41]

10.43 In practice, valuation clauses that give the certifier complete discretion to assess variations rather than this being undertaken by reference to valuation rules are very rare.

Certificates that are determinative as to whether work is extra

10.44 Not only may a party wish to challenge a certificate because it does not agree with the contract administrator's assessment of what a variation is worth, it may also wish to challenge it on the more fundamental question of whether the work is a change or not. A certificate issued under the contract may purport to make a final determination as to whether or not the work is additional. Such a certificate may be finally determinative on this point.

10.45 In *Goodyear* v. *Weymouth and Melcombe Regis Corporation*[42] a contract administrator's certificate was found to be final and to override any considerations as to whether or not the work in question was a variation. The case related to the building of a market house in Weymouth. The contractor claimed to have undertaken additional work in respect of which it was entitled to additional payment. The contract provided that if a difference of opinion arose as between employer and contractor as to whether certain work was additional, or the price of such additional work, then the architect's decision on the point should be final. The architect found that the work was not extra and the court found that the contractor could not challenge the certificate. Erle CJ stated:[43]

> 'His decision, therefore, is to be final both as to the extras and additions, the prices of which are to be regulated by the schedule; and it seems to me that the architect having to find what is properly due from time to time he can estimate what is due for extras and additions. We cannot inquire whether he allowed properly or improperly, though of course, if his conduct was fraudulent, his determination would be void; but there is no suggestion of that.'

10.46 The court dismissed the contractor's allegation that the architect had incorrectly treated work as part of the contract scope rather than valuing it as an extra, as not relevant since the certificate was finally conclusive.[44]

10.47 If the work in question is within the contract scope, then a contract administrator's instruction that purports to order it as an extra may be invalid because it has no authority to act in this way. The contract administrator undertakes its role as the agent the employer. As such it will normally have no implied authority to vary the works by purporting to agree, on the

41. See *ibid*. at para. 46 of the judgment. See *infra*, paras. 10.57–10.62.
42. (1865) 35 LJCP 12.
43. *Ibid*. at 17.
44. See also *Laidlaw* v. *Hastings Pier Co* (1874), *Hudson's Building Contracts*, 4th Edn, Vol. 2, p. 13 and *Lapthorne* v. *St Albyn* [1885] 1 Cab & El 486.

employer's behalf, to pay extra for work that the contractor is already obliged to undertake for the contract price.[45]

Opening up a 'final and binding' certificate because of deficiencies in form and procedure

10.48 Whilst a final and binding certificate under a contract cannot be challenged on substantive grounds,[46] it may be subject to challenge because of a deficiency in the manner or form in which it is issued. The principal grounds for challenge, as they may relate to certificates valuing variations, are reviewed below.

(i) The certificate purports to cover matters that it should not

10.49 A certificate can deal only with what the contract validly authorises it to cover. It cannot be conclusive on matters that the contract administrator has no authority to determine. If work is undertaken under a collateral contract rather than under the principal contract, the contract administrator's certificate issued under the principal contract cannot have any bearing on it. If the contract administrator has no role under the collateral contract, it cannot certify or determine the value of that additional work.

(ii) The certificate is not issued in the correct form and manner

10.50 A certificate must be validly issued in accordance with the contract provisions. It must be issued in the correct format, within the stipulated timescales and by the person duly authorised.

10.51 Construction contracts will commonly require that certificates should be issued in writing, but rarely that a particular wording or format should be followed. Disagreements can arise as to whether a document issued by the contract administrator amounts to a certificate or whether it is simply an informal notification with no contractual status. For example, in *London Borough of Merton* v. *Lowe*[47] the contract administrator issued a document which did not say on the face of it that it was a final certificate. The court found that the document did have the status of a final certificate, not least because the contract administrator's accompanying letter referred to it as such. The test to be applied is whether there was an intention to issue the certificate in question, although this needs to be assessed objectively and therefore the subjective opinion of the contract administrator as to what he was intending to do is not conclusive.

10.52 In terms of timescales, contracts can require certificates to be issued within specific periods of time. If not complied with, the certificate may have no status under the contract, although

45. See *supra*, para. 8.87 and the case *Sharpe* v. *San Paulo Railway Co* (1872–73) LR 8 Ch App 597.

46. A certificate may of course be final and binding on certain grounds but not others. The fact that the contract administrator has got the assessment wrong is irrelevant if the parties have agreed that they will abide by his determination. See *supra*, para. 10.9 with reference to *Campbell* v. *Edwards* [1976] 1 WLR 403.

47. (1981) 18 BLR 130.

express provisions to this effect are required.[48] Contracts commonly provide for an expectation that final certificates will be issued within a specific period of time by reference to the completion of snagging or the submission of a contractor's account. However, such contracts rarely specify that the final certificates must be issued within a particular period such that there is a sanction if the timescale is not achieved.

10.53 The certificate must be issued by the person identified in the contract as having this role.[49] The contract administrator is often the named architect or engineer, but will rely on the quantity surveyor to make the financial assessment of variations. The contract administrator will then need to issue the certificate and a certificate issued by the quantity surveyor will have no status despite the fact that it was providing the financial assessment.[50]

(iii) Parties' right to be heard

10.54 The contract administrator is not normally under an obligation to follow the rules of natural justice and give both parties the right to make submissions before undertaking its valuation and issuing its certificate. It is required to act independently and fairly, but the role of certifier under a contract does not normally mean he has an obligation to give the parties the right to be heard.[51]

10.55 The manner in which the contract administrator must act has to be looked at in the context of the contract. The contract may place a positive obligation on the contract administrator to conduct a valuation or certification process in a certain way. Failure to follow a specified process could therefore lead to a challenge.

10.56 Courts have been more willing to find that the contract administrator is under an obligation to listen to both parties where the contract itself is more onerous as to the finality of the certificate. If a party has a right to refer a dispute on a certificate to a tribunal (such as an adjudicator or the court), it has a remedy, albeit one that it has to exercise within a strict timetable. However, if the contract administrator's determination is without any opportunity of appeal, the courts have been more willing to find that the contract administrator is under an obligation to hold a balanced review of both parties' submissions.[52]

(iv) Disqualification of the contract administrator for improper conduct

10.57 The contract administrator may be disqualified and its certificates treated as having no status if it has not acted independently, has failed to disclose certain interests or has acted fraudulently. This basis for seeking to open up a certificate consists of a number of different lines of cases, which are reviewed here in brief.

48. See *ECC Quarries Ltd* v. *Merriman* (1988) 45 BLR 90.
49. *Ess* v. *Truscott* (1837) 150 ER 806; *Lamprell* v. *The Guardians of the Poor of the Billericay Union, in the County of Essex* (1849) 54 ER 850.
50. See also Chapter 8, section B.
51. See section C of this chapter on the duties of the contract administrator to act fairly.
52. See *Eaglesham* v. *McMaster* [1920] 2 KB 169.

10.58 In practice, this situation most commonly occurs where an employer is accused of seeking to interfere with the decision-making process of its contract administrator such that it cannot be treated as having acted independently. In *Hickman* v. *Roberts*[53] the architect issued a certificate for a lower figure than claimed because the employer had instructed him to do so. The House of Lords found that the employer could not rely on the otherwise conclusive nature of that certificate because it had been issued under its wrongful influence. This is not to say that an employer cannot make submissions to the contract administrator. However, in this case the architect had made it clear that he thought that he had limited discretion and accepted, in evidence, that he was influenced by the employer in the exercise of his duties. As part of the parties' implied duty to cooperate, neither should seek to prevent the unfettered exercise by the contract administrator of its duty to act fairly between them. If a party does act in breach of this obligation, this will sound in damages, or it may simply lead to the certificate being treated as invalid.[54]

10.59 This is not to say that it is necessary for the employer to be directly involved in influencing the contract administrator's decisions in order for there to be impartiality. In practice, however, proving that the contract administrator has not carried out its duties independently and fairly will be very difficult unless there is communication from the employer that indicates that it was seeking to influence it.[55]

10.60 If the contract administrator acts fraudulently in deliberately intending to deceive when issuing a certificate, it will be disqualified. Where the contract administrator is retained by the employer, there will be an implied warranty in favour of the contractor as to its honesty.[56] A certificate given by the contract administrator in contravention has no effect.[57]

10.61 There is also a line of cases in which a contract administrator has been found to be disqualified if it conceals an interest which would give rise to a clear conflict of interest in the performance of its duties. For example, in *Kimberley* v. *Dick*[58] the architect promised the employer that the construction of a building would cost not more than £15,000. The architect was then, under the terms of the contract, to act as arbitrator if any dispute arose. The contractor was not aware of the architect's promise and, since this was in conflict with an obligation to act fairly between the parties, any award of the architect's could not stand. It is not sufficient for there simply to be a conflict of interest. The interest must be one about

53. [1913] AC 229.

54. See *Panamena Europea Navegacion Compania Limitada* v. *Frederick Leyland & Co Ltd* [1947] AC 428.

55. See *Perini Corporation* v. *Commonwealth of Australia* (1969) 12 BLR 82, where the contract administrator was a director of the governmental Department of Works. The director indicated that, in determining the contractor's extension of time entitlement, he had given 'departmental policy' as a reason for disallowing extensions, rather than his own opinion. This is an example of a situation where the contract administrator had effectively misconstrued his duties without the normal direct interference from the employer. In the context of the valuation of variations, the equivalent would normally be very difficult to establish. For example, establishing that a contract administrator assessed a variation at £100 rather than £200 because of a failure to act independently, rather than just the fact that it was its opinion that the value should be £100, will be very difficult. If the certificate is final and binding, the complaint that the variation ought properly be valued at £100 is not a ground which would entitle it to be opened up.

56. See Diplock J in *Neodox Ltd* v. *The Mayor, Aldermen and Burgesses of the Borough of Swinton and Pendlebury BC* (1958) 5 BLR 34 at 47.

57. *Macintosh* v. *The Great Western Railway Company* 46 ER 176.

58. (1871–72) LR 13 Eq 1.

which the contractor did not know, and could not reasonably have known. The fact that the contract administrator is an individual that works for the employer is not in itself a disqualification.[59] The cases upholding this line of challenge have commonly involved situations where the contract administrator has had an undisclosed direct financial interest in maintaining the project cost at a certain level. It is very common these days that an employer will work closely on ongoing projects, with a consultant acting as the contract administrator. Clearly, it could be said that the consultant has a long-term interest in suppressing project costs in order to maintain a fruitful ongoing relationship, but this may well be treated as falling into the category of an interest that the contractor would be aware of. If the consultant were to profit-share from the employer's business dealings, then arguably this could fall foul.

10.62 There is no reason why the contract cannot provide that the employer undertakes the valuation of variations. In these circumstances it cannot be said to be independent, although it will have obligations to act honestly such that its failure to do so would allow a certificate that would otherwise be final to be opened up.[60]

SECTION C: THE CONTRACT ADMINISTRATOR'S CERTIFICATION ROLE AND DUTIES

10.63 A contract administrator will normally have two roles under a construction contract. It will perform a certifying role, which will involve it in making determinations which affect the parties' entitlements, such as extensions of time and the assessment of the financial entitlement for extra work. Secondly, the contract administrator will act as the agent of the employer on the project in directing and managing the works, and some of the contract administrator's powers under the contract relate to this role. The contract administrator's power to instruct variations falls into this second category.[61]

10.64 The two roles will involve different duties. Because, in the certifying role, the contract administrator is making decisions that affect the parties' contractual entitlement, it will owe duties to undertake this role in a fair and balanced manner. This section considers these duties.

10.65 In undertaking the role of agent, the contract administrator is acting on the employer's behalf in directing the work that is required. It is not making determinations about the parties' entitlements and therefore no question of 'fairness', in terms of how the role is undertaken, arises. However, even where the contract administrator is undertaking this agency role in directing the work, it is exercising discretionary powers under the contract, and these can be said to be subject to review in certain cases. The exercise of such powers is considered elsewhere in this book.[62]

59. *William Ranger* v. *The Great Western Railway & Others* (1854) 10 ER 824 where the contract administrator was the principal engineer for the Railway Company.

60. See section D of this chapter.

61. See Chapter 8, section C, as regards the extent and nature of the contract administrator's authority as agent.

62. See *supra*, paras 7.29-7.31. In addition, the courts have on occasion considered whether the exercise of the power to vary the works can be the subject of review. In *Brodie* v. *Corporation of Cardiff* [1919] AC 337 the House

10.66 The certification role can be undertaken by the employer itself, rather than by an independent consultant acting as a contract administrator. Section D of this chapter considers the additional issues that arise in such circumstances.

10.67 It will typically be the case that the contract will name the employer's lead design consultant, such as an engineer, as the contract administrator who then has the role of issuing valuations. The financial assessment for the valuation will often be undertaken by the employer's cost consultant, traditionally the quantity surveyor. The certificate must be issued by the person identified in the contract as having this role, even though the contract administrator will often have relied on the cost consultant's figures.[63] A certificate issued by an individual other than the contract administrator, such as the cost consultant, will therefore have no status.

10.68 The contract administrator is appointed by the employer. It will normally have a contract with the employer which will govern the performance of its duties, including its obligations in undertaking the valuation role under the construction contract.

10.69 The contract administrator will not normally have any direct contractual relationship with the contractor. If the contractor does not like the contract administrator's assessment of its entitlement, its remedy is to have the contract administrator's certification opened up under the provisions in the construction contract. This, indeed, has influenced the approach of the courts in limiting the degree to which certificates can be treated as final and binding:[64]

> '. . . [T]he architect is the agent of the employer. He is a professional man but can hardly be called independent. One would not readily assume that the contractor would submit himself to be bound by his decisions, subject only to a challenge on the grounds of bad faith or excess of power.'

10.70 If the contractor thinks that the contract administrator has not undertaken the valuation of variations correctly, it can have the assessment reviewed via the dispute resolution process.

10.71 A situation may, however, arise where the contractor cannot adequately resolve the problem of an incorrect valuation by having it opened up using the disputes process.

10.72 The contract administrator may under-certify and the employer may become insolvent before the contractor has had the opportunity to have the valuation reviewed by a tribunal. In those circumstances the question arises whether the contractor can bring a claim in tort against the contract administrator as a result of the loss it has suffered. In *Sutcliffe* v.

of Lords found that an arbitrator could effectively open up the decision of a contract administrator not to issue a variation instruction, on the basis that the engineer's determination that the work in question was not extra was incorrect: see Chapter 9, section E.

63. *Ess* v. *Truscott* (1837) 150 ER 806; *Lamprell* v. *The Guardians of the Poor of the Billericay Union, in the County of Essex* (1849) 154 ER 850. The contract administrator is not obliged to follow the assessment made by the cost consultant: see *R. B. Burden Ltd* v *Swansea Corporation* [1957] 1 WLR 1167.

64. See *Beaufort Developments (NI) Ltd* v. *Gilbert-Ash (NI) Ltd* [1999] 1 AC 266, discussed in section B of this chapter, concerning the wide powers of the court to open up and revise certificates. See comments by Lord Hoffmann at 276.

Thackrah[65] an employer successfully brought a claim against the contract administrator on the basis of a breach of contract where the loss arose because of over-certification leading to losses due to insolvency. The architect knew that the contractor had undertaken defective work but did not make deductions from the interim certificates to reflect this. The contractor became insolvent, which meant that the employer was unable to ensure that the contractor corrected the defects. Equally, the employer had effectively overpaid the contractor because no deductions had been made to the valuation to account for this.

10.73 The equivalent claim by a contractor would have to be brought on the basis that the contract administrator's valuation certificate amounted to a negligent misstatement which could be said to have caused foreseeable economic loss.[66] The question arises whether the contract administrator could be said to owe the contractor a duty in such circumstances. The courts have found in favour of parties bringing claims in the tort of negligence in analogous situations. For example, in *Arenson* v. *Arenson*[67] a party successfully brought an action in negligence against an auditor who undertook a valuation of shares as an expert.

10.74 The case *Pacific Associates* v. *Baxter*[68] indicates, however, that the courts will not allow a contractor to bring a claim in negligence against a contract administrator when it would otherwise have had a remedy by having the valuation reviewed and opened up in the normal way. The contractor had a claim under the contract associated with unfavourable ground conditions on a dredging project in the Middle East. It did not agree with the engineer's determination and so brought its claim against the employer in an arbitration to have the engineer's assessment opened up. The contractor settled with the employer for £10 million, but subsequently brought a claim against the engineer in negligence for £45 million whilst giving a credit for the sum already recovered. The contractor alleged that the engineer's determination of its claim was negligent. The Court of Appeal found that the claim should be struck out on the basis that it disclosed no cause of action.

10.75 The situation in *Pacific Associates*, where the contractor was able to bring a claim against the employer but chose to settle it, is quite different from the type of situation discussed above, where an employer's insolvency would otherwise deny the contractor a remedy.

10.76 Even if the contractor could establish that a duty of care existed, it would still need to establish that the contract administrator has been negligent, which may be problematic. If a contractor disagrees with the contract administrator's valuation and looks for it to be reviewed via the usual disputes process, it does not need to establish negligence. It simply asks the relevant tribunal to review the contract administrator's valuation. In most situations when the contractor is successful in increasing the valuation of its variation account there will be no question of the contract administrator's assessment being negligent. After all, a reasonable (non-negligent) valuation will cover a wide band. Therefore, a claim which is dependent on establishing negligence represents a significantly weaker means of having a valuation revised. All three judges found that on the facts of the case no duty could be said to be owed by the

65. [1974] AC 727.
66. See *Hedley Byrne & Co Ltd* v. *Heller & Partners Ltd* [1964] AC 465.
67. [1977] AC 405.
68. [1990] 1 QB 993.

engineer to the contractor. The leading judgment, given by Purchas LJ, stated that in the context of the factual matrix no duty of care could be said to have arisen. This was because the contractual matrix did not include an indemnity being given direct by the engineer, but did allow the contractor to have the engineer's decisions reviewed by a tribunal. Therefore, whilst the court emphasised that the decision was grounded in the facts of the case, the contractual relationship between the parties is typical of that on most construction projects whereby the contract administrator does not give a direct warranty to the contractor and the contractor's remedy is accepted as being the valuation review process. The indication is therefore that a duty in the tort of negligence will not arise in these circumstances. Against this, it is important to recognise that in this case the contractor did have a claim against the employer, which the parties settled. In circumstances where the employer becomes insolvent, having significantly underpaid because of a contract administrator's negligent valuations, the contractor may be left without a remedy.

10.77 The contractor's usual remedy of having the contract administrator's certificate reviewed by the relevant disputes tribunal may not be available to it where that certificate is final and binding under the terms of the contract.[69] The contract administrator owes a duty to act independently and honestly, and if it is found to be in breach of those obligations, the contractor will be able to open up what would otherwise be a binding certificate.[70]

10.78 The contract administrator's performance of its duties may also be relevant if the contractor seeks to establish that the contract machinery for reviewing claims has broken down. In *Bernhard's Rugby Landscapes Ltd* v. *Stockley Park Consortium Ltd*[71] the contract contained a procedure that required the contractor to submit a dispute concerning the valuation of variations to the contract administrator, who would need to reassess and issue a decision in writing before the contractor could proceed to litigation. The contract administrator failed to issue a written decision and the contractor commenced litigation anyway, claiming that the contractual process for resolving the dispute had broken down. The employer sought to stop the litigation on the basis that it had been commenced prematurely.[72] The court agreed with the contractor and cited various failures in the way the valuation process operated, including the fact that the contract administrator had no authority to agree a financial claim without the agreement of others and its continued insistence on additional information and records rather than simply making an assessment based on what had been provided.[73]

10.79 Whilst the contract administrator does not have a direct contractual relationship with the contractor, the employer, of course, does. Where the employer undertakes the valuation itself, it will owe a duty to the contractor in respect of how it is performed. Where the role is undertaken by an independent contract administrator, the employer will, in certain

69. See section B of this chapter.
70. See *supra*, paras. 10.57–10.62.
71. (1998) 14 Const LJ 329.
72. On UK projects caught by the Housing Grants, Construction and Regeneration Act 1996 (as amended by the Local Democracy, Economic Development and Construction Act 2009) this type of issue will no longer arise, because a party to a construction contract has the right to refer a dispute to adjudication at any time.
73. See the decision in relation to Preliminary Issue 6, (1998) 14 Const LJ 329 at 357–364.

circumstances, owe a duty to the contractor to ensure that it is undertaken in accordance with certain standards.[74]

SECTION D: THE EMPLOYER'S DUTIES IN RELATION TO CERTIFICATION

10.80 This section considers the employer's duties where it is empowered to undertake the certification role, and also its responsibilities to the contractor in relation to the performance of this role by an independent contract administrator.

The employer as certifier

10.81 There is no reason why a construction contract cannot name the employer organisation, or an employee of that organisation, as the body or person that will undertake the certification and valuation role.

10.82 The contractor may wish to have the employer's valuation opened up and revised, in which case it will be necessary to consider whether the certificate is final and binding, as discussed in section B of this chapter.[75]

10.83 Even if a certificate is otherwise final and binding, a tribunal may still be entitled to revise it if the certifier has acted improperly in undertaking the valuation process.[76]

10.84 An employer will not be required to undertake the valuation with skill and care and therefore errors in the assessment of variations will not entitle a tribunal to open up a valuation that is otherwise binding.[77] If the contractor was able to open up a final certificate on the basis that it did not agree with the valuation, it would not, by its nature, be a binding certificate. However, the employer is generally recognised as having a duty to act 'honestly, bona fide and reasonably', and breach of such obligations regarding conduct will give a tribunal the jurisdiction to revise certificates.[78]

10.85 Whilst the requirement that the employer acting as certifier should act honestly and in good faith mirrors the language used in the considerable body of case law surrounding the

74. See section D of this chapter.

75. A valuation clause that names the employer as certifier is more likely to provide that the assessment is made on the basis of an unfettered discretionary assessment, as opposed to the type of assessment that an independent contract administrator will typically be required to undertake. See *supra*, paras. 10.38–10.43, which consider this type of valuation provision.

76. See *supra*, paras. 10.57–10.62.

77. See *WMC Resources Ltd* v. *Leighton Contractors Proprietary Ltd* (2000) 2 TCLR 1 at 14 (para. 37): '. . . a court will not set aside a valuer's determination merely on the ground that it is "incorrect" or that it reveals errors. The determination will only be interfered with if it is not made in terms of the contract; a mere mistake in the valuation will ordinarily not be a departure from the terms of the contract.' See also *Balfour Beatty Civil Engineering Ltd* v. *Docklands Light Railway Ltd* (1996) 78 BLR 42 at 58, in which Sir Thomas Bingham MR noted that the employer '. . . accepted without reservation that the Employer was not only bound to act honestly but also bound by contract to act fairly and reasonably, even where no such obligation was expressed in the contract. . .'.

78. (2002) 2 TCLR 1 at 17.

duties of independent certifiers,[79] it is less obvious what the requirement to act 'reasonably' means. Looked at in the context of cases such as *WMC Resources Ltd* v. *Leighton Contractors Proprietary Ltd*,[80] which have applied such criteria, it is clear that the term is not being used to mean that the level of the valuation in question must be reasonable. After all, in *WMC Resources* the court contemplated that a valuation could not be challenged on these grounds if incorrect. Instead, the term would seem to be used in the sense of the reasonableness of the employer's conduct in undertaking the process, and so if it delayed in producing the valuation, this could be considered to be unreasonable.

10.86 Disputes concerning the obligation on a party to exercise its discretionary powers under a contract have arisen in other commercial contexts. *Socimer International Bank Ltd (in liquidation)* v. *Standard Bank London Ltd (No. 2)*[81] concerned two banks that were involved in trading securities. Entitlement under the contract depended on the value of certain assets and one of the parties to the agreement undertook the role of the valuer in making this assessment. There was disagreement as to the duties of the valuer and the standard it was required to achieve. The Court of Appeal rejected the claimant's case that the valuer's assessment of the price of the assets should have been made on an objective basis. It also rejected the claimant's argument that the defendant owed a duty of reasonable skill and care in carrying out the valuation. Rix LJ reviewed the law in this area, examining a number of the leading authorities on the constraints that are placed on a decision-maker when that role is exercised under a contract to which it is a party:[82]

> '. . . [A] decision-maker's discretion will be limited, as a matter of necessary implication, by concepts of honesty, good faith, and genuineness, and the need for the absence of arbitrariness, capriciousness, perversity and irrationality. The concern is that the discretion should not be abused. Reasonableness and unreasonableness are also concepts deployed in this context, but only in a sense analogous with Wednesbury unreasonableness, not in the sense in which that expression is used when speaking of the duty to take reasonable care, or when otherwise deploying entirely objective criteria: as for instance when there might be an implication of a term requiring the fixing of a reasonable price, or a reasonable time. In the latter class of case, the concept of reasonableness is intended to be entirely mutual and thus guided by objective criteria.'

10.87 Therefore, whilst a party exercising a discretionary power under the contract will be required to act with honesty it is not required to undertake an assessment which is reasonable in an objective sense. However, it may not act unreasonably in the *Wednesbury* sense[83] of not

79. See cases such as *Kimberley* v. *Dick* (1871–72) LR 13 Eq 1, discussed *supra*, para. 10.61.
80. (2000) 2 TCLR 1.
81. [2008] EWCA Civ 116.
82. *Ibid*. at para. 66. The Court of Appeal judgment undertakes an extensive review of the relevant authorities on the subject including: *Abu Dhabi National Tanker Co* v. *Product Star Shipping Ltd (The Product Star) (No. 2)* [1993] 1 Lloyd's Rep 397; *Ludgate Insurance Company Ltd* v. *Citibank NA* [1998] Lloyd's Rep IR 221; *Gan Insurance Co Ltd* v. *Tai Ping Insurance Co Ltd (No. 2)* [2001] EWCA Civ 1047.
83. See *Associated Provincial Picture Houses Ltd* v. *Wednesbury Corporation* [1948] 1 KB 223. This public law case concerned the challenge to the actions of a UK local authority. The actions of such a body were said to be subject of review if they were 'so absurd that no sensible person could ever dream that it lay within the powers of the authority'. The test has come to be termed as *Wednesbury* unreasonableness.

being so unreasonable that no sensible person could have arrived at that conclusion.[84] This is a relatively low standard when it comes to reviewing valuations. A contractor that wishes to challenge a valuation undertaken by an employer may find it difficult to establish that this standard has not been achieved.

10.88 *Socimer* and the other cases referred to in the Court of Appeal's judgment do not relate to the valuation process in a construction context. However, the case involves a valuation process in a commercial context and therefore the same principles are relevant. In addition to fairness and honesty, it may be that a tribunal would consider that the exercise of an employer's discretion, when acting as certifier, should be judged by reference to a *Wednesbury* reasonableness test in accordance with *Socimer*.

Duty not to interfere and to ensure the contract administrator performs

10.89 The courts have considered the extent and nature of the employer's duty to the contractor to ensure that the contract administrator properly performs its role, both when the contract administrator is independent and when it is an employee of the employer organisation.

10.90 The contract itself may contain express duties concerning the obligation on the employer not to interfere with the contract administrator's role and independence.[85]

10.91 It is more likely that, to the extent that the employer owes obligations to the contractor in relation to the performance of the contract administrator, these will be implied.

10.92 The employer gives no implied warranty as to the contract administrator's competence and skill, or indeed as regards the reasonableness of its determinations.[86]

10.93 In *Panamena Europea Navegacion Compania Limitada* v. *Frederick Leyland & Co Ltd*[87] the House of Lords found that the employer was under a duty not to interfere with the proper performance by the contract administrator of the duties required of it under the contract. In addition, the employer had a positive obligation to ensure that the contract administrator performed its duties. If the employer knew that the contract administrator was failing in its duty, it was under an obligation to instruct it so as to ensure that it properly exercised its role. Whilst this case is relatively old, it has been cited in a number of more recent Technology and Construction Court cases, including *B R Cantrell & E P Cantrell* v. *Wright & Fuller Limited*.[88] In the second case HHJ Thornton QC, in commenting on the employer's

84. Compare to *WMC Resources Ltd* v. *Leighton Contractors Proprietary Ltd* (2000) 2 TCLR 1, considered *supra*, at paras. 10.38–10.43. In that case (at 229 of the judgment) the employer was required to make the assessment 'in its sole discretion'.

85. For example, the 4th Edition of the FIDIC Red Book 1987, Clause 2.6, stated that the engineer would act impartially. The current FIDIC Red Book 1999, Clause 3.1, states: 'The Employer undertakes not to impose further constraints on the Engineer's authority, except as agreed with the Contractor.'

86. *Neodox Ltd* v. *The Mayor, Aldermen and Burgesses of the Borough of Swinton and Pendlebury BC* (1958) 5 BLR 34 at 47.

87. [1947] AC 428.

88. [2003] BLR 412. This case referred more extensively to *Penwith District Council* v. *VP Developments Ltd* [1999] EWHC 231 TCC, which in turn also cited *Panamena Europea Navigacion Compania Limited* v. *Frederick*

obligations, concluded that it would be in breach of contract if it failed to intervene so as to ensure that the contract administrator issued the necessary certificate:[89]

> '. . . [T]he architect. . . has a contractual obligation to act fairly, impartially and in accordance with the powers given to him by the conditions. The employer may not interfere in the timing of the issue of any certificate but is not himself in breach of contract if a particular certificate is not issued or is erroneous unless he is directly responsible for that failure. However, if and when it comes to his notice that the architect has failed to comply with his administrative obligations, by for example failing to issue a certificate required by the contract, the employer has an implied duty to instruct the architect to perform that function in so far as it remains within the power of the architect to perform it and the employer is in breach of the contract with the contractor to the extent that he does not intervene to arrange for the correct or a correcting step to be taken by the architect.'

10.94 The employer does not guarantee the contract administrator's performance and is not in breach simply because the contract administrator fails to issue a certificate. The employer's duty is to make reasonable efforts and it will be in breach if it fails to intervene. It may be that the employer, acting reasonably, is unable to ensure that the contract administrator undertakes the actions that it should.

10.95 Where the contract administrator is an employee of the employer, the employer will have implied obligations as regards the performance of the role. The Australian case of *Perini Corporation* v. *Commonwealth of Australia*[90] concerned a public works contract to construct a mail exchange. The Director of Works, an officer of the employer organisation, was the contract administrator. He refused to award extensions of time under Clause 35 of the contract, on the basis that this was against the department's policy. The case involved preliminary issues concerning the duties of the Director and the employer organisation in relation to the certification process.

10.96 The Supreme Court of New South Wales found that the Director was required to act 'fairly and justly'.[91] The court, in considering the duties of the employer, talked in terms of a 'negative' implied term as well as a 'positive' implied term. The negative term placed a duty on the employer not to interfere with the Director's performance:[92]

> 'In my opinion it is not possible to assume that the parties to this agreement could have contemplated that he would act in manners other than those upon which they have agreed and expressed in Clause 35 and that it is a consequence of this assumption that they shall have implicitly bound themselves one to the other that they would not do anything that would prevent him from a proper discharge of the mandate which

Leyland & Co Ltd [1947] AC 428. See also *Perini Corporation* v. *Commonwealth of Australia* (1969) 12 BLR 82, referred to later, which relies heavily on *Panamena*.

89. [2003] BLR 412 at 435, para. 99.
90. (1969) 12 BLR 82.
91. *Ibid.* at 97.
92. *Ibid.* at 107–108.

> contractually they had granted to him. . . The obligation of the defendant in this respect is more closely seen because it was the employer of the Director who in his turn was bound to act as the defendant should direct. . . I am of the opinion that there must be implied into this contract in order to give it business efficacy an implied term of the negative character to which I have already referred.'

10.97 The positive term required the employer to ensure that the Director performed the certifying duties under the contract:[93]

> 'In my opinion the plaintiff and the defendant, being the parties bound by this agreement, are bound to do all co-operative acts necessary to bring about the contractual result. In the case of the defendant this is an obligation to require the Director to act in accordance with his mandate if the defendant is aware that he is proposing to act beyond it. . . I am accordingly of the opinion that a term must be implied in the present agreement binding the defendant to insure that the Director of Works, its servant, performs his duties under Clause 35 in accordance with his mandate.'

10.98 These duties do not mean that the employer warrants to the contractor that the contract administrator will produce the correct valuation of variations. They require only that the employer instructs the contract administrator to perform its duty to carry out its obligations and that it does not improperly interfere with the task. If the contract administrator issues a final and binding certificate which values variations at a level that the contractor objects to, it has no remedy unless the employer has breached these duties.

10.99 Where the employer is in breach, the contractor's remedy will normally involve seeking to open up and revise the certificate. However, in limited circumstances it may be necessary to consider whether the employer's breach can lead to a direct claim for damages. Such a remedy was brought by the claimants in both *Panamena* and *Perini*. In *Panamena* the case was not decided on this basis, but this issue was considered in *Perini*, which makes extensive reference to both the Court of Appeal and House of Lords' judgments in *Panamena*.[94] The court in *Perini* found that a party could sue for breach by the employer of its implied duties to monitor the contract administrator (as discussed above), the indication being that a claim could be made for damages.[95]

Parties' agreement to have an independent certifier

10.100 Whilst there is no reason why a construction contract cannot name the employer as certifier, if it names an independent contract administrator from the outset then the employer cannot subsequently take up this role.

93. *Ibid.* at 111–112.
94. *Ibid.* at 108–111.
95. *Ibid.* at 108. In respect to the employer's arguments to the contrary, Macfarlan J stated: '. . .[I]t does not follow, nor in my opinion has it been decided that if the contractor has otherwise suffered damage he is not entitled to sue upon an implied terms.' It should be recognised, however, that establishing loss may be problematic if the contractor has the right to simply have the valuation reviewed.

10.101 *Scheldebouw BV* v. *St James Homes (Grosvenor Docks) Limited*[96] concerned a commercial development being procured using a construction management contract structure. St James instructed a professional team to provide architectural and other services and entered into a number of trade contracts for the execution of different elements of the work. One of those trade contracts, which was for the cladding of three buildings within the development, was with Scheldebouw. St James also instructed a construction manager, who was identified as such in each of the trade contracts, and whose functions included the role of certifier under the trade contracts.

10.102 In the course of Scheldebouw's works, St James terminated the employment of the construction manager and notified Scheldebouw that it would undertake this role itself, to which Scheldebouw objected. The court was asked to determine whether St James had acted within its contractual rights.

10.103 The court held that although St James was entitled to replace the construction manager, this did not extend to allowing St James to substitute itself into the role. The contract structure was based on the employer and the construction manager being two different entities. It was such an unusual situation for the employer itself to perform the role of certifier under a construction management contract, and so express wording would be required to allow it. A trade contractor would take into account who was carrying out the role of construction manager when calculating the risk in the contract. Substituting the employer into this role would adjust that risk,[97] by removing the layer of protection previously afforded to the trade contractor because the construction manager would no longer be an independent professional person/firm who is separate from the employer. It is thought that this principle would not just apply to a construction management set up but would be relevant wherever a contract has been agreed with an independent contract administrator and the employer seeks to take over this role.

SECTION E: AGREEMENT OF VALUATION AND SETTLEMENT

10.104 The valuation process will typically involve discussion between the contract administrator and the contractor as to entitlement.[98] That process may involve the parties seeking to reach agreement as to the valuation of variations that have been instructed. This section considers such agreements.

Authority to agree

10.105 Any agreement to settle a party's rights under a contract has to be entered into by that party or a properly authorised agent on its behalf. The contract administrator is unlikely to have such authority and will certainly not have implied authority to settle on the employer's

96. [2006] EWHC 89 (TCC).

97. An employer is still, of course, obliged to act in an independent, impartial, fair and honest manner if it undertakes the role of contract administrator.

98. Whilst this section focuses on the negotiation and agreement of the financial entitlement for extra work, the same can also take place in respect of the entitlement to extra time to complete the works.

behalf.[99] If a contractor wants to ensure that it has a binding settlement as to the valuation of variations, it should ensure that the employer signs off on the agreement directly.

The same principle applies to contractors, in terms of the persons representing them. **10.106**

In the case of *Hurst Stores and Interiors Ltd* v. *ML Europe Property Ltd*,[100] the contractor had been required to issue monthly statements throughout the works, which were identified as 'interim'. Six months before completion, the contract administrator amended the wording of the pro-forma monthly statements to state that they were 'in full and final settlement'[101] of all the contractor's claims. The contractor's project manager signed the amended monthly statement without understanding that he was compromising the company's disruption claims. **10.107**

The contract administrator refused the contractor's final account disruption claim on the basis of the signed binding monthly statement. The contractor claimed that its project manager lacked authority to compromise all claims under the contract. The court held that to enter into an agreement which is 'in full and final settlement of all. . . claims. . . out of or in connection with the trade contract works'[102] amounted to a variation of the contract, rather than any sort of valuation pursuant to its terms. The project manager was engaged only to act on its behalf in managing the contract, and had no authority to vary the terms of the contract. **10.108**

Consideration

Parties agreeing the settlement of a claim are entering into a compromise agreement and, as with any agreement, this must be supported by consideration.[103] **10.109**

If a debt is liquidated such that it involves a final and ascertained amount, and liability and quantum are not otherwise disputed, then settlement may not be supported by consideration. In *D&C Builders Ltd* v. *Rees*[104] a building firm had undertaken refurbishment work at a house in Brick Lane in east London. The house owners still owed £482 for the work but, knowing that the builders were in desperate straits for cash, offered £300 in settlement. The judge at first instance found, as a question of fact, that the amount of £482 was ascertained and not in dispute. Therefore, the supposed settlement was not supported by consideration and the builders could sue for the difference. The Court of Appeal upheld the decision. **10.110**

In the context of a settlement of a variations claim it will very rarely be the case that it can be said that the claim is liquidated and that the agreement does not involve a compromise by both parties. **10.111**

99. See Chapter 8, section C in relation to the contract administrator's authority to act as the employer's agent.
100. [2004] EWCA Civ 490.
101. *Ibid.* at para. 7.
102. *Ibid.* at paras. 34–35.
103. This is not required if the agreement is made by deed, although the settlement of a variation claim is in practice highly unlikely to be recorded in this manner.
104. [1966] 2 QB 617.

10.112 In the New Zealand case of *James Wallace* v. *William Cable Ltd*[105] a subcontractor claimed additional monies for variations. Following completion, the main contractor sent the subcontractor a cheque stating that it was in settlement of outstanding claims. The subcontractor sought to argue that there was a lack of consideration. The Court of Appeal of New Zealand found that there was a concluded agreement since the subcontractor's claim was not a final and ascertained sum. The main contractor had disputed the claim and the cheque that was sent represented a proposed settlement that was accepted.

10.113 It is also the case that the courts have often taken a liberal approach to the requirement of consideration when analysing settlements reached by parties. For example, where a carpenter was experiencing financial problems on a project and agreed an increase in his prices part way through the project, the contractor was not subsequently entitled to renege on the agreement on the basis that there was no mutual consideration. The court found that the carpenter, in agreeing to proceed with the works, had provided the contractor with a benefit in the form of certainty that the carpenter would proceed with the works.[106]

Interim valuations

10.114 Monthly valuations issued during the course of the project are almost always interim in nature and can be opened up by either party at a later stage.[107]

10.115 Just because an employer has paid for items under a series of interim valuations throughout a project does not stop it from changing those values in the final account. In *Royston Urban District Council* v. *Royston Builders Ltd*[108] an employer paid throughout the project based on certain prices which had index-linked increases as set out in a schedule. It transpired at the end of the project that the schedule was not incorporated into the contract and the employer adjusted the valuation to reflect this. The court found that the fact that the employer had paid on interim certificates did not mean that it was estopped from changing the valuations at the end of the project. The monthly certificates were provisional and could be adjusted. There could not be said to have been any detrimental reliance by the contractor, which is a pre-condition of estoppel.

10.116 Equally, a contract administrator may value work on the basis of certain rates during the course of the project but then change its mind at a later stage. This is perfectly legitimate. The question that needs to be determined is what the correct rate is under the contract, and the fact that a certain rate has been used for numerous prior valuations will have no direct bearing on this question.

10.117 In *Mears Construction Ltd* v. *Samuel Williams (Dagenham Docks) Ltd*[109] it was held that the inclusion of a clause entitling the engineer to make a correction or modification to a previous

105. [1980] 2 NZLR 187.
106. *Williams* v. *Roffey Bros & Nicholls (Contractors) Ltd* [1991] 1 QB 1. This case and the issue of consideration to support an agreement is discussed in more detail *supra*, para. 9.90.
107. See section B of this chapter.
108. (1961) 177 EG 589.
109. (1977) 16 BLR 49.

certificate permitted him to modify a price which he subsequently realised he had mistaken to be reasonable. Therefore, he could review the reasonableness of a price (of a variation) after that price had already been fixed, taking account of events taking place after the price was originally fixed. As the arbitrator could open up, review and revise the engineer's decision, certificate or valuation, then the court could also do so.

10.118 This is not to say that the parties cannot reach a binding settlement on the valuation of variations on an interim basis. It is just that the parties need to be clear as to what they are agreeing and to ensure that it is clearly recorded in writing. An agreement to use a particular rate for valuing certain work in monthly certificates may be construed as being an agreement to use that rate for the purposes of interim valuations but without binding either party when it comes to the final account. Both parties need to be careful to ensure either that such agreements are formulated in such a way as to be binding, or that they do not give up other entitlements in exchange for a deal that cannot be relied upon. For example, a contractor should not agree to a rate for variations on an interim basis in exchange for not bringing a claim for disruption costs associated with that change if the employer is able to adjust that rate at a later stage.

10.119 If the parties do reach a binding agreement on the valuation of variation or a rate to be applied, it is important that they are clear as to what possible claims under the contract are being settled. For example, does the agreement on the variation cover indirect costs as well as direct costs? *Walter Cabott Construction Ltd* v. *The Queen*[110] is a case involving a number of claims arising from the construction of a fish hatchery in North Vancouver, Canada, one of which concerned the settlement of associated claims. The work required the use of timber cladding, but the contract document incorrectly described the grade of timber that was required. The parties agreed on the use of an improved grade of timber and the contractor brought a claim during the course of the project for the extra costs involved. This was settled, but at the end of the project the contractor sought to make a further claim for the costs of the delay caused by the variation. This had not been raised at the time and the court found that it was to be implied that the contractor had settled the costs of delay as part of the overall arrangement in relation to the variation:[111]

> '. . . [I]t seems to me that when a person engages a contractor and when an extra price is agreed to in respect of a particular item, that person has a right to assume that the contractor has taken into account all of his costs, direct and indirect, flowing from the change in circumstances that led to the renegotiation and that he will not later be presented with a bill for additional compensation.'

10.120 The question as to what has been settled as part of any such arrangement entered into during the course of a project will be a matter of construction. However, this case serves as a reminder that parties need to consider carefully the scope of any such deal.

110. (1974) 44 DLR (3d) 82.
111. *Ibid.* at 90.

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CHAPTER ELEVEN

ENTITLEMENT TO MONEY

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SECTION A: INTRODUCTION

11.1 This introductory section considers the main principles that govern the contractor's entitlement to additional money as a result of variations. Later sections of this chapter pick up on particular points in greater detail.

11.2 This chapter is principally concerned with the assessment of the contractor's entitlement as a result of a change instructed under the contract variation mechanism. However, as discussed in Chapter 9, extra work on a construction project may be carried out outside the usual contract mechanism for instructing change, such as under a collateral contract, in which case the contract provisions for valuation will not apply.[1]

11.3 The parties may agree the price to be paid for the extra work instructed.[2] Indeed, many contracts contain procedures for variations to be proposed and a price agreed before the work is undertaken.[3]

11.4 If there is no agreement as to the price, it will be necessary to consider how the extra work is valued under the contract.

11.5 The contract may stipulate that the contractor has no right to additional payment for changes that are instructed for certain reasons, for example when it has been necessary to change the design because of contractor default.[4] However, in the absence of such a provision, the

1. The work may have been undertaken under a consensual variation of the contract negotiated between the parties (Chapter 9, section C), or the work may have been undertaken under a collateral contract (Chapter 9, section F), or the contractor may have a claim in restitution such that the extra works be paid on a *quantum meruit* basis (Chapter 9, section G). The assessment of entitlement in these circumstances, where entitlement does not derive from the contract variation mechanism, is considered in section D of this chapter.

2. The settlement and agreement of variations is discussed in Chapter 10, section E.

3. Contracts which incorporate such procedures will normally provide for the contract administrator to make an assessment if agreement cannot be reached. Such procedures are discussed in Chapter 8, section E.

4. See *supra*, paras. 6.12–6.14, where such provisions are discussed further.

reason for the change will not normally be relevant to how the valuation of the instructed variation is undertaken.[5]

11.6 It may also be the case that the contract simply does not contain a set of valuation rules. In these circumstances it will be necessary to consider the appropriate common law principles for assessing the contractor's entitlement.[6]

11.7 However, typically, the contract will contain rules and procedures for valuing extra work and these will normally be applied by the contract administrator, although under some contracts the employer itself may undertake the valuation.[7] The contract will normally require variations to be valued in accordance with these rules and procedures. The contractor will not be entitled to avoid the contract valuation rules and cannot elect to be paid on a different basis instead, such as by reference to costs.[8]

The two approaches to pricing changes

11.8 Contract valuation rules for variations will normally adopt one of two approaches: valuation by reference to the contract sum breakdown, or valuation using a separate pricing document for extra work.

11.9 The valuation of variations using a breakdown of the contract sum is the traditional, and still the most common approach. This is the method adopted by the FIDIC, ICC and JCT suites of contracts, among others. It is discussed in detail in section B of this chapter. The contract sum breakdown is normally contained in a document which has also been used to tender the works, such as a bill of quantities.[9] The rates it contains are then used as the 'price book' for valuing the extra work ordered during the course of the project. If variations are required which involve work that is different from that forming the original scope, the contract rates may be inappropriate. Such a contract will typically include additional rules for valuing such dissimilar work, but these will often still seek to take account of the contract pricing information.

11.10 The alternative approach is to incorporate into the contract a separate schedule of pricing information which is used to value change, rather than simply applying rates and prices from the contract sum breakdown. This is the methodology adopted, for example, by the NEC

5. See Chapter 6, section B generally, and in particular, see paras. 6.32–6.34.
6. See section D of this chapter.
7. The employer will owe duties to the contractor as to how it is required to apply and operate the valuation process where it is doing so rather than a contract administrator. See Chapter 10, section D. The contract administrator's duties in relation to how it approaches the valuation process, such as the obligation to act independently, are considered in Chapter 10, section C.
8. Cases have arisen where a contractor has sought to make claims on the basis that the whole of its work should be re-evaluated by reference to total cost. Such an approach has typically been dismissed by the courts on the basis that the contract procedure for valuation should be followed. See *McAlpine Humberoak Ltd* v. *McDermott International Inc (No. 1)* (1992) 58 BLR 1, reviewed further in section D of this chapter.
9. Alternatively, a contract sum analysis or schedule of prices may be adopted. Under a measurement contract the schedule of rates that is used to value the contract works is typically also used to value variations. The common factor is that the pricing document that is used to determine the contract sum for the original scope is also used for valuing additional work.

and IMechE suites of contracts, and is discussed in detail in section C of this chapter. Such a pricing schedule will typically contain rules for assessing what will be paid for each of the resources affected by the change. For example, if extra plant is required, what rates are used and how associated costs such as fuel and transport are determined.

11.11 If variations are valued using the contract sum breakdown, the employer knows that it will, broadly speaking, be paying for extra work at the same rates as the original scope of work. If the alterative pricing system is used, the rates the employer will pay for changes may bear no relationship whatsoever to the contract price for the original scope.

11.12 If this alternative model is used, the employer will need to review and negotiate the separate schedule of rates for variations in exactly the same way as it negotiates the contract sum for the original scope. There is no inherent reason why contract rates and variation rates should be the same; it is a matter of contract negotiation and risk. The rates for variations may be of limited commercial relevance if it transpires that there are very few changes on the project. But if there are significant changes, then the rates for additional work may be an important factor influencing the out-turn cost of the project.

11.13 The rates that the parties have agreed will be used for the pricing of variations and cannot be unilaterally changed, in exactly the same way that the contract price is binding on the parties. This will be the case even if the contractor has made a mistake in formulating its rates and prices.[10] This is the case whether the traditional or the alternative method of pricing is used.

11.14 However, the problems arising as a result of errors with rates are more likely to arise using the traditional method of pricing change using the contract sum breakdown. Such a breakdown, such as that contained in a bill of quantities, will not only contain many more individual rates, and therefore more opportunity for error, it will also contain prices that have been built up from the cost of the individual resources. The type of pricing schedule used for such contracts as NEC will simply contain prices for the resources that will be employed (such as equipment), rather than rate build-ups for individual items of work based on resource costs, and therefore there is less likelihood of error. The alternative contract pricing approach will typically adopt a cost-based assessment for many categories of resource, which avoids the potential for incorrect rates and prices being quoted.

11.15 Not only is the likelihood of error a risk for the contractor, it also involves risk for the employer. Equally, the contractor may intentionally price the bill of quantities in a strategic manner, with higher rates loaded on to items where it expects additional work to be ordered. The alternative pricing method is more transparent and this problem is avoided.[11] For these

10. See *Henry Boot Construction Ltd* v. *Alstom Combined Cycles Ltd* [2000] BLR 247, discussed in section B of this chapter. It may be the case that the contract includes rates for variations which are uneconomic and which the contractor wants to avoid. Such rates are normally treated as sacrosanct, although there may be scope to argue that there is a limit to the amount of additional work that the employer is entitled to instruct in those circumstances; see *infra*, paras. 11.23–11.25, 11.52 and *supra*, 5.117–5.119.

11. See *infra*, para. 11.174.

reasons, those responsible for drafting the NEC consider this alternative approach to the valuation of variations to be more appropriate than the traditional approach:[12]

> 'Assessment of compensation events as they affect Prices is based on their effect on Defined Cost plus the Fee. This is different from some standard forms of contract where variations are valued using the rates and prices in the contract as a basis. The reason for this policy is that no compensation event for which a quotation is required is due to the fault of the Contractor or relates to a matter which is at his risk under the contract. It is therefore appropriate to reimburse the Contractor his forecast additional costs (or actual additional costs in certain circumstances) arising from the compensation event. Disputes arising from the applicability of contract rates are avoided.'

11.16 The downside with the alternative approach, such as that adopted by NEC, is that variations will often be valued by reference to the costs that the contractor has incurred rather than using pre-agreed rates. As such, there will be less pressure on a contractor to work efficiently and such a reimbursable approach to valuation may well increase the price of change for the employer. There is no inherent reason, however, as to why such pricing schedules need to be based on cost rather than price.

11.17 It is, however, overly simplistic to say that contracts such as FIDIC and JCT value solely by reference to the contract sum breakdown whilst NEC does not value on this basis at all. The distinction is not entirely black and white. The contracts that follow the traditional approach of using rates from the contract sum breakdown will normally also contain rules to allow the use of alternative rates where this is required to arrive at a 'fair valuation'. In practice, this means using market rates, or having regard to the contractor's costs where the additional work is different from that contained in the original scope. Such a 'fair valuation' will typically involve a type of assessment similar to the cost-based analysis that will often be adopted under NEC.

11.18 Using rates from the contract sum breakdown is feasible only if that breakdown is reasonably detailed. A traditional bill of quantities contract will often contain the level of detail necessary. However, increasingly, lump sum contracts are entered into with a very limited, high-level breakdown of the contract price. As such, it will not be feasible to extrapolate rates and prices for individual items of work from the breakdown when it comes to valuing variations.[13] Where this is the case, changes will need to be undertaken on a 'fair valuation', which will typically involve a cost-based approach that is similar to the alternative model.[14]

11.19 It will often be the case that the contractor has tendered on the basis of a detailed contract sum breakdown which builds up to an overall lump sum price, but during the final stages of negotiation the lump sum price has changed, often downwards. As a result, the contract sum

12. NEC Guidance Notes, in relation to Clause 63.1.

13. See the comments of Beldam LJ in the Court of Appeal in the *Henry Boot* case, as commented upon *infra*, para. 11.75.

14. It is also the case that many of the contracts that use the traditional pricing method for variations will also refer to dayworks assessments if the work cannot be measured, which again is similar to the type of assessment adopted under NEC contracts.

breakdown contains a breakdown of items which does not add up to the final agreed price between the parties. If the traditional model for pricing variations is used, this will cause potential disagreement and confusion because the individual rates and prices may need to be discounted in order to take account of the reduced overall contract price.

11.20 For all these reasons the parties may consider that the breakdown of the contract sum is unsatisfactory for pricing changed works. It seems likely that the alternative approach of using a separate pricing schedule for variations will be used increasingly. However, if this approach is taken, it is important that the pricing schedule for variations is carefully drafted.[15]

11.21 It should also be recognised that contracts which primarily use the alternative pricing method for variations will often give the parties the option to revert to the traditional approach. For example, NEC provides as an alternative that parties may agree that the valuation of change should be made using the contract sum breakdown.

Omissions

11.22 The work being valued as part of the variation process will often not only involve additional work of the same type as that which formed the contract scope; there will also be omissions as a result of the scope being reduced. Changes can also involve dismantling work that has previously been constructed, retrospective rework or the retro-fitting of items as part of the implementation of a revised design. Valuing this work is more complex than valuing additional contract scope items. A variation may result in orders being cancelled and premiums having to be paid in order to expedite the procurement of replacement items.[16] All these factors will need to be taken into account in undertaking the valuation.[17] Whether the traditional approach of using contract sum breakdown is used, or the alternative approach of using a separate schedule of prices, any valuation process will seek to incorporate a flexibility to reflect these complexities. However, the valuation of omitted work raises particular challenges using the alternative method of a schedule of prices because the calculation can sometimes appear to involve a theoretical analysis.[18]

The right to be paid for extra work

11.23 The contractor's right to be paid for additional work depends on the provisions of the contract under which the work is carried out. There is no reason why the parties cannot

15. See *MT Højgaard A/S* v. *E.ON Climate and Renewables UK Robin Rigg Ltd* [2013] EWHC 967 (TCC), discussed *infra*, paras. 11.129–11.137, where an alternative pricing schedule was used but there were problems in applying it to value the changes undertaken.

16. See *Tinghamgrange Ltd (trading as Gryphonn Concrete Products)* v. *Dew Group Ltd and North West Water Ltd* (1995) 47 CLR 105 (CA), referred to in section B of this chapter.

17. As discussed in section B, contracts will often provide that work undertaken under different conditions will need to be priced differently from contract work. Equally, a variation may lead to the repricing of contract scope work.

18. See *MT Højgaard A/S* v. *E.ON Climate and Renewables UK Robin Rigg Ltd* [2013] EWHC 967 (TCC), discussed *infra*, para. 11.129.

agree that the contractor will undertake additional work free of charge. This would be very unusual, although contracts do sometimes contain provisions that allow the employer to direct the contractor as to how it will undertake the works, including changes to sequence and temporary works, without compensation being due in return.[19] There is no reason why a unilateral variation mechanism should not allow the employer to order certain extra work on the basis that the contractor is not entitled to additional payment in return .[20]

11.24 Contracts do sometimes contain provisions that allow the contract administrator to correct errors, although if the arrangement was clear these would not apply.[21]

11.25 In such circumstances there may be limits on the amount of additional work that the employer is entitled to instruct.[22]

Design and build contracts

11.26 The valuation of change under a design and build contract involves other complexities. The employer will typically instruct changes to the performance criteria that the works are required to achieve. Therefore, if the contractor seeks to implement an over-engineered solution to the changed criteria, the valuation may properly be undertaken by reference to a simpler and cheaper design.[23] For this reason, among others, pre-agreeing change is of greater importance under design and build projects.

Measurement contracts

11.27 Section E of this chapter considers the valuation of change under measurement contracts. Whilst the quantities undertaken under measurement contracts are reassessed once the work is carried out, changes between estimated and actual values do not represent a variation. Variations will be made where the scope of work is varied, in much the same way as with a simple lump sum contract, and so the provisions for the valuation of change are still required. This type of contract also typically provides for the contractor to be entitled to an uplift in its rates for contract work where the change in quantities is significant.

Overlap with other contract compensation provisions

11.28 The final section of this chapter considers the relationship between the valuation of variations and the contractor's entitlement to additional payments under other contract clauses. For example, the contractor may be entitled to be paid for the costs it incurs if it has been delayed or disrupted under a loss and expense provision. There may be a right to be paid

19. As regards such provisions, see *supra*, para. 5.13.
20. Whilst it is the case that a consensual variation requires consideration, there is no reason why, when a unilateral variation is triggered, there needs to be a mutual exchange as consideration has been provided under the original contract. See *supra*, para. 1.42.
21. See *infra*, para. 11.52.
22. See *supra*, paras. 5.117–5.119.
23. See *supra*, paras. 3.128–3.223.

for additional costs incurred as a result of specific risks, such as the ground conditions being worse than expected. It is necessary to consider the overlap between these provisions and the contractor's entitlement under the valuation of variations clause.

SECTION B: VARIATIONS VALUED BY REFERENCE TO THE CONTRACT SUM

11.29 This section considers valuation mechanisms which use the breakdown of the contract sum,[24] as incorporated in the parties' agreement, to value variations.[25]

11.30 The approach taken by contracts adopting this method are relatively similar.

11.31 Some contracts contain very brief provisions, but most contain relatively lengthy clauses setting out the rules and procedure for valuing, and these typically use a three-limbed approach.[26] If the variation involves work that is not covered by the contract rates because it is dissimilar, the rates can be used but adjusted to account for the differences in the nature of the new work. If the rates are entirely inapplicable, the assessment will be by reference to what is fair and reasonable, which will often involve a determination by reference to the contractor's costs. In valuing change under a single variation order, it may be the case that different limbs of the valuation provision will apply to different parts of the additional work.[27]

11.32 An example of the a contract with a short valuation provision is MF/1. This simply states that the valuation should:[28]

> '. . . be determined by the Engineer in accordance with the rates specified in the schedules of prices, if applicable. Where rates are not contained in the said schedules or are not applicable then the amount shall be such sum as is in all the circumstances reasonable'.

11.33 In applying this provision there may, of course, be uncertainty as to whether or not contract rates are 'applicable'. For example, if the new work is similar but not the same as that contained in the schedule of prices, can those prices be taken into account at all? Other contracts provide more guidance as to the applicability of the contract rates. For example, the ICC Measurement Contract 2011 provides that where work is 'not of a similar character or is not carried out under similar conditions or is ordered during the Defects Correction Period', the

24. The contract sum breakdown will normally be contained in the priced bill of quantities, but this will not necessarily be the case.

25. As this section goes on to explain, the contract sum breakdown will represent the starting point for valuation, with alternative rates being applied if contract rates are inapplicable.

26. See *Henry Boot Construction Ltd* v. *Alstom Combined Cycles Ltd* [2000] BLR 247, as discussed later.

27. For example, one element of the new work instructed under a variation order may be same as that included in the original scope and therefore can be priced under the first limb using directly applicable rates. Another element of work in the same variation order may bear no relationship to any work within the original scope, such that limb three is applied and a 'fair' valuation is made, with no reference to the contract rates. See paras. 54 and 55 of *MT Højgaard A/S* v. *E.ON Climate and Renewables UK Robin Rigg Ltd* [2013] EWHC 967 (TCC), discussed in detail in section C of this chapter.

28. Clause 27.3.

contract rates shall be used, but only to the extent that this may be reasonable. If not, a 'fair valuation' shall be made.[29]

11.34 Many valuation clauses are very lengthy and attempt to set out all the possible aspects of the possible impact of change. For example, when extra work is instructed, not only will that work itself have to be valued but there may also be an impact on the original contract work. A simple valuation clause, such as the MF/1 provision referred to above, does not preclude such costs being assessed as part of the valuation process, albeit that it does not specifically refer to them. However, many of the more comprehensive valuation provisions do. For example, the ICC valuation clause provides that the rates for contract scope work itself can be adjusted if a variation results in those rates becoming 'unreasonable or inapplicable'.[30] It is certainly the case that the more comprehensive ICC provision again gives more certainty as to what the valuation process should extend to and how change should be valued.[31]

Valuation using contract rates and the sanctity of prices

11.35 The rates and prices contained in the contract sum breakdown are crucial when valuing change. They are used for valuing variations when the extras are simply 'more of the same', but are also normally relevant when valuing dissimilar work. It may be possible to derive rates from certain items of work in the contract sum breakdown when valuing a quite different item of work.

11.36 For example, the relevant provision in the FIDIC Red Book 1999 states:[32] 'Each new rate or price shall be derived from any relevant rates or prices in the Contract, with reasonable adjustments to take account of. . .' differences in the character, working conditions and volume of the variation as opposed to the contract work.

11.37 The contract prices are applied in undertaking the valuation, even though it may be apparent that the contractor has made an error in fixing them.[33] They cannot be corrected and are treated as sacrosanct.

11.38 If individual rates and prices within the contract sum breakdown are significantly greater or lower than cost, the contractor may either gain a windfall or suffer a significant loss as a result of changes.

11.39 The basis of the parties' agreement is that the contract rates will be used to value variations. It is therefore irrelevant whether they are 'fair' or whether they cover the costs of doing the work, in much the same way that it is irrelevant whether the overall contract sum is 'fair'.

29. Clause 52(4)(b).
30. Clause 52(5).
31. As regards the impact of additional work on the undertaking of contract work, and the relationship between the valuation of variations and loss and expense, see section F of this chapter.
32. At Clause 12.3.
33. Rates that bear little relationship to cost or market rate may be thought to have been the result of an error by the contractor. It may, alternatively, be the case that a commercially astute contractor will load the rates of items that are likely to be subject to increases. This may particularly be the case with rate pricing on a measurement contract, where the principle of the sanctity of rates also applies: see section E of this chapter.

The rates represent the parties' bargain and must be respected. HHJ Humphrey Lloyd QC, in *Weldon Plant Ltd* v. *Commission for the New Towns*,[34] summarised the position:[35]

> 'The contractor therefore takes the risk that its rates and prices for the work may not cover its costs of carrying out a variation which is the same as or comparable to contract work. . . .'

11.40 If a tribunal were able to rewrite the rates after a contract was entered into on this basis, then it would allow a contractor to secure a job with a low tender and then use the judicial process to increase its price. The only basis on which a party can allege that the price can be changed, because of an error, is if it can be said to be subject to rectification.[36]

11.41 Valuation rules will often refer to using contract rates where they are appropriate, but whether a bill rate is 'appropriate' is dependent on whether the work that is being valued is comparable to the equivalent bill item. The appropriateness of the rate is not dependent on the level of the rate itself, as the agreed price constitutes the parties' bargain. Therefore, if a rate has been inserted in error, it is still correct to use that rate if the work to which it relates is comparable, and therefore appropriate.

11.42 *Henry Boot Construction Ltd* v. *Alstom Combined Cycles Ltd*[37] illustrates the principle that errors in pricing do not mean that bill rates can be adjusted. The dispute was subject to arbitration, with an appeal on points of law to the Technology and Construction Court, where the case was heard by HHJ Humphrey Lloyd QC, from which it went to the Court of Appeal, which upheld the first instance judgment.

11.43 Alstom had employed the contractor to construct a power station in North Wales. During the course of the project the employer decided that certain pipe work needed to be installed at a lower depth than planned. When it came to value this variation, the pricing information in the contract potentially gave the contractor a significant windfall. It was necessary for the contractor to undertake sheet piling as part of this variation. A price of £250,880 had been given for works that included the sheet piling but in the pricing documents that figure was said to relate only to a much smaller site area than had been intended.[38] The upshot was that, when a rate per square metre for the sheet piling was extrapolated from the £250,880 figure, it turned out to be very high and significantly greater than a normal market rate for this work.

11.44 The following passage from the first instance judgment neatly summarises the view that the contract rates are sacrosanct, as upheld by the Court of Appeal:[39]

34. [2001] 1 All ER (Comm) 264.
35. *Ibid*. at 273.
36. In practice, rectification is unlikely to be open to a party in this type of situation. See *supra*, para. 3.23 for a review of what a party will need to establish to take advantage of this remedy.
37. [2000] BLR 247.
38. It would seem as if the contractor's price was intended to cover the temporary works, including the sheet piling, for a number of areas on the site, including the Turbine Hall. However, the relevant pricing document stated that the figure of £250,880 was only for the work on the Turbine Hall, apparently in error.
39. [1999] BLR 123 at paras. 31 and 32. It should also be noted that many contracts contain clauses which specifically emphasise this characteristic of the contract rates. For example, in the *Henry Boot* case, the contract

> 'It is in any event a basic principle of the law of contract that a party cannot avoid the effect of a unilateral mistake made prior to the making of the contract (subject to exceptions such as where the mistake was in fact known to the other contracting party). A mistake in a rate or price or in its application binds both parties. . .
>
> The fact that the rate or price otherwise applicable may appear to be "too high" or "too low" is immaterial: the parties have agreed that such a rate or price is to be used to value variations or, if clause 55 is applicable, the correction of an error or omission.'

11.45 The contract was based on the ICE standard form[40] containing various options for the reassessment of rates and the employer sought (unsuccessfully) to rely upon these provisions in order to have the 'incorrect' rate reviewed. Clause 52 contained what was referred to, by the court, as three 'rules' for valuation:[41]

- Rule 1: where work is similar to that priced in the contract, those contract rates shall be used.
- Rule 2: where work is not of a 'similar character' or is not executed under 'similar conditions', the contract rates shall be used as the basis for valuation 'so far as may be reasonable'.
- Rule 3: if the above do not apply, 'a fair valuation shall be made'.

11.46 The employer sought to argue that the contract rates could be adjusted to something more 'reasonable' by valuing under Rules 2 or 3.

11.47 The Court of Appeal rejected this approach to the application of the valuation rules. Rule 1 was mandatory: if the variation work was similar to that under the contract, that rule had to be followed. There was therefore no basis for valuing in accordance with Rules 2 or 3.

11.48 The employer argued that it was not reasonable to use the contract rate where the rate itself was unreasonable. It emphasised that Rule 2 stated that the contract rates should be used as the basis of valuation only 'so far as may be reasonable'. The court took the view that Rule 2 should be applied only when the work to be valued was of a dissimilar character or undertaken under dissimilar conditions. The words 'so far as may be reasonable' concerned the assessment to be made in determining the applicability of the contract rates in view of the differences in the character and conditions of the work. If the contract rates are not applicable because of those differences, Rule 3 can be adopted. The provisions for dissimilar character or conditions cannot be used to change an agreed contract rate.

11.49 The employer unsuccessfully sought to rely on two other contract valuation provisions to upset the contract rate.

contained the following proviso to Clause 55(2) of the ICE Standard Conditions of Contract, 6th edition, the provisions of which were quoted in the Court of Appeal judgment: 'Provided that there shall be no rectification of any errors, omissions or wrong estimates in the descriptions, rates and prices inserted by the contractors in the Bill of Quantities'.

40. ICE Conditions of Contract, 6th edition.

41. This three-stage process is very typical and is used, for example, in the JCT suite of contracts, the FIDIC Red Book 1999 and the ICC Measurement Contract 2011.

11.50 Clause 52(2) provided that if the nature or amount of any variation 'relative to the nature or amount of the whole of the contract work' is such as to make the contract rate unreasonable or inapplicable, it may be changed. The court found that this proviso was not relevant to the situation in this case. The rate could not be said to be inapplicable because of the nature or amount of the variation.[42]

11.51 Clause 56(2) provided that the rates for work may be altered if the actual quantities undertaken are greater or less than those predicted, with the result that the contract rates are unreasonable or inapplicable. This is a reasonably standard provision for measurement contracts and is intended to cover the possibility that there is a significant variance between predicted and actual quantities.[43] The court found that this provision had no relevance to the situation covered by this case.

11.52 On the question whether bill rates can be adjusted, it is worth considering the following:

- Many contracts contain provisions that allow for the correction of errors in the technical documents.[44] Such clauses are typically worded to allow the contract administrator to clarify what is required to be built if there are discrepancies or ambiguities in the technical description of the works. As such, it is highly unlikely that such a clause would trigger a change to prices and rates.[45]
- If a rate is very low, the employer may take undue advantage to order more of a certain type of work at below market rates.[46] In that situation, the question arises whether the employer is constrained in the amount of additional work it can order because of the low level of the rate. The issue arises in the context of the limitations that exist on the employer's power to order extra work.[47]
- A contract rate or price can be used to derive a new rate for additional work only to the extent that this is possible or appropriate. There may be insufficient information or particularisation as to what the contract price contains or how it has been built up, such that it is not possible to extrapolate a new rate. Questions may arise as to whether it is possible or appropriate to break a lump sum price down and reliably extract rates.[48]

42. This provision, in the ICE Conditions of Contract, 6th edition, did not make it into the 7th edition. It does not appear in the ICC 2011 suite. It seems to have been primarily intended to ensure that variations were not priced by adopting a low contract rate designed for bulk work, when the variation involved a much smaller quantity of work of the same type and therefore the same economies of scale would not be achieved. In view of the wide scope for altering rates because of changed conditions, such a specific provision was perhaps considered unnecessary.

43. See section E for further discussion concerning variation valuation under measurement contracts.

44. The contract in *Henry Boot* contained specific provisions stating that such correction could not be made. See earlier reference to Clause 55(2) that stated that there could be no correction of errors or wrong estimates in the rates and prices.

45. See Chapter 3, section H, which discusses such clauses.

46. There is no reason in theory why the parties could not agree that the contractor will undertake additional work with no right to additional payment. Consideration is not a factor with unilateral variations: see *supra*, para: 1.42.

47. See the discussion concerning *Paragon Finance* v. *Nash* [2001] EWCA Civ 1466 at para. 5.28.

48. See the comments of Beldam LJ on this issue, as referred to *infra*, para. 11.75.

Valuation using contract rates: methods of measurement

11.53 Standard form contracts will often state that the valuation of variations is to be in accordance with the method of measurement that applies to the contract generally.[49] In any event, contracts will normally refer to the application of a standard method which will therefore apply in interpreting what is included in the rates in the bill.[50]

11.54 Therefore, when applying the rates from the bill of quantities, the approach to be taken to preliminaries, overheads and profit will depend on how they have been priced in the bill, taking into account the measurement rules.[51] This is sometimes spelled out directly in the contract. For example, the JCT Standard Form Contract 2011 states at 5.6.3.3 '. . . allowance, where appropriate, shall be made for any addition to or reduction of preliminary items of the type referred to in the Standard Method of Measurement'. However, even if it is not, the reference in the contract to the relevant measurement method means that this needs to be taken into account.

11.55 The bill items may not include the preliminaries for such items as site supervision and cranes. In assessing the variation it may be appropriate to include an allowance for these costs. In practice, it is likely that it will be difficult to establish the impact of variations on site resources, such as to be able to assess whether an allowance is justified. It will also be necessary to consider the interaction between the pricing of preliminaries in variations, as opposed to claims to compensate for these costs as part of a loss and expense claim.

11.56 As regards overheads and profit, a percentage will typically be added to the bill rates, in accordance with the usual contract pricing regime.[52]

Differences in work sufficient to justify a change to rates

11.57 Valuation clauses that use the contract price as the basis for valuing variations normally state that, where the variation work is different[53] from the contract scope work, this will justify a change to the rates.[54]

11.58 Before analysing how the alteration to the rates themselves are calculated, it is necessary first to consider what type of difference in work type or conditions justifies a reassessment.

49. For example, see JCT Standard Building Contract 2011, Clause 5.6.3.

50. FIDIC Red Book 1999, Clause 12.2; ICC Measurement Contract, 2011, Clause 57.

51. For example, the prices may be required to include preliminaries costs, or certain preliminaries costs but not others. Other, or all, preliminaries may be priced separately at the start of the bill.

52. In *Weldon Plant Ltd* v. *Commission for the New Towns* [2001] 1 All ER (Comm) 264, the judge stated (at para. 18 of the judgment) that '. . . a valuation which did not include profit would not contain an element which is an integral part of a valuation under. . .' those rules relating to contract rate based valuation. See paras. 11.96–11.100 for a fuller discussion about overhead and profit recovery in the context of valuation provisions generally.

53. If the proposed variation is significantly different from the original contract scope, the employer will not be entitled to insist that such work is undertaken. See Chapter 5.

54. As noted earlier, the level of detail of such clauses differs. Certain contracts, such as MF/1, simply refer to contract prices only being used if 'appropriate', whilst contracts such as ICC specify various bases that will justify an alteration in the rate, such as the character of work, conditions of execution, the point in time the work is undertaken, etc.

11.59 The most obvious difference that leads to the contract rates being inappropriate concerns the type of work undertaken. Standard form contracts often talk about work not being of a 'similar character' to that described in the bills, and this justifying different rates.[55]

11.60 The need for different rates where the work itself is different from the original scope will normally be relatively uncontroversial. The more complex and contentious situation is where the work itself is the same, but the conditions under which it is undertaken are different from those contemplated for the original scope.

11.61 A reasonably typical approach is for contracts to state that where the work is not executed under 'similar conditions',[56] the rates may be adjusted.[57] This is quite a broad term and there is limited case law as to what it may encompass.

11.62 As a starting point to considering how such a provision should be analysed, *Wates Construction (South) Ltd* v. *Bredero Fleet Ltd*,[58] gives some guidance.

11.63 The contractor had entered into a JCT-based contract[59] to build a shopping centre for the developer at Fleet, in Hampshire. The case before HHJ Thayne Forbes was an appeal from an arbitrator's award on points of law. The starting point for the analysis of variations in these circumstances was described by the judge as follows:[60]

> '. . . the foundation of those contractual provisions is the requirement that a comparison be made between the "conditions" under which a variation. . . was actually executed (which can be thought of as "the varied works conditions") and the "conditions" under which the work set out in the contract bills would have been executed ("the contract works conditions"). . .'

11.64 When it came to determining whether the conditions had changed, it was necessary to make that assessment by reference to what the contract documents said the conditions should have been. The arbitrator, in making his determination as to whether the work was undertaken under 'similar conditions', took into account information other than that contained in the contract, such as the contractor's actual knowledge as to the state of the site. The court found that this was the wrong approach. Only information contained in the contract should be considered in the assessment of whether there had been a change in conditions.

11.65 Other than explaining that the 'conditions' must be referred to in the contract, the judgment does not give guidance as to what type of conditions can be taken into account. The judgment refers to the fact that counsel for the employer had quoted the following passage from *Keating on Building Contracts* to describe what dissimilar conditions may consist of:[61]

55. The term 'similar character' is used, for example, in the FIDIC, ICC and JCT forms of contract.
56. The term 'similar conditions' is used, for example, in the FIDIC, ICC, LOGIC and JCT forms of contract.
57. See later discussion as to what rate adjustment may be appropriate.
58. (1993) 63 BLR 128.
59. It incorporated an amended JCT Standard Building Contract 1980, Private Edition with Quantities.
60. (1993) 63 BLR 128 at 136.
61. *Ibid*. at 141. The passage is from the 5th Edn of *Keating on Building Contracts* (1991, Sweet & Maxwell). The current 9th Edn (2012, Sweet & Maxwell) contains the same passage. The judge did not indicate, one way or another, whether he considered this was an appropriate interpretation.

'Similar conditions might, it is suggested, include physical site conditions such as wet compared with dry, high compared with low, confined space compared with ample working space and winter working compared with summer working.'

11.66 Where a contract allows for a reassessment of rates where the 'conditions' of executing the work have changed, this can have wide implications. This can lead to a situation whereby extra work is valued at higher rates than contract work, even though both pieces of work are undertaken under the altered conditions. For example, suppose a contractor is employed to decorate one floor of a building. A variation is instructed for it to decorate a second floor. Access to the building is more difficult than contemplated by the contract and these changed conditions mean that for the second floor the original contract rates are uplifted. However, the rates for the initial floor, being the original scope of works, may well remain the same, unless the contractor can establish that the restricted access, in itself, amounts to an instructed variation.[62]

11.67 Certain contracts expressly provide for variations which effectively involve changes to working conditions. For example, the JCT Standard Building Contract 2011, Clause 5.1.2 states that variations can involve the imposition by the employer of alterations to site access, limitations on working space and hours, and changes to the order in which work is undertaken. If the employer instructs a variation that makes such alterations, the contractor will be entitled to be paid for undertaking what would otherwise be contract work, but under these altered conditions. However, if one of these alterations is made (such as the change to working space) without instruction, the contractor may not be entitled to an uplift. However, if extra work is instructed and is undertaken under the changed working space conditions, this work may attract the uplift.[63]

11.68 As well as contracts allowing changes to the rates where the extra work is undertaken under dissimilar conditions, they may also provide for uplifts where there are differences in the volume or timing of the extra work. For example, JCT refers to significant changes in quantity justifying a change in rates.[64] The ICC form of contract allows an adjustment to the rate where the variation is undertaken after completion, during the Defects Correction Period.[65]

11.69 These provisions are all designed to recognise that, even where varied work is the same as contract work, there may be the differences in certain characteristics of its execution which mean that adjustments need to be made to the bill rates. Certain changes in the characteristics of work can often justify a re-rating under more than one category. The additional work may

62. Whilst such a change will often not be instructed, the contractor may have a claim for disruption under the loss and expense provisions.

63. Clause 5.6.1.2 of the JCT Standard Building Contract 2011 with Quantities states that where work is '. . . not executed under similar conditions', an alteration of the rates may apply.

64. JCT Standard Building Contract, Clause 5.6.1.2. See also Clause 52(2) in the ICE Conditions of Contract, 6th edition, discussed earlier in the context of the *Henry Boot* case, which allowed a change in rates where the amount of additional work instructed meant the contract rate was inappropriate.

65. ICC Measurement Contract 2011, Clause 52(4)(b). Most contracts only allow variations to be instructed up to completion and therefore do not provide such an uplift. See Chapter 5, section D for a discussion in relation to limitations as to when variations may be instructed.

be said be of a different 'character', but may equally be said to be the same work undertaken under different 'conditions', either of which can be used to justify uplifts.[66]

11.70 Whilst this discussion has concerned the suitability of contract rates for varied works, it is also important to remember that a variation will often result in the original contract scope work being undertaken under different conditions. Many contracts expressly provide for an adjustment of rates for the contract scope work in those circumstances.[67]

11.71 Whilst valuation clauses allow for changes in rates when the aspects of the varied work are different (such as the conditions or volume of work), this is normally only discussed in the context of a rate increase.[68] These changes may, equally, justify a reduction in rates. An increase in the volume of work may reduce costs, and changes to the working conditions on site may be positive.

The use of contract rates for different work and extrapolating rates

11.72 As discussed above, the contract rates will be used to value extra work where appropriate. Even if the contract rates are not directly applicable, it may still be possible to apply them, with adjustment, as part of the second rule of the normal three-stage valuation process.

11.73 Contract valuation rules will normally allow an assessment to be made by using certain elements of the contract rates even though they are not wholly appropriate and cannot directly be applied to the valuation of extra work. When work has a different character, and/or is undertaken under different conditions, it is necessary to consider whether appropriate rates can be extrapolated from the contract prices.[69]

11.74 In *MT Højgaard A/S* v. *E.ON Climate and Renewables UK Robin Rigg Ltd*[70] the valuation, under a bespoke contract, was to be undertaken by reference to a variation pricing schedule called L1.3 and involved a three-stage process of the type discussed in this section. The judge recognised that the prices in the schedule might not be directly appropriate for valuing all elements of a single variation. Some rates may be applicable to elements of a variations order but for others there may be no applicable rate:[71]

66. For example, suppose a contract provides for pipe work to be installed in trenches. The employer instructs a variation requiring more of the same pipe work installation but in a different location on the site which has different ground conditions, making the work more difficult and therefore more expensive. Whether such a change is described as work of a different character or the same work under different conditions matters little.

67. See, for example, JCT Standard Building Contract 2011, Clause 5.9 and ICC Measurement Contract 2011, Clause 52(5). The contract may provide that the impact of varied work on original contract work is compensation through the loss and expense provisions: see section F of this chapter.

68. The same goes for clauses which provide for a change to the rates for undertaking original contract work as a result of variations.

69. As discussed in the introductory section to this chapter, a variation can lead to a complex series of changes including not only the adding of extra items of work, but also demolition, rework, the retro-fitting of contract work, the cancellation of orders, etc.

70. [2013] EWHC 967 (TCC). This case is discussed in further detail *infra*, para. 11.129. The variation schedule was a separate price schedule for changes rather than rates contained in a breakdown of the contract sum.

71. *Ibid*. at para. 54.

> 'The identification of three "limbs" tends to suggest that the Engineer must choose one limb only when determining the adjustment to the Contract Price under a particular VO. . .
>
> There may, however, be cases where there are some directly applicable Schedule L1.3 rates but there are some items to be valued for which there are no directly applicable Schedule L1.3 rates. In such a case, there is nothing in the contract wording that requires the Engineer to adjust the Contract Price as if none of the Schedule L1.3 rates were directly applicable. The words "if the rates contained in [Schedule L1.3] are not directly applicable to the specific work in question, suitable rates shall be established . . ." support the interpretation that, where there is more than one item of specific work and rates in Schedule L1.3 are applicable to one item but not to another, resort to limb 2 suitable rates should be had for the item or items where the Schedule L1.3 rates are not directly applicable, but that Schedule L1.3 rates should otherwise be used.'

11.75 In *Henry Boot* the Court of Appeal commented upon the question of the practicality of extrapolating a rate from a contract sum item. The arbitrator's award was remitted back to him on the basis that he had erred in finding that because a price in the contract effectively contained an error, it should not be used in undertaking the valuation.[72] The price in question was a lump sum item of £250,880. The arbitrator had also indicated that the pricing information in relation to this single item was insufficient for it to be used to extract rates reliably. Beldam LJ, in Court of Appeal, commented:[73]

> 'The arbitrator is required to value work which is by definition dissimilar or executed under dissimilar conditions to work for which a rate or price is quoted in the Bill of Quantities. The extent to which it is reasonable for him to do so must depend on his assessment of the work involved in the "dissimilar" work and his extraction from the rates or prices quoted in the Bill of Quantities of ingredients which it is reasonable for him to use in valuing the additional work.
>
> The arbitrator decided that "the rate extraction exercise" was inappropriate because of the difficulties of extracting from the figure of £250,880 a rate which could be said with confidence to be directly relevant and applicable to the work in question for the reasons contained in. . . his award. . .
>
> When the arbitrator referred to "the rate extraction process", he was I think referring to the means by which the price (£250,880) could be related to the additional "dissimilar" works. Normally the breakdown of the price would include provision for plant, materials, labour and overheads and, if as the arbitrator said there was insufficient information available to him to relate the price to the additional works, it was open to him to form the opinion that he could not say how far it was reasonable to use the price in the valuation of the "dissimilar" works.'

11.76 Whilst the award was remitted back to the arbitrator because of the approach he had taken in relation to the pricing error, the court clearly accepted that it may not be possible to

72. See earlier discussion of this case, where the basis of the error is explained in further detail.
73. [2000] BLR 247 at 257.

extrapolate an appropriate rate for new work from a price in the contract sum. There may be insufficient detail for the exercise to be reliably undertaken using the contract rate. After all, valuation clauses typically state that contract prices should only be used if they are suitable or appropriate.

11.77 Even if it is not possible to extrapolate rates for new work from the contract prices, it may be possible to use them to assess appropriate preliminaries costs information or overheads and profit percentages. In undertaking a 'fair' valuation (as discussed further below), that pricing information may therefore still be of some relevance.

Stage 3 of the valuation rules: a 'fair' assessment

11.78 Most contracts provide that, if contract rates and prices are inappropriate, a 'fair' or 'reasonable' valuation should be undertaken.[74] This amounts to the third stage of the valuation rules, using the language of *Henry Boot*.

11.79 Such terms as 'fair' and 'reasonable' are, of course, very vague. In practice such an assessment is likely to be undertaken in one of two ways:

- Cost-based analysis. It is possible to undertake the analysis by asking what the variation work has actually cost, or what it would cost the contractor. Such an approach may be tempered by allowing only reasonably incurred costs. Overhead and profit may be added. Certain contracts specifically stipulate such a cost-based approach.[75]
- Market rate analysis. Rather than asking what the work cost, an alternative approach is to ask what the market price for the additional work is. Evidence of the market rate for work can be sought, or a party could use its company's norms or published pricing books to justify sums claimed.[76]

11.80 In most situations an analysis by reference to cost and market rate will reach the same conclusion. For a main contractor that is subcontracting packages, the cost of undertaking additional work will be the market rate of hiring a subcontractor to undertake the extra, plus its management, overhead and profit.

11.81 Where a contractor is using its own employed resources to undertake the work, the difference between cost and market rate may be very significant. This will particularly be the case

74. Examples: ICC Measurement Contract 2011, Clause 52(4): 'fair valuation'. JCT Standard Building Contract 2011, Clause 5.6.1.3: 'fair rates and prices'. MF/1, Clause 27.3: 'such sum as is in all the circumstances reasonable'.

75. FIDIC Red Book 1999, Clause 12.3: 'If no rates or prices are relevant for the derivation of a new rate or price, it shall be derived from the reasonable Cost of executing the work, together with reasonable profit, taking account of any other relevant matters.'

76. Contractors will often develop their own sets of norms, taken from their own experience or derived from data from other projects and then used for the purpose of estimating. Since main contractors will typically subcontract most work packages, they will increasingly not maintain such reliable norms as they may have done traditionally. Reliable norms will be more common in specialist areas, such as for mechanical and electrical work. Published price books of unit rates, such as *Spon's* and *Page and Nation*, are also often used to justify rates. Using such an approach does not directly correlate to the contractor's costs on a project, but amounts to an attempt to show what the market rate for work is.

in relation to specialist work where the contractor has developed techniques, knowledge or equipment which means that it enjoys considerable efficiencies in comparison to the market.

11.82 Where a cost-based assessment is undertaken after the work has been carried out, there is a risk that the valuation will lead to the contractor being paid for inefficiencies. Whilst in principle the intention may be to eliminate these, in practice it may be very difficult to assess the degree to which this has occurred.

11.83 As the cases below illustrate, the courts generally talk in terms of an assessment being made by reference to cost. However, a market price-based assessment is also sometimes mentioned although without any real discussion as to whether the two approaches would give different results.

11.84 HHJ Humphrey Lloyd QC in *Weldon Plant Ltd* v. *Commission for the New Towns* stated:[77]

> '. . . the contractor would be entitled to a fair valuation which would ordinarily be based upon the reasonable costs of carrying out the work, if reasonably and properly incurred (if need be tempered so that it is not too far out of line with the contract rates: see *Hudson*, p. 946 ff (paras 7-105 ff)). Clearly if, in the execution of the work, cost or expenditure is incurred which would not have been incurred by a reasonably competent contractor in the same or similar circumstances, then such costs would not form part of a fair valuation. The rules set by clause 52(1) thus should not leave the contractor at a disadvantage, except to the extent that it was of its own making or volition.'

11.85 The judge therefore envisaged a cost-based approach, but with two provisos. Firstly, the costs need to be reasonably incurred. Secondly, and perhaps more controversially, he states that those costs need to be 'tempered' so that they are 'not too far out of line with the contract rates'. This seems to suggest that one should take account of the general level of pricing within the contract. If one is looking to assess 'fair' rates, it may be logical to say that some account may need to be taken of the keenness of the contractor's tender prices. If not, such a provision should refer simply to 'cost' or 'market', as indeed some valuation clauses do.[78] The passage from *Hudson on Building and Engineering Contracts*, as referred to in the above passage, does indicate support for this proposition.[79]

77. [2001] 1 All ER (Comm) 264 at para. 15.

78. FIDIC refers to 'cost'. See also the discussion in the introductory section of this chapter regarding the NEC approach, which specifically does not use the rates from the breakdown of the contract sum, as the drafters of that contract consider such rates to be inappropriate because the decision to make changes lies solely with the employer.

79. The reference to *Hudson* in the *Weldon Plant* judgment was to the 11th Edn (1995, Sweet & Maxwell), which states at para. 7-105: 'Both parties will usually be bound by any such profitability or unprofitability in the price element of the valuation, it is submitted. So neither owner nor contractor will be permitted to argue that the prices quoted in the schedule or bills were unduly profitable or unprofitable as the case may be. This may be conveniently described as the 'shopping list principle', and may be an important factor in interpreting the final fall-back 'fair valuation' or 'fair rates and prices' bases of valuation, or 'unreasonable', or 'inapplicable' wording to be found in many valuation clauses, which in most clauses require to be interpreted in the light of the contractor's level of pricing, it is submitted.'

11.86 The judge, in this case, went on to emphasise this cost based approach, requiring cost heads aligning with the usual rates build up for bill items. He also goes on to cite a passage from *Engineering Law and the ICE Contracts*,[80] which conversely suggests a market price approach may be adopted:[81]

> 'Although the commentary in *Keating* on clause 52(1) provides no assistance on the constituent elements of a fair valuation, the passage at p. 86 cited by [contractor's counsel] does say that in assessing a reasonable sum "useful evidence. . . may include. . . a calculation based on the net cost of labour and materials used plus a sum for overheads and profit". Mr Max Abrahamson says much the same at p. 186 of his book:
>
> > "8. 'Fair Valuation' will normally mean cost plus a reasonable percentage for profit (but not contingencies if the work is being valued after it has been carried out on actual not estimated costs) with a deduction for any proven inefficiency by the contractor, but if there is proof of a general market rate for comparable work it may be taken into consideration or applied completely."
>
> In the course of his argument [employer's counsel] had difficulties in countering the proposition that a fair valuation had to include each of the elements which are ordinarily to be found in a contract rate or price: elements for the cost of labour, the cost of plant, cost of materials, the costs of overheads, and profit. In my judgment a fair valuation has not only ordinarily to include something on account of each of those elements, but also it would not be a fair valuation within the meaning of the contract if it did not do so.'

11.87 The same judge considered the assessment of a 'fair and reasonable' valuation under Clause 9(2) of the FCEC subcontract[82] in *Floods of Queensferry Limited and Anor* v. *Shand Construction Limited and Ors*.[83] The contractor had sought to value the plant element for certain variations using the FCEC Schedule of Rates.[84] This was treated by the judge as inappropriate because it did not necessarily have any bearing on the contractor's costs and could lead to the contractor recovering in excess of what it spent:[85]

> 'Payment for work on a dayworks basis under clause 9(2) of the FCEC Form of Sub-Contract by applying national schedules such as those in FCEC Schedule of Rates, is not likely to be awarded readily. The guiding principle is that set out in clause 9(2): the valuation must be fair and reasonable. Where, in general, contract rates and prices are not available or appropriate and where the contractor's actual costs of labour, plant and

80. Max W. Abrahamson, *Engineering Law and the ICE Contracts*, 4th Edn (2003, Applied Science Publishers).

81. [2001] 1 All ER (Comm) 264 at para. 16.

82. The FCEC 'blue form' subcontract was designed to be used in conjunction with the ICE form of main contract. Clause 9(2) stated that the subcontract rates and prices should be used to value variations for like or analogous work, unless such rates and prices are inapplicable, and then 'such value shall be such as is fair and reasonable in all the circumstances'.

83. [1999] BLR 319.

84. Published by the Civil Engineering Contractors Association.

85. [1999] BLR 319 at para. 127. See also the first instance decision in *Henry Boot*, again HHJ Humphrey Lloyd QC, at para. 36: 'A fair valuation when used as an alternative to a valuation by, or by reference to, contract rates and prices generally means a valuation which will not give the Contractor more than his actual costs reasonably and necessarily incurred plus similar allowances for overheads and profit for anything more would confer on him an additional margin for profit and would not be fair to the Employer.'

materials reasonably and properly incurred can be established with an acceptable degree of certainty, then those figures, together with an appropriate addition for site and head office overheads and profit, would produce a fair and reasonable valuation. If the use of the FCEC Schedule provides a figure markedly in excess of that which would be arrived at in that way then the result would probably not be regarded as fair and reasonable and, of course, the same will apply vice versa.'

11.88 Dayworks are typically used only where measurement of the works is not possible and therefore an assessment purely on the basis of the time that the resources have been occupied is all that is realistic.[86]

11.89 The judge went on to suggest that valuation using dayworks schedules could be deemed appropriate if a cost-based analysis did not compensate the contractor because it had been disrupted by the change or the work was of such a small quantity that the contract rates did not amount to adequate compensation. The point is *obiter* and is not fully developed in the judgment.[87]

11.90 If a valuation is undertaken by reference to cost, this raises questions as to the evidence that needs to be provided by a contractor to justify payment. The right to be paid for a variation is contractual and the valuation process exists to determine the level of the contractor's entitlement for the changed work it has been instructed to undertake. A variations provision does not normally provide for the compensation of loss, as may be the case with other contract mechanisms, such as the loss and expense provision. Under a variation clause 'valuation is a contractual entitlement and does not require proof of actual loss'.[88] In most cases a valuation will be undertaken using extrapolated rates and therefore the question of a contractor proving what costs it has incurred does not arise. Since proof of actual loss should not be required, it could be said that establishing 'cost' should involve assessing what certain work would have cost it, rather than having to prove what the work did cost.

11.91 The FIDIC Red Book 1999 provisions specifically provide that where rates cannot be extrapolated from contract prices, an assessment based on 'cost' is required. Under that contract the term is defined to mean 'all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit'.[89] This provision would therefore indicate that it would be necessary

86. See later discussion of dayworks valuation provisions.

87. [1999] BLR 319 at para. 127: '. . .it is to be noted that in some circumstances payment on [the rates] will not truly reflect the tangible, if not readily quantifiable, costs of disruption and of the effect of diversion of resources which might otherwise have been efficiently engaged on productive work. Similarly, valuation on that basis may be inappropriate where the work involved was relatively small. . . .' The judge concluded, '. . . there may therefore be occasions when it is not fair or reasonable to use rates, modified rates or actual cost derived from hire or invoiced rates and when dayworks/FCEC rates will be the only fair method'. It should be recognised, however, that either reason could lead to an adjustment in rates because the conditions under which the variation was executed were different from planned. If the contractor has suffered additional costs as a result of undertaking the change, it should look for these to be directly valued rather than using uplifted dayworks rates as a roundabout method of obtaining proper compensation.

88. *Ibid*. at para. 298.

89. This is the general definition of 'Cost' in the FIDIC Red Book 1999 at Clause 1.1.4.3, and the variation valuation provision (Clause 12.3) states that profit should be added.

to show that expenditure had been incurred if the valuation was being undertaken after the event.[90] However, if for some reason the contractor provided no proof of costs incurred, it seems likely that a contract administrator would still have an obligation to value the work by taking a view as to what those costs were likely to be.

11.92 Providing proof of cost is likely to be essential if the cost incurred is out of the ordinary. Using a costs-based assessment may be the only way of capturing the financial impact of a variation. This is illustrated by the case, *Tinghamgrange Ltd (trading as Gryphonn Concrete Products)* v. *Dew Group Ltd and North West Water Ltd*.[91]

11.93 North West Water (the employer) had hired Dew Group as main contractor to undertake work at the Oswestry Water Treatment Works in Shropshire. The work required the use of drainage blocks, which Dew ordered from Tinghamgrange (the supplier). The employer instructed a variation which meant that the drainage blocks were no longer required. Dew cancelled the order with the supplier who, in turn, successfully sued for its lost profit. Dew brought the employer into the action as a third party and this Court of Appeal decision concerns that aspect of the dispute. It was agreed by both parties that the work was not analogous with the bill rates and therefore a 'fair valuation' was required.[92] The employer's engineer had valued the variation by reference to the difference in cost between the old drainage blocks and the new ones, but was not prepared to certify the costs associated with cancelling the order. The judgment summarises Dew's position as follows:[93]

> '. . . [C]ounsel for Dew, submitted that his client's claim was simply for the cost of the work that they had done in accordance with the instructions they had received. They had had to pay Gryphonn's loss of profit; that was an integral part of their costs and to exclude that element from a valuation of the work was unfair, particularly having regard to the history of the dispute.'

11.94 Sir John Megaw, finding for the contractor, took a very straightforward approach to the assessment of how the valuation should be undertaken:[94]

> 'The "fair valuation" of the variation is intended to provide fair compensation to the contractor for any adverse financial effect upon it, resulting from the unilateral variation.'

The treatment of preliminaries, overhead and profit under 'fair' valuations

11.95 As some of the passages referred to above indicate, if cost is to be used as the basis for determining a fair valuation, it will be necessary to take account not only of direct costs, but preliminaries costs, overheads and profit.

90. See later comments in relation to proof of cost in the context of overheads.
91. (1995) 47 Con LR 105.
92. The contract was ICE Conditions of Contract, 5th edition.
93. (1995) 47 Con LR 105 at 111.
94. *Ibid*. at 117.

11.96 This issue was considered in *Weldon Plant Ltd* v. *Commission for the New Towns.*[95] The following passage from this case summarises the judge's view that profit must be part of a fair valuation, subject to 'special circumstances', although there was no indication as to what these could be.[96] The judge refers to the rules as described in the *Henry Boot* case,[97] in particular rule 3, which concerns the 'fair valuation' that needs to be undertaken if contract rates are not applicable:[98]

> '. . . in my judgment a fair valuation must, in the absence of special circumstances (none of which have been identified by the arbitrator), include an element on account of profit. First, a contractor is in business to make a profit on the costs of deploying its resources, and accordingly an employer must under cl 52(1) pay profit in a valuation made under any rule (via the rates or otherwise on a fair valuation) on costs, for a valuation under cl 52 would not otherwise be a fair valuation within the meaning of those words. Secondly, a valuation which did not include profit would not contain an element which is an integral part of a valuation under rules 1 and 2. A fair valuation under rule 3 would not be in accordance with the principles of cl 52 if it did not include all relevant elements to be valued or represented in some significant manner in a valuation under that clause.'

11.97 In discussing preliminaries costs, the judge distinguished between what he called 'site overheads', meaning the cost of resources that were required throughout the project and therefore were constant, as opposed to overheads 'directly related to the cost of the works'. Within this second category were those resources which may only be required to undertake certain works and may therefore rise and fall during the project. This category, he stated[99] '. . .will only be recovered if there is proof that they were in fact incurred or increased as they will be or will have been recovered from valuations of the work executed'.

11.98 The judge then went on to discuss head office overheads, stating that recognition had to be made '. . . in order to ensure that the contractor obtains a contribution from the costs of the business it undertakes towards its fixed or running overheads'. In respect of this head, the judge went on to state:[100]

> '. . . [I]t would not be fair if the valuation did not include an element on account of such contribution. It would mean that such a contribution would have to be found elsewhere, presumably from the contractor's margin for profit or risk. In my view a valuation which in effect required the contractor to bear that contribution itself would not be a fair

95. [2001] 1 All ER (Comm) 264.

96. It may perhaps be the case that if it could be established that the contractor would not make profit on the extra work that these may amount to special circumstances.

97. See the earlier discussion of that case in this section as regards the three rules.

98. [2001] 1 All ER (Comm) 264 at para. 18.

99. *Ibid*. at para. 19.

100. *Ibid*. at para. 19. See also the passage at para. 14 of the same judgment: 'In most cases it is to be assumed that expenditure for costs inevitably attracts ordinary overhead charges, since such expenditure cannot be made by a contractor without ancillary work being done or office and other resources being deployed, the costs of which is part of the overheads of the business, and which is recovered by an appropriate addition to the base costs, i.e. an "on cost".'

valuation, in accordance with the principles of cl 52(1) which are intended to secure that the contractor should not lose as a result of having to execute a variation.'

11.99 However, the judge distinguished between the preliminaries costs for work, and such business or head office overheads, in terms of the evidence that is required to establish entitlement:[101]

'Unlike overheads such as time-related overheads, it is not necessary to prove that they were actually incurred for the purposes of a fair valuation (although their approximate amount must of course be established, e.g. by deriving a percentage from the accounts of the contractor including, where appropriate, associated companies that provide services or the like that qualify as overheads).'

11.100 In conclusion, therefore, the approach of the courts to the notion of a 'fair' valuation has generally been that this means costs reasonably incurred. This may be consistent with a market price approach and, as noted earlier, there has been some reference to such an approach in decisions. There has also been some judicial support for the idea that all such valuations need to take account of the general pricing levels as reflected by the contract sum. Therefore, even when undertaking a stage 3 'fair valuation', it may still be necessary to have regard to the contract rates and prices.

General rate adjustment clauses

11.101 Whilst the valuation rules described above would seem to give considerable leeway in undertaking the valuation, some contracts contain yet further catch-all provisions.

11.102 For example, the JCT Standard Building Contract 2011 With Quantities provides, in addition to these valuation rules, the following:[102]

'To the extent that a Valuation does not relate to the execution of additional or substituted work or the omission of work or to the extent that the valuation of any work or liabilities directly associated with a Variation cannot reasonably be effected in the Valuation by the application of clauses 5.6 to 5.9, a fair valuation shall be made.'

11.103 This allows a very wide discretion as a means of ensuring that the valuation of a variation is fair. Whilst it may be seen as a further basis on which a contractor's claims can be based, it could equally be used for downward adjustment if this is appropriate.[103]

Dayworks for non-measurable work

11.104 In certain circumstances a contractor may be required to undertake extra work which cannot be measured. No work product may be achieved, for example, if the employer simply wants a

101. *Ibid*. at para. 19.
102. At clause 5.10.1.
103. See discussion in Chapter 6, section B as to how such a provision may be used for downward adjustment.

certain number of attendant labourers or certain plant to be supplied. It may then be suitable to value the work by reference to the time the labour and plant were engaged, multiplied by an hourly, daily or weekly rate. This is typically called a dayworks assessment.

11.105 Certain contracts provide that if the work cannot be measured using contract rates, such work may, or should, be assessed on a dayworks basis.[104] Other contracts envisage that the employer will notify the contractor in advance that certain work will be assessed on a dayworks basis.[105]

11.106 If the employer has not sanctioned a dayworks valuation in advance, the contractor may still record labour and plant on a time-related basis, in the expectation that this system of valuation will be adopted. If the contract procedure is to notify in advance, then the position will be clearer for the contractor.

11.107 The maintenance of proper records often arises in relation to dayworks. In particular, there may be an expectation that sheets recording labour and plant attendance are signed off by representatives of both parties each day. Whether the production of such records is necessary to establish an entitlement to be paid will depend on the contract provisions.[106] If there is no stipulation, the question whether the resources have been provided for the periods involved is a matter of evidence and therefore signed dayworks sheets may not be treated as a condition of payment.[107]

SECTION C: VARIATIONS VALUED BY REFERENCE TO A PRICE SCHEDULE

11.108 The traditional approach to valuing variations is to use the rates and prices derived from the contract sum breakdown contained in the contract, and discussed in detail in section B of this chapter.

11.109 The alternative is to value change using an entirely separate pricing schedule.[108] This is the approach adopted by both the NEC and IChemE suites of contracts.

11.110 Such a separate pricing schedule can be constituted in any form the parties may choose. It could amount to a set of rates and prices for undertaking specific items of work. As such, it could look very similar to the schedule of rates for the contract work but with different prices for the various items of work to reflect the fact that the parties have agreed that variation

104. See JCT Standard Building Contract With Quantities 2011, Clause 5.7: 'Where the execution of additional or substituted work cannot be valued in accordance with' the measurement rules, then it is to be valued by reference to certain specified published dayworks rates schedules.

105. See ICC Measurement Contract 2011, Clause 52(6): 'The Engineer may if in his opinion it is necessary or desirable order in writing that any additional or substituted work shall be carried out on a daywork basis' with reference to the schedule contained in the contract or certain published rates.

106. See, for example, ICC Measurement Contract 2011, Clause 56(4).

107. *JDM Accord Ltd* v. *The Secretary of State for Environment, Food and Rural Affairs* [2004] EWHC 2 (TCC).

108. The introductory section of this chapter discusses the reasons this model may be used rather than the traditional approach.

work should be priced on a different basis. Bespoke contracts will sometimes use this pricing model for change.[109]

11.111 The standard form contracts that adopt this model typically incorporate rates for the resources that will be employed for undertaking the work, rather than rates for items of work. For example, such a contract will include rates for the equipment or labour, rather than including rates for items of work, such as a rate per cubic metre for excavating a certain type of material, which in itself would require the use of plant and labour. The rates for resources in this type of pricing schedule may use prices but, as discussed further below in the context of NEC, will often also refer to cost. There will also typically be provision for overheads and profit percentages.[110]

Standard form contracts using variation price schedules

11.112 Under NEC, a variation, being a change to the 'Works Information', is valued as a 'compensation event'.[111] The emphasis in the contract is very much on the parties seeking to agree the price for a change in advance, via the submission of quotations.[112] However, as with any contract which allows an employer unilaterally to vary the scope, there needs to be a prearranged set of rules for valuing a change if agreement cannot be reached.

11.113 Under NEC contract options A and B,[113] the change to the contract sum is calculated by using the provisions in a schedule to the contract called the Shorter Schedule of Cost Components (SSCC), which in turn also refers to a further schedule called the Contract Data.[114]

11.114 The assessment is either by reference to sets of agreed rates contained in a schedule incorporated into the contract (see example of equipment resource below), or by reference to 'cost', whereby the schedules identify what resources the contractor has used in undertaking the variation it will be paid for, and how the cost for those resources is calculated (see example of personnel resource below).

109. See, for example, the contract in *MT Højgaard A/S* v. *E.ON Climate and Renewables UK Robin Rigg Ltd* [2013] EWHC 967 (TCC), discussed later in this section.

110. The introductory section of this chapter discusses the differences in approach with these two types of valuation methodology.

111. The term 'compensation event' under NEC is used to mean any event for which the contractor receives additional compensation under the contract, including what would under other contracts be described as loss and expense, and claims under the contract (e.g. ICC Clause 12) as well as variations.

112. NEC3, Clause 62.

113. Option A is a lump sum contract with a reasonably high level breakdown. Option B is a measurement contract with a bill of quantities.

114. Under NEC the contract sum is the total of the 'Prices'. Clause 63.1 states that the change to the 'Prices' is assessed by reference to the effect of the compensation event upon the 'Fee' (see later) and on the 'Defined Cost' which in turn is defined as '. . . the cost of the components in the Shorter Schedule of Cost Components whether work is subcontracted or not excluding the cost of preparing quotations for compensation events' (Clause 11.2 (22)). Clause 52.1 states: 'All the Contractor's costs which are not included in the Defined Cost are treated as included in the Fee. Defined Cost includes only amounts calculated using rates and percentages stated in the Contract Data and other amounts at open market or competitively tendered prices with deductions for all discounts, rebates and taxes which can be recovered.' Therefore, where the SSCC is calculated by reference to cost incurred, the contractor must ensure it has obtained market prices.

11.115 In relation to equipment, this is calculated by reference to the rates information that is to be included in the Contract Data schedule. That may, for example, contain a CECA[115] plant dayworks schedule, which would then be used to value the change. The SSCC provides rules for how to deal with the incidental charges in respect of equipment, such as storage, transportation, repair, erection and demobilisation.

11.116 In relation to people,[116] the calculation is by reference to the cost of the personnel required to effect the change. The SSCC stipulates which resources used will be reimbursed, what costs are allowable and how they are calculated. The contractor is to be reimbursed based on the cost of the site-based personnel it has directly employed to undertake the changed work, including personnel who are temporarily on site in relation to change. This excludes the cost of head office personnel. The contractor will also be entitled to recover subcontracted personnel costs, but only need justify the amounts paid rather than having to provide payroll information. The SSCC explains how those costs should be calculated, for example, to include pension provision costs.[117]

11.117 The SSCC also includes rules for the other resources needed and used to undertake changes to the work, including plant, materials, energy and other services, design work and insurance. In respect of each resource the schedule explains what resources will be paid for and how costs and charges to be used in the valuation of the variation are determined.

11.118 Under NEC, the contractor is also paid a 'Fee', which is calculated by reference to agreed percentages which are applied to the contractor's direct costs and subcontractor costs. The change to the contract sum, calculated using the SSCC by reference to the changes to resources because of the variation (as described above), will also result in a change to the fee.[118]

11.119 This section discusses the valuation methodology of using a specific pricing schedule for variations rather than the contract sum breakdown. Whilst this is the primary approach adopted by NEC to the valuation of change, this form of contract does provide, as an alternative, that the parties may agree that the contract sum breakdown approach is used for the assessment.[119]

11.120 If the parties agree that this alternative approach is adopted, difficulties can arise because the contract does not include detailed provisions to deal with the complexities that can arise if extras are instructed which do not accord with the contract sum rates. As discussed in section B, contracts such as FIDIC, JCT and ICC, which use the traditional valuation methodology, contain rules as to what rates are used for the valuation if the contract rates are not

115. Civil Engineering Contractors Association.

116. The egalitarian NEC uses the term 'People' rather than 'staff' and 'labour'.

117. The NEC Guidance Notes suggest that amounts in the SSCC should also cover the amounts referred to in the longer Full Schedule of Cost Components, which includes reference to various payments which may form the personnel allowance, for example including bonuses, overtime working, travel costs, etc.

118. Clause 63.1: the change to the 'Prices' as a result of a compensation arise from the change to the Defined Cost and the resulting Fee.

119. Option A, Clause 63.14; Option B, Clause 63.13.

applicable. NEC does not contain provisions stipulating how the assessment should be made in such circumstances.

11.121 The IChemE forms of contract also adopt alternative valuation rules of the type discussed in this section, using a separate pricing schedule rather than the contract sum breakdown.

11.122 The IChemE international Red Book form of contract and the domestic Red Book form contain similar provisions.[120] Both forms of contract envisage that, if a variation is to be made, the contractor will provide a quotation for the price of undertaking the change that the parties will then seek to agree. The need for the Project Manager under these forms to make an assessment, because agreement cannot be reached, is very much the fall-back option. If an assessment by the Project Manager is needed, it is undertaken with reference to Schedule 18 of the contract.

11.123 Schedule 18 under both forms is the schedule for 'Valuation of Variations and claims'. The advice notes contained within the body of both of the standard forms explain that the completed schedule should contain information as to the contractor's rates for a range of resources likely to be used in undertaking extra work. This includes personnel costs and IT costs, among others. Whilst the NEC's equivalent (the SSCC and Contract Data) gives much more detail as to how the assessment of rates and costs against resources is to be carried out, the IChemE forms simply give short guidance notes as to what the schedule should contain.

11.124 Whilst the project manager's assessment of entitlement needs to be undertaken with reference to the Schedule 18 rates and costs, it does not seem that they are definitive as to what the contractor is entitled to be paid. The domestic form specifically states that the project manager's assessment should be 'reasonable having regard to Schedule 18'.[121] The international form gives more scope for departing from the Schedule 18 rates. Clause 19.1 of that contract states that the valuation 'shall be such amount as shall in all the circumstances be reasonable'. This contract refers to Schedule 18 for the assessment of the contractor's quotations and so these rates are clearly intended to influence the evaluation, but are not binding.

11.125 Since both IChemE contracts simply talk about a reasonable assessment, there is no fixed methodology for dealing with the pricing of change which involves omitting as well as adding work. Whilst with NEC, the variation rates from the schedules are used to assess the omission as well as the addition, it is not clear whether the same approach need be taken under IChemE. It could be considered reasonable to omit the part of the contract sum that relates to the omitted work, before calculating the price for the addition using Schedule 18.

Valuation of omissions

11.126 The method of calculating the financial impact of a variation, using a pricing schedule rather than the contract sum breakdown, is relatively straightforward when calculating additions to the work but is more complex when work is omitted.

120. The International Red Book, 1st Edn, 2007, and the Domestic Red Book Lump Sum Contract, 5th Edn, 2013, are referred to.

121. Clause 18.1 of the Domestic Red Book Lump Sum Contract, 5th Edn, 2013.

11.127 Under NEC, if the contractor is simply instructed to undertake an additional item of work, it is necessary to calculate the cost and rates of the extra personnel and plant resource needed to undertake the item, and the adjustment to the Fee. However, many changes to work involve both an omission and an addition. Under the traditional form of valuation for variations, as discussed in section B of this chapter, an omission is priced by simply deducting the price element forming part of the contract sum breakdown in respect of the deleted work. This is not the approach followed under the alternative method of pricing variations discussed in this section because the contract sum is not used as the basis for calculating the financial impact of change. If a variation involved an addition and omission, it is necessary to determine the difference in price between the original item that was to be built and the revised item which is replacing it. Importantly, both calculations are undertaken using the rates in the pricing schedule.[122] As the NEC Guidance Notes, in relation to Clause 63.1, state:

> 'Where the work to be done is changed, it is important that the assessment is based upon the change in forecast or recorded Defined Cost. The clause gives no authority for the price for the originally specified work to be deleted or for the forecast Defined Cost of all work now required to be used as the basis for a new price.
>
> If the Works Information originally included a piece of work (a) which is now to be replaced by a piece of work (b), the compensation event is assessed as the difference between the forecast Defined Cost of (b) and the forecast Defined Cost of (a). The Fee is then added to this difference and the resulting total amount is used to change the Prices. The original price for (a) does not enter the assessment.
>
> Similarly, if the effect of a compensation event is only to delete future work, the assessment is based on the forecast Defined Cost of that work plus the Fee, not simply a deletion of the price for the deleted work.'

11.128 This calculation may, for example, show that in order to build the item in the original scope one needs 10 personnel days and five plant days, whilst to build the revised item as instructed by the variation one needs 13 personnel days and seven plant days. The pricing of the variation is by reference to the extra three personnel days and two plant days. The assessment of the cost of the change is therefore determined without using the contract sum breakdown, for either additions or omissions.

11.129 If this alternative type of pricing mechanism is utilised, it is important that the contract provides clear guidance as to how omissions are valued. The difficulties that can arise are illustrated by *MT Højgaard A/S* v. *E.ON Climate and Renewables UK Robin Rigg Ltd.*[123]

11.130 This case related to the construction of the Robin Rigg offshore wind farm in the Solway Firth. MT Højgaard was the contractor employed to install the foundations and transition pieces and had planned to do so by utilising a jack-up barge called the LISA. That vessel

122. Clause 63.1 refers to the effect of the compensation event on the forecast Defined Cost. The effect will involve work to be omitted and extra work to be undertaken, but both are by reference to the Defined Cost and not the contract sum breakdown.

123. [2013] EWHC 967 (TCC).

proved inadequate and the employer procured a substitute, the MPI Resolution, which it paid for directly and provided for use on the project as free issue. The valuation of this variation therefore required an assessment to be made for the omission of the LISA.

11.131 The contract contained a breakdown of the contract sum in an appendix designated L1.1. However, the contract provided that variations would be valued in accordance with a separate variations pricing schedule, designated L1.3. Clause 31.3, dealing with the valuation of variations, read as follows:[124]

> 'If the Contractor and the Employer are unable to agree on the adjustment of the Contract Price, the adjustment shall be determined in accordance with the rates specified in Part L, Schedule L1.3 Schedule of Rates.
>
> If the rates contained in the Schedule of Rates (Schedule L1.3) are not directly applicable to the specific work in question, suitable rates shall be established by the Engineer reflecting the level of pricing in the Schedule of Rates (Schedule L1.3).
>
> Where rates are not contained in the said Schedule, the amount shall be such as is in all the circumstances reasonable. Due account shall be taken of any over- or under-recovery of overheads by the Contractor in consequence of the Variation.'

11.132 The employer's case was that the rates in schedule L1.3 should be utilised. The contract and the pricing schedule did not give an indication as to what period the rate should be multiplied by in order to evaluate the omission. The employer proposed that the calculation should be by reference to the period of time that the LISA would have taken to undertake the works had it not been omitted. This was clearly an approach that the judge was uncomfortable with because he considered it to be 'at best hypothetical and at worst fictitious', not least because the evidence was that the LISA was not capable of installing all the foundations.[125]

11.133 Stuart-Smith J considered the position, stating that the application of the rates in the variations pricing schedule was clear for additions but not for omissions:[126]

> 'The provisions of Clause 31.3 are clear, at least in relation to limb 1 and limb 2, in identifying how rates are to be identified and established. What they do not say is how such rates are to be treated so as to reach the adjustment of the Contract Price.
>
> . . . when valuing additional work because the Engineer can either adopt (to a greater or lesser extent) the contractor's projected costings (which will be the product of rates and projected time for carrying out the work), or he can value independently the work as actually carried out to the extent that it is reasonable to do so.
>
> With omissions the position is different because the omitted work has not been and will not be carried out.'

124. *Ibid*. at para. 10.
125. *Ibid*. at para. 76.
126. *Ibid*. at paras. 57–58.

11.134 The judge went on to state that the assessment of the omission could therefore result in '. . . creating a hypothetical calculation based on what would have been reasonable if the work had in fact been carried out'.

11.135 If the approach indicated by the NEC Guidance Notes were followed, the analysis would involve multiplying the rate by the period that the LISA would have been needed for, as set out in the contract. This is because the calculation should, to use the language of NEC, seek to omit the 'forecast Defined Cost'. In *Højgaard* the design of the final permanent works was not changed but the method of undertaking it was, as reflected by the omission of the LISA.[127] This is still a change which can be valued by applying the agreed rates to the forecast work.

11.136 The judge instead adopted the approach to valuation proposed by the contractor, which involved omitting the relevant element of the contract price. The difficulty with this approach is that the contract sum breakdown was not referred to in the valuation clause which required the assessment to be in accordance with schedule L1.3 rather than L1.1.[128]

11.137 What the case reflects is the uncertainty that can arise in valuing omissions under this type of provision where there is no clear guidance under the contract as to what periods or units of measurement should be applied to the rates in the pricing schedule.

SECTION D: ASSESSMENT IF THERE IS NO VALUATION PROVISION

11.138 This section considers the situations in which the valuation of changes is not undertaken in accordance with the contract valuation rules.

11.139 There may be no contract in place between the parties, or the contract that had been in existence may have fallen away, such that the contractor is entitled to be paid for the work undertaken on a restitutionary basis.[129] The basis for assessing the payment due in restitution is different from contractual compensation and valuation in those circumstances is considered elsewhere in this book.[130]

11.140 There are three situations in which the contractor may undertake additional work under a contract where there is no provision allowing for specified valuation rules to apply:

- a variation is instructed under the contract but the contract does not contain valuation provisions;

127. As regards variations which involve changes to the method of working, see Chapter 3, section E.

128. The judge appeared to consider that the assessment could be made under schedule L1.1 because this appeared to be 'in all the circumstances reasonable' in accordance with limb three of the clause (see para. 80 of the judgment). However, an assessment under limb three should be undertaken only if an assessment under limb 2 could not be undertaken. On both parties' cases an assessment under limb two could be undertaken. The first instance decision in this case has been appealed and is due to be considered by the Court of Appeal in March 2014. See also the Court of Appeal decision in *Henry Boot Construction Ltd* v. *Alstom Combined Cycles Ltd* [2000] BLR 247, where such a delineated staged approach to the three limbs of such a valuation provision was emphasised.

129. See Chapter 9, section G.

130. See *supra*, paras. 9.232–9.242.

- the parties agree that the contractor will undertake a variation to the scope, rather than one being instructed, and there is no agreement as to price;[131]
- the contractor undertakes additional work under a new contract but the parties do not agree the price for the work.[132]

11.141 In the final two situations identified above, the contract that is in existence may contain valuation provisions that may be relevant for assessing entitlement. These situations are discussed in further detail later in this section.

Valuation using the contract mechanism is mandatory

11.142 A contractor may seek to establish an entitlement to be paid outside a contract valuation mechanism because this will result in a higher payment.[133]

11.143 If a contract is already in place between the parties, the contractor will often face considerable challenges in seeking to establish that the contract mechanism should not be applied to value the extra work that has been undertaken.[134] It will need to establish either that no contract is in existence or that the contract does not apply to the new work.

11.144 In order to claim that no contract is in existence, it will have to show either that no agreement was reached between the parties or that the contract has fallen away. In *McAlpine Humberoak Ltd* v. *McDermott International Inc (No. 1)*[135] a contractor sought to establish that the changes were so numerous that it was entitled to value the whole of the work on a 'reasonable' basis without having to individually value each variation as distinct and extra from the contract work. At first instance it was successful, with the trial judge finding that the contract had been frustrated and that a substitute contract came into existence under which all the project work should be paid on a reasonable basis. The Court of Appeal rejected this analysis. It found that the contract could not be frustrated as a result of the instruction of large numbers of changes because the contract expressly contained a mechanism to govern this process.[136] A contractor in such a situation needs to operate the contract procedures to record, manage and administer the changes that are instructed.

11.145 Contractors seeking to establish a right to effectively remeasure the whole of the works in accordance with the approach of the claimant in *McAlpine Humberoak* will often make reference to the following well-known passage from the judgment of Lord Kenyon in the 1791 case *Pepper* v. *Burland*:[137]

131. This is referred to as a consensual variation in this book. See Chapter 9, section C.
132. A collateral contract, see Chapter 9, section F.
133. There may of course be other reasons; in particular the lack of formal instructions may debar any claim under the contract.
134. In particular, in relation to claims based on a collateral contract and in restitution, where the contractor will have to establish that the contract/principal contract cannot govern the extra work. See Chapter 9, sections F and G.
135. (1992) 58 BLR 1.
136. See *supra*, para. 5.103, where this case is discussed further.
137. (1791) 170 ER 107; (1791) Peake 139.

> '. . . [I]f a man contracts to work by a certain plan, and that plan is so entirely abandoned that it is impossible to trace the contract, and say to what part of it the work shall be applied, in such case the workman shall be permitted to charge for the whole work done by measure and value, as if no contract at all had ever been made.'

11.146 Not only were the comments *obiter* but it is clear from the judgment that the judge was considering a contract that did not contain a procedure for instructing and valuing change. His analysis needs to be considered in this light.

11.147 If a construction contract does not contain an instruction and valuation procedure, then any changes that are ordered should be treated as consensual variations of the contract scope.[138] The amount of money that the contractor is entitled to be paid for those extras will depend on the terms of its agreement to alter the scope. It will often be the case that there is no express agreement and so a tribunal will need to determine what the parties impliedly agreed, which will often turn on what is reasonable.[139]

11.148 Lord Kenyon's view that there should be an effective remeasure would therefore appear to reflect his assessment of the parties' agreement in view of the fact that there were, in this case, a very large number of ad hoc consensual variations but with no express agreement as to their price.

11.149 This approach will not be applicable where the parties' contract does set down a procedure and mechanism for instructing, recording and valuing change. *Pepper* v. *Burland* and *McAlpine Humberoak* deal with quite different types of contract. The *McAlpine Humberoak* contract included the very common requirement that the contract valuation mechanism must be used to value variations, whilst the *Pepper* v. *Burland* contract contained no such procedure.

11.150 A contractor may seek to establish that it is entitled to payment outside the valuation mechanism because the contract contains constraints on the extras that may be ordered and the extra work in question is beyond what is allowed.[140] For example, the contract may provide that only a certain type of additional work can be instructed. The contract may contain other limits, such as the volume of work that can be ordered as extras, or constraints on the time periods in which variations can be instructed. Whilst the contract may contain such constraints, if the employer orders the work and the contractor undertakes it without complaint, the contractor is likely to be treated as having waived any right to object.[141] The opportunity for the contractor to then have the work valued on a different basis may therefore be limited.

138. See Chapter 9, section C.
139. See later in this section as to how this may be determined.
140. See Chapter 5 as regards such constraints on the power to order variations.
141. If the contractor does raise objections at the time, the position may be quite different. See *Costain Civil Engineering Ltd* v. *Zamen Dredging and Contracting Company Ltd* (1996) 85 BLR 77. This issue is discussed in more detail *supra*, paras. 5.35–5.43.

Price to be assessed under a contract where no agreement as to rates

11.151 As discussed above, there are three situations where the contractor has a right to be paid under a contract but there is no directly applicable valuation clause: there is no valuation clause, the change was a consensual variation, or the extra work was under a new contract. In these situations a tribunal will need to determine the price that should be implied as being due for the agreed work.[142] In assessing the price that should be paid it will be necessary to take into account the terms of the contract and the rates it contains. Or, in the case of the new contract, it will be necessary to take account of the rates in the original, or principal, contract.

11.152 Where a variation is instructed under the contract but the contract does not contain valuation provisions, the parties' agreement for the extras may well imply a price based on the rates in the contract sum breakdown. Even if the agreement was not construed in this manner, the contractor would still be entitled to be paid a reasonable sum for its work.[143] What is reasonable will depend on the surrounding circumstances. As discussed below, what is reasonable would need to take account of the prices contained in the contract.

11.153 The same logic is likely to apply to the two other types of situation referred to above. If there is a consensual variation but no agreed price, a reasonable sum will be due and the rates in the subsisting contract will be relevant in making the assessment. If the additional work is undertaken under a new contract but with no agreement on price, a reasonable sum will be due.

11.154 In seeking to assess a reasonable sum, in the type of situation discussed above, it seems likely that the rates and prices in the existing or original contract will be a very important factor. The cases that discuss the assessment of reasonableness support this approach.

11.155 In *Benedetti* v. *Sawiris and Others*[144] the Supreme Court compared the assessment of a reasonable sum under a contract where there was no agreement on price, to the assessment under a claim in restitution.[145] Lord Clarke JSC stated:[146]

> '[T]he correct approach to the amount to be paid by way of a *quantum meruit* where there is no valid and subsisting contract between the parties is to ask whether the defendant has been unjustly enriched and, if so, to what extent. The position is different if there is a contract between the parties. Thus, if A consults, say, a private doctor or a lawyer for advice there will ordinarily be a contract between them. Often the amount of his or her remuneration is not spelled out. In those circumstances, assuming there is a contract at all, the law will normally imply a term into the agreement that the remuneration will be

142. It can be the case that the lack of agreement as to price is indicative of the parties not having reached a binding agreement, albeit in those situations a court will commonly conclude that the contractor has a right to be paid for work undertaken in restitution: see Chapter 9, section G.

143. The sale of goods or supply of services without express agreement as to price gives rise to an obligation to pay a reasonable price: Sale of Goods Act 1979, s.8(2); Supply of Goods and Services Act 1982, s.15(1).

144. [2013] UKSC 50.

145. Sometimes called unjust enrichment or *quantum meruit*. Discussed briefly earlier in this section and in more detail in Chapter 9, section G.

146. [2013] UKSC 50 at para. 9.

reasonable in all the circumstances. A claim for such remuneration has sometimes been referred to as a claim for a *quantum meruit*. In such a case, while it is no doubt relevant to have regard to the benefit to the defendant, the focus is not on the benefit to the defendant in the way in which it is where there is no such contract. In a contractual claim the focus would in principle be on the intentions of the parties (objectively ascertained).'

11.156 The question of how a reasonable price should be assessed was also commented upon by Gloster LJ in *Energy Venture Partners Ltd* v. *Malabu Oil & Gas Ltd*:[147]

'[T]he assessment of such a sum will depend upon all of the circumstances, the objective being to ascertain what the parties to the contract would have considered to have been a reasonable amount.'

11.157 In cases involving the assessment of a *quantum meruit* where the claim is in restitution, the courts have often expressly taken into account the prices used by the parties in contract documents.[148]

SECTION E: MEASUREMENT CONTRACTS

11.158 A measurement contract contains estimated quantities of work against which the contractor tenders rates. The quantities are remeasured after the work is carried out and the contractor is paid on the basis of actual quantities, multiplied by its tendered rates. A change in the quantities between the estimated and actual levels is not a variation because this does not represent a change to the defined scope of the works. The scope has not changed simply because the final remeasure results in quantities different from those initially estimated.[149]

11.159 The scope on a measured work contract can, of course, be varied. The work as described by the contract can be altered, which is nothing to do with the reassessment of quantities, although cases arise where the distinction between the two is controversial.[150]

11.160 Whether work is deemed included in a unit rate will be a matter of contract interpretation, although often influenced by the provisions of the standard method of measurement rules incorporated into the agreement. The work that the contractor is required to undertake under an item in the bill will be limited in some manner. If the scope encapsulated in the bill items does not cover certain work that the employer wants undertaking, it will have to instruct further works as a variation.[151]

147. [2013] EWHC 2118 (Comm) at para. 281.

148. See *Way* v. *Latilla* [1937] 3 All ER 759 and *ERDC Group Ltd* v. *Brunel University* [2006] EWHC 687 (TCC).

149. See Chapter 3, section I for a more detailed discussion regarding measurement contracts and the distinction between changes to quantities and variations of the scope.

150. See *Holland Dredging (UK) Limited* v. *The Dredging and Construction Co Ltd and Imperial Chemical Industries PLC (Third Party)* (1987) 37 BLR 1, discussed further in Chapter 3, section I.

151. See Chapter 3, section I for a more detailed discussion in the context of the case *AE Farr Ltd* v. *Ministry of Transport* (1965) 5 BLR 94, which is such a 'missing item' case. As noted in that discussion, the contract may specifically allow that if an item is not included in the bill then the error will be treated as a variation and priced under the relevant valuation provisions. See ICC Measurement Contract 2011, Clause 55(2).

11.161 Measurement contracts need to provide mechanisms for both the reassessment of quantities and the valuation of variations. The provisions dealing with each are often contained in clauses that sit alongside one another in the contract. They are, however, quite separate processes.

11.162 Provisions for the valuation of variations will follow the same type of rules as contained in lump sum contracts, and as discussed in sections B and C of this chapter. Many measurement contracts normally also include an extra set of provisions that allow rates to be changed if final quantities are significantly different from those estimated in the bill.

11.163 Taking the ICC Measurement Contract[152] by way of illustration, Clauses 51–53 deal with variations and their valuation, whilst Clauses 54 and 55 deal with the measurement of quantities. Clause 51(5) states that no variation order is required for an increase or decrease in quantities from that in the bill. Variations are valued, under Clause 52, using the rates from the bill to the extent that the work is of a similar character or is undertaken under similar conditions. Where the work is different, then bill rates are used as the basis for the valuation, to the extent that they are applicable and reasonable, and if not, a fair valuation is made.[153] Remeasurement is separately covered by Clause 55 and provides for a process for reviewing quantities as work is finished, and applying the bill rates to the actual volumes of work undertaken.

11.164 Clause 56(2) is the provision in the ICC contract allowing a change in rates because of the change in quantities:

> 'Should the actual quantities carried out in respect of any item be greater or less than those stated in the Bill of Quantities and if in the opinion of the Engineer such increase or decrease of itself shall so warrant the Engineer shall after consultation with the Contractor determine an appropriate increase or decrease of any rates or prices rendered unreasonable or inapplicable in consequence thereof and shall notify the Contractor accordingly.'

11.165 Many contractual provisions such as this, allowing a change in the rates because of a variance between estimated and actual quantities, are often vague and can lead to uncertainty as to whether an alteration in the rates is justified.[154]

11.166 The confusion created by such clauses is illustrated by *Mitsui Construction Co Ltd* v. *The Attorney General of Hong Kong*.[155] The case concerned the construction of water supply tunnels in Hong Kong by the contractor, Mitsui. Under the measurement contract there were rates for five different types of tunnel lining work, depending on the ground conditions. Where weak rock was hit, extensive tunnel lining would be required which would correlate

152. ICC Measurement Contract 2011.

153. See section B, where these variation valuation rules are discussed.

154. See also, for example, JCT Standard Building Contract 2011 With Quantities, Clause 5.6.1.5: '. . . where the Approximate Quantity is not a reasonably accurate forecast of the quantity of work required. . . the Valuation shall include a fair allowance for such difference in quantity'.

155. (1986) 33 BLR 1.

with a high agreed unit rate. When strong rock conditions were encountered, limited tunnel lining work would be needed, corresponding to a low unit rate. As the works progressed the engineer would agree the category of ground conditions encountered, which would then be measured, with the contractor paid according to quantities multiplied by the appropriate rate.

11.167 The bill incorporated estimated quantities of each of the five types, but these proved to be very inaccurate. A much higher proportion of the rock encountered was weak in comparison to that predicted. Whilst the contractor was of course paid more than originally predicted because there was more work at the higher rates, the contractor argued that it was not properly compensated. Its rates had been inclusive of preliminaries and it claimed that the significant increase in the quantity of work in poor ground conditions meant much slower work, for which the rates did not fully compensate it. The contract contained the following Clause 74(4):[156]

> 'If the nature or amount of any omission or addition relative to the nature or amount of the Works or to any part thereof shall be such that in the opinion of the Engineer the rate contained in the Contract for any item of the Works is by reason of such omission or addition rendered unreasonable or inapplicable then a suitable rate shall be agreed upon between the Engineer and the Contractor.'

11.168 The employer sought to argue that the clause only applied so as to allow the rates to be adjusted when there was an increase in work because of variations, and not where there was a change because of the remeasure.

11.169 The contractor argued that the 'omission or addition' referred to in the clause could arise as a result of both a change of quantities as a result of remeasure and variations. On this logic, the contractor would get a change in the rates in respect of the contract work being remeasured but also in respect of the rates for the variations, under the same clause.

11.170 The court found for the contractor and adopted its interpretation. Whilst this interpretation of such a provision is not in step with the clear meaning of typical standard form clauses (such as ICC, Clause 56(2)[157]), it should be recognised that the Mitsui contract was an amalgam of two forms and contained a considerable amount of inconsistent language. What the case illustrates, however, is the uncertainty that such provisions can cause, if not clearly drafted.[158] The opportunity to open up rates can lead to significant changes to the price and can be very contentious. It is important to have clear provisions that can be applied without disagreement.

156. *Ibid*. at 12.

157. Under ICC any variation would be valued under Clause 54, which would allow account to be taken in assessing rates of the different character and conditions of new work.

158. Whilst, in this case, the lack of clarity in the contract provisions did lead to considerable confusion, there has been a history of unclear decisions in relation to the operation of valuation and variation provisions in measurement contracts. This goes back to the nineteenth century, when the courts often struggled to appreciate the difference between measurement contracts and lump sum; see, for example, *Kimberley* v. *Dick* [1871] LR 13 Eq 1. More recently, see *J. Crosby & Sons Ltd* v *Portland Urban District Council* (1967) 5 BLR 121, discussed further at Chapter 3, section I. These judgments can be contrasted with decisions of courts which have displayed very clear insight as to the commercial workings of measurement contracts: see *Arcos Industries Pty Ltd* v. *The Electricity Commission of New South Wales* (1973) 12 BLR 65 and *Grinaker Construction (Transvaal) (Proprietary) Ltd* v. *Transvaal Provincial Administration* (1981) 20 BLR 30.

11.171 The purpose of provisions such as clause 56(2) of the ICC contract is to provide for the rate to be altered because the actual quantity of work undertaken is significantly different to that predicted. The logic being that the increase in quantities may be such that the contractor can employ economies of scale in undertaking the work or that the quantities of work require a change in the method of working such that the rate should be adjusted. Determining whether the rate no longer applies therefore depends on the change in the quantities and should not be driven by questions as to the inherent suitability of the rate. In accordance with the rationale of *Henry Boot Construction Ltd*[159] v. *Alstom Combined Cycles Ltd* the contract rates are otherwise sacrosanct and the rate can only be adjusted if the criteria in the clause are met.[160]

11.172 The FIDIC provisions set out a much more detailed test than the ICC provisions referred to above, and one that can be applied with more certainty. The FIDIC Red Book 1999,[161] Clause 12.3, provides that 'a new rate or price shall be appropriate for an item of work if' four criteria in relation to the quantities change are all satisfied. These require that the measured quantity has changed by more than 10 per cent; and the quantity change results in a cost increase of over 0.01 per cent of the total contract sum; and the quantity change alters the unit cost of the item by more than 1 per cent; and the item is not specified in the contract as a 'fixed rate item'. This test has the benefit of having clear guidelines, albeit that it requires a series of careful and complex calculations to be undertaken before one can determine whether it will apply.

11.173 Following the remeasurement process actual quantities are applied to the contract rates. A mistake by a contractor with its rates can result in a significant windfall or loss, especially where the final quantities are significantly different. The contract rates are treated as sacrosanct and cannot be altered on remeasurement simply because of a pricing error at tender stage.[162] The type of variation provision described above, allowing rate adjustment because of a variance in quantities, will not justify an alteration of the rate.

11.174 The contractor may, of course, intentionally price certain items high in its tender having determined that the estimated quantity is low and in the expectation that it will rise on remeasure:[163]

> 'The need for some contractual provision, either requiring the builder to act reasonably in pricing the bill or empowering the person administering the contract to reject the

159 [2000] BLR 247.

160 See discussion concerning the sanctity of rates and the Henry Boot case at paragraph 11.42. See also *Maeda Corporation* v. *Government of Hong Kong SAR* [2014] BLR 22, in which the Hong Kong Court of Appeal appear to have followed a contrary approach to that adopted by the Court of Appeal in Henry Boot although the grounds on which that decision is said, in the Hong Kong judgment, to be distinguished are not wholly convincing.

161. Other FIDIC books contain this provision but use different percentages.

162. See *Henry Boot Construction Ltd* v. *Alstom Combined Cycles Ltd* [1999] BLR 123, as discussed in section B of this chapter. Whilst this case dealt with the valuation of rates for a variation, it applies equally to rates used for remeasurement, as noted by HHJ Humphrey Lloyd QC at first instance (at para. 31) when he stated that counsel for the contractor '. . . was therefore correct in his submission that a party to a construction contract is therefore stuck with a rate or price whether the contract price is expressed as a lump sum or subject to recalculation by adjustment or after re-measurement using the contract rates and prices which are constituent elements of the contract price or tender sum. Contracts sometimes make this express. See ICC Measurement Contract 2011, Clause 55(2).

163. *Sist Constructions* v. *State Electricity Commission of Victoria* [1982] VR 597 at 606.

rates in the price bill, arises from the notorious practice of those who tender for building and engineering contracts of marking what has been described as an unbalanced bid, that is to say, of pricing the bid in a way in which, without affecting the amount of the tender, is calculated to enure to their financial advantage. A tenderer may put down low rates of items where he believes that the "as built" quantities are likely to be less than the billed quantities, and high rates for items where he believes the "as built" quantities will exceed the quantities in the bill. He may also increase his rates for early work and reduce his rates for later work in order to give him a substantial cash flow at an early stage. The practice is also known as "loading" the rates. It is referred to in many of the textbooks.'

SECTION F: RELATIONSHIP WITH OTHER CONTRACTUAL COMPENSATION PROVISIONS

11.175 A construction contract will, normally, contain not only a provision for valuing an instructed variation but also clauses that entitle the contractor to additional payments as a result of various specified events – for example, compensation for costs incurred as a result of unforeseeable ground conditions or delay and disruption.[164] It will sometimes be necessary to consider the overlap between the two provisions; firstly to avoid claiming twice for the same loss, and secondly because a contractor may have a choice as to which provision it claims under.

11.176 What may be included in the valuation of a variation depends, of course, on the express provisions of the clause itself. It may allow for the valuation not only of the additional work instructed, but also the increased cost of undertaking other work disrupted as a result. For example, a variation may require additional labour which in itself limits site access for labour working on the original contract work. The increased cost of undertaking the contract work may be able to be captured in the valuation of the variation.[165]

11.177 Contractual loss and expense provisions give the contractor a right to claim the costs it has incurred as a result of being delayed and disrupted by specified events (including variations).[166] The contract may provide that the costs of undertaking the additional work itself are recovered under the valuation of variations clause, whereas the cost of any resulting delay and disruption is to be recovered under the loss and expense clause. However, the two provisions for compensation may overlap. For example, in order to undertake the variation a tower crane may have been retained on site for longer. The cost of this tower crane could be included as part of the valuation of the variation or it could equally be included within a calculation for site prolongation costs as a result of project delay. Many valuation of varia-

164. See Chapter 9, section H, which considers these other contract provisions.

165. See, for example, JCT Standard Building Contract Without Quantities, Clause 5.9: 'If as a result of. . . compliance with any instruction requiring a Variation. . . there is a substantial change in the conditions under which other work is executed. . . then such other work shall be treated as if it had been the subject of an instruction requiring a Variation and shall be valued in accordance with the provisions. . .' of the valuation clause.

166. The contract may also include clauses that allow for recovery of the contractor's increased costs as a result of specific events or risks, such as unexpected ground conditions. See Chapter 9, section H.

tion clauses therefore include provisions intended to avoid a contractor double claiming and which identify the provision under which costs should be recovered where there may be uncertainty.[167]

11.178 It will normally be the case that the other contractual compensation provisions will entitle the contractor to its additional costs of undertaking the works in a revised or disrupted manner. The aim of those clauses is not to compensate the contractor for the direct costs of carrying out varied work,[168] but to compensate it for carrying out the planned contract work in a different manner or under different conditions from those that had been foreseen. It is the preserve of the valuation of variations clause to deal with the cost of implementing different work. However, this distinction assumes that variations just involve changes to the permanent works. Variations can include instructed changes to the way in which work is undertaken. A loss and expense clause can therefore compensate the contractor for disruption as a result of a named event. That disruption may, in effect, involve the contractor in increasing its resources or changing its method of working. The claim for disruption costs will in those circumstances be a claim for the increased cost of those additional resources or changed method. That change to the level of resources or method could equally be the subject of an instructed variation with the additional cost forming part of the valuation of the variation. There can therefore be overlap as to the clause that compensates the contractor for such a change.[169]

11.179 The overlap between these different clauses can also arise in relation to the valuation of additional work. Extra work is normally valued by reference to contract rates where the work is of a similar type. If the work is dissimilar or carried out under different conditions, the contract rates will be used with an uplift to reflect the additional costs involved.[170] Those different conditions could, however, equally be valued as disruption under a loss and expense clause. For example, extras may be instructed which are the same as work within the original contract scope and for which there are applicable rates. However, the work may be being undertaken on a disrupted site because of restricted access. One approach to valuation may be to assess the variation using the contract rates with an uplift to reflect the disruption. Another approach would be to assess the variation using the contract rates with no uplift (on the basis that it is simply the same contract work) and to value the disruption separately by reference to the loss and expense provisions.

11.180 There are, therefore, a number of instances in which there is possible overlap between the valuation of variations clause and other contract compensation clauses. How a party may seek to choose between the two will depend on a number of factors. Compliance with the

167. See for example, JCT Standard Building Contract Without Quantities, Clause 5.10.2.

168. It should, however, be recognised that some contractual compensation provisions, relating to specified events, envisage circumstances whereby the contractor may be compensated for the cost of implementing a change to the permanent works. See, for example, ground conditions clauses as discussed in Chapter 9, section H.

169. See both loss and expense provisions and ground conditions clauses, discussed in Chapter 9, section H. As discussed in that section, because the loss and expense clause can compensate for the disruption costs, the contractor may be entitled to be paid for a change in undertaking the works even though no variation instruction has been issued.

170. This is what is commonly referred to as the second limb of a typical valuation clause. See *supra*, para. 11.48.

notice provisions under the different clauses may be an issue.[171] In some instances additional resources may have been employed without these having been approved by the employer by way of instruction.[172] The value of entitlement under the two provisions may be different, as may be the standard of proof required in order to establish a right to be paid.[173]

11.181 To avoid the risk of overlap and the resulting risk of double recovery, certain contracts are structured so that all claims for additional payment are processed in the same way. No distinction is drawn between the valuation of changes arising from instructed variations as opposed to specified events and risks. This avoids the likelihood of double recovery or, to a degree, the contractor seeking to gain advantage by bringing the claim under one contract provision as opposed to another. This is the approach adopted by NEC3 which treats them all as 'Compensation Events'.

171. See *WW Gear Construction Ltd* v. *McGee Group Ltd* [2012] EWHC 1509 (TCC), as an example of a situation where the court determined that a contractor could seek to recover loss and expense costs under a variations provision even though it may have been barred from recovering under the loss and expense clause.

172. See Chapter 9, section H, where this particular aspect of the distinction between variations clauses and other clauses allowing for compensation for additional costs is explored in further detail.

173. See *supra*, para. 11.90.

CHAPTER TWELVE

ENTITLEMENT TO TIME

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SECTION A: INTRODUCTION

12.1 A change to the scope of works may mean that it is no longer possible to complete the project by the planned completion date, in which case the completion date may need to be adjusted.[1] This chapter only considers in summary the issues concerning time and delay under construction contracts and concentrates on these issues in the context of variations to the work.[2]

Extensions of time and damages for late completion

12.2 A construction contract will typically identify a completion date and the events justifying an adjustment to that date via the extension of time mechanism. Those events will normally include variations instructed by the employer.

12.3 It is also necessary to consider the position where the parties' contract is less sophisticated and does not expressly deal with time and delay. Where a construction contract does not identify a completion date for the works, the contractor will be entitled to a reasonable period in which to complete. Even if a completion date is specified, the contract may not contain a mechanism for adjusting the date. In this situation critical delay caused by the employer will result in the contractor being allowed reasonable time to complete.[3]

12.4 Most construction contracts specify a completion date and contain an extension of time mechanism for adjusting that date. Such a contract typically provides that the contractor will be liable for liquidated damages if it does not achieve completion by the specified date, as adjusted via the extension of time mechanism.[4]

1. The same principles apply to a requirement that a contractor complete certain parts of the works in sections by specified dates. The discussion in this chapter concerning completion and liquidated damages is equally applicable to such sectional work.
2. This book does not attempt to deal in detail with issues that are of general relevance to all delay events, such as notice provisions, causation and concurrency.
3. See section B of this chapter.
4. The contract can, of course, provide instead for general damages.

12.5 In order for the employer to impose liquidated damages it will be necessary to demonstrate that the contractor has not finished the work by the completion date. If the employer has delayed the work, the extension of time provision will operate so as to formally adjust the completion date, thereby ensuring that it can be clearly identified and liquidated damages imposed if the contractor is late. In this sense, it is often said that the extension of time mechanism is designed to preserve the employer's right to liquidated damages. However, strictly speaking, it is there to give the contractor additional time so that it is not in breach for failing to finish by the specified completion date. It is possible for a contract to provide expressly that a contractor is not entitled to additional time for a specified delaying event. This is because the right to a reasonable period of time to complete as a result of employer delay is an implied right which may be excluded by express provision.[5]

12.6 Section E of this chapter applies the principles of delay and extension of time entitlement (reviewed in section B and D) to the context of variations. In particular, it considers delay in the context of the problematic situations concerning variations, and their approval, that is the subject matter of this book – for example, where changes to the scope of the contract may be agreed by the parties or ordered without a formal instruction. Or where changes need to be undertaken by the contractor because it is impossible to complete the project if the contract design is strictly followed. This final section reviews the entitlement to extra time in these circumstances.

Delaying effect of variations

12.7 The critical delay caused by a variation will depend largely on when it is instructed. If it is instructed before the relevant phase of work is undertaken, the impact will be less. If the variation is instructed before the design has been developed by the contractor, the necessary adjustments to the design of related parts of the project can be made before detailed design and procurement have been undertaken.

12.8 An employer is normally entitled to vary the works up until the date when completion is certified and is under no obligation to instruct at an earlier stage when the impact of the change would be less.[6] A variation may be instructed 'late', in the sense that if it had been instructed earlier in the project it could have been integrated with little or no impact on design development and the physical works themselves. However, a variation is always 'late', in the sense that it would have been preferable for the employer to have fully finalised the scope before project commencement. However, if the employer can instruct up until completion, it is never so late as to be invalid.

12.9 The later the variation is instructed, the more likely it will be that extensive rework will be required to implement the change. Materials may have been ordered that will have to be

5. See *infra*, paras. 12.58–12.65.

6. Some contracts place restrictions on when variations may be ordered. If a contract places no restrictions on a contractor, it will be free to order changes up to completion. See Chapter 5, section D for a detailed review of these issues. See *supra*, paras. 5.132–5.135.

cancelled. This will affect the valuation of the direct costs of the extra work.[7] A late change is also likely to mean more extensive critical delay, justifying an extension of time and a greater loss and expense entitlement. It will sometimes be the case that even once a variation has been instructed the employer will need to provide details for the changed work or will need to approve materials or the contractor's design details. The assessment of the delaying impact of the change may not stop with the instruction itself, but may be crucially dependent on later approvals given by the employer.[8]

12.10 If the contractor is delayed it could be entitled to compensation. This book considers such financial entitlement in the context of the possible overlap between delay compensation provisions and the contractual entitlement to be paid for the direct costs of a variation.[9]

SECTION B: CONTRACTS WITH NO COMPLETION DATE OR EXTENSION OF TIME MECHANISM

12.11 If the parties' contract does not include a date for the completion of the works, a reasonable period will be implied. Such a term is implied by the common law and statute.[10] The House of Lords, in *Hick* v. *Raymond & Reid*, found that where works are to be performed within a reasonable time, it has '. . . invariably been held to mean that the party upon whom it is incumbent duly fulfils his obligation, notwithstanding protracted delay, so long as such delay is attributable to causes beyond his control, and he has neither acted negligently nor unreasonably'.[11]

12.12 A contractor that fails to complete the works on time, whether by reference to an express date or within an implied period, will be in breach.[12]

12.13 A contract will normally contain an extension of time mechanism for adjusting the completion date. If the contract does not contain such a mechanism, the contractor will have an implied right to complete in a reasonable time if it is critically delayed.

12.14 This entitlement arises as a result of the implied obligations on the parties to a contract to cooperate with each other to allow the work to be undertaken[13] and not to prevent performance. As to the duty not to prevent performance:[14]

7. See Chapter 11 generally. See, in particular para. 11.92 and the case *Tinghamgrange Ltd (trading as Gryphonn Concrete Products)* v. *Dew Group Ltd and North West Water Ltd* (1995) 47 Con LR 105, where the contractor was entitled to the cost of cancelled materials orders as part of the valuation of the variation.

8. As regards the employer's obligations in relation to design details and approvals in relation to variations, see *supra*, paras. 4.10–4.14.

9. See Chapter 9, section H and Chapter 11, section F.

10. Sale of Goods and Services Act 1982, s.14.

11. Lord Watson in *Hick* v. *Raymond & Reid* [1893] AC 22 (HL) at 32–33.

12. It will be a question of construction whether, under the contract, time is of the essence so that failure to meet the date will entitle the other party to treat the contract as repudiated. Unless the contract states time to be of the essence, the general position at the date of contracting is that the court will treat the breach of an obligation to complete by a particular date as having its remedy in damages, but no more.

13. This implied duty to cooperate was described by Lord Blackburn in *Mackay* v. *Dick* [1881] 6 App Cas 251 at 263, as follows: 'Where in a written contract it appears that both parties have agreed that something should be done, which cannot effectively be done unless both concur in doing it, the construction of the contract is that each agrees to do all that is necessary to be done on his part for the carrying out of that thing, though there may be no express words to that effect.'

14. *Per* Vaughan Williams LJ in *Barque Quilpué Ltd* v. *Brown* [1904] 2 KB 264 at 271.

> '. . . there is an implied contract by each party that he will not do anything to prevent the other party from performing the contract or to delay him in performing it. I agree that generally such a term is by law imported into every contract. . .'

12.15 As a result of this duty, sometimes referred to as the prevention principle, a party to a contract cannot gain a benefit by taking advantage of its own wrong.

12.16 This implied duty gives the contractor the right to a reasonable period to complete if the employer causes delay and the contract does not provide for that delay event. It is important to emphasise that this is an implied right and as such it can be excluded by an express provision.[15]

12.17 If the entitlement to additional time was not implied in these circumstances, the contractor would be liable in damages as at the original completion date and the employer would gain a benefit by taking advantage of its own wrong. The duty to cooperate therefore implies an entitlement to extra time in such circumstances where the contract is silent.

12.18 Therefore, in the absence of an extension of time mechanism operating to change the completion date, the contractor will be entitled to additional time to complete, with that additional time assessed on a reasonable basis. In *British Steel Corp* v. *Cleveland Bridge and Engineering Co Ltd*[16] the court held:[17]

> 'It was common ground between the parties that the principles I had to apply in this connection were those stated by the House of Lords in *Pantland Hick* v. *Raymond & Reid*. . . that the question of what constituted a reasonable time had to be considered in relation to the circumstances which existed at the time when the contractual services were performed, but excluding circumstances which were under the control of the party performing those services. As I understand it, I have first to consider what would, in ordinary circumstances, be a reasonable time for the performance of the relevant services; and I have then to consider to what extent that time for performance. . . was in fact extended by extraordinary circumstances outside their control.'

12.19 In *Shawton Engineering Limited* v. *DGP International Limited*[18] changes were instructed but there was no contractual mechanism for extending time on account of such variations. The defendant was obliged to complete its work within a reasonable time. The claimant sought to terminate the contract on the basis of the defendant's failure to complete. The defendant argued that it was not in breach because, on the facts, a reasonable period had not expired. The Court of Appeal held that what amounted to a reasonable time had to be judged at the time when the question arises in the light of all relevant circumstances. The nature of the variation was relevant:[19]

15. This is discussed further *infra*, paras. 12.58–12.65. A contract can expressly provide that a contractor does or does not get an extension of time as a result of named events such as additional work that is instructed.
16. [1984] 1 All ER 504.
17. *Ibid.* at 512.
18. [2005] EWCA Civ 1359.
19. *Ibid.* at para. 69.

> 'Equally, the true work content was a relevant circumstance. . . The mere instructing of a (perhaps quite modest) variation after the original date for completion would not by itself necessarily mean that a reasonable time had to be assessed afresh by reference only to the variation and whatever work happened to remain at the date of the variation instruction. . . Mr Thomas may well be right that a modest variation instruction given after an original completion date has passed could, depending on all the circumstances, result in an obligation to complete within a reasonable time whose assessment would produce a date which was in the past. But I accept Mr Friedman QC's submission that the question is a composite one. The circumstances in the present case included that the variations were significant in scope and, importantly, that, throughout most of the year 2000, Shawton were not insisting on, nor particularly concerned about, early completion of DGP's drawing work.'

12.20 The contractor's entitlement to additional time is implied. If the employer acts in a way that prevents completion, and the contract does not expressly deal with the impact of that event on the completion date, it will be implied that the contractor will be entitled to a reasonable time to finish the works. However, such an implied entitlement can be excluded by express provisions in the contract. The examples considered in this section involve circumstances where there is no extension of time clause and therefore there is no express provision dealing with the allocation of responsibility with respect to the delay caused by certain events. Where an extension of time clause exists, it will be necessary to consider whether responsibility for the cause of the delay has been expressly allocated.[20]

12.21 If the contract does not contain an extension of time clause, it is unlikely that it will contain a liquidated damages provision. Where the contract does provide for liquidated damages, in the absence of an extension of time mechanism to extend the completion date the employer will not be able to recover if it has caused delay.[21]

SECTION C: GROUNDS FOR AN EXTENSION OF TIME

12.22 A construction contract will normally provide that the contractor is entitled to an extension of time if it is delayed as a result of certain specified events. This section considers the events that are typically identified in the contract as giving rise to an entitlement to an extension of time.

12.23 One such event is the carrying out of instructed variations. However, situations may arise where the contractor undertakes varied work without a formal instruction having first been given.[22] In these circumstances it may be necessary to consider the other grounds identified in the contract justifying an entitlement to an extension of time. The contract may require notices to be given in respect of delays when they occur in order to trigger an entitlement to an extension.[23]

20. See *infra*, paras. 12.48–12.57.
21. See *infra*, paras. 12.53–12.54.
22. See section E of this chapter.
23. Whether this is the case will depend on the provisions of the contract. It is not within the remit of this book to consider such notice requirements in detail.

Instructed variations

12.24 An extension of time clause will normally define a variation in terms that are consistent with the provisions for the valuation clause. The change will give an entitlement to additional payment for the direct cost of the extra work as well as an extension of time.

12.25 For example, the extension of time provision in the ICC Measurement Contract 2011[24] refers to 'any variation ordered under Clause 51(1)'. Under this contract the contractor will also be entitled to the costs of undertaking a variation instructed under that clause. What qualifies as a variation, therefore, is the same for both extra time and extra money.

12.26 The same approach is taken by FIDIC. The extension of time provision in the FIDIC Silver Book 1999[25] just refers to the term 'Variation', which itself is defined under that contract to mean a change that has been instructed under the relevant provisions. Such a variation also triggers an entitlement to be paid extra.

12.27 Under the JCT suite of contracts there is less consistency between the time and money clauses. For example, the JCT Standard Building Contract 2011, Clause 5.1 reads as follows:

> '5.1 The term "Variation" means:
>
> .1 the alteration or the modification of the design, quality or quantity of the Works including:
>
> .1 the addition, omission or substitution of any work;
>
> .2 the alteration of the kind or standard of any of the materials or goods to be used in the Works;
>
> .3 the removal from the site of any work executed or Site Materials other than work, materials or goods which are not in accordance with this Contract;
>
> .2 the imposition by the Employer of any obligations or restrictions in regard to the matters set out in this clause 5.1.2 or the addition to or alteration or omission of any such obligations or restrictions so imposed or imposed by the Employer in the Contract Bills or in the Employer's Requirements in regard to:
>
> .1 access to the site or use of any specific parts of the site;
>
> .2 limitations of working space;
>
> .3 limitations of working hours; or
>
> .4 the execution or completion of the work in any specific order.'

24. See Clause 44(1)(a).
25. See Clause 8.

12.28 The term 'Variation' is not defined so as to be restricted to changes that have been instructed by the contract administrator. Despite this, the provision dealing with the valuation of changes, at Clause 5.2.1.1, refers to 'all Variations required by Architect/Contract Administrator's instructions or subsequently sanctioned by him in writing'. Therefore, the valuation provision is seeking to capture variations that have been instructed.

12.29 However, the extension of time provision, at Clause 2.29.1 of the same contract, refers to the following relevant event which justifies extra time:

> 'Variations and any other matters or instructions which under these Conditions are to be treated as, or as requiring, a Variation.'

12.30 This provision is not limited to variations that are instructed by the contract administrator. As demonstrated above, Clause 5.1 does not define 'Variation' so as to limit it to changes that are instructed. It includes any change that may be made to the works.

12.31 Therefore, whilst the valuation clause limits the variations that may be valued to those that are instructed, the extension of time clause includes a looser definition. The contractor appears to be entitled to an extension for any alteration it makes to the works provided that this is captured by the definition of 'Variation' under Clause 5.1.

12.32 In fact, Clause 2.29.1 goes wider than just covering 'Variations' as defined by the contract. It goes on to refer to other matters or instructions which are to be treated as, or as requiring, a 'Variation'. This is very wide. It would seem that this broad wording has been adopted so as to cover deemed variations under the contract, but it could be interpreted as capturing many other delaying events.[26]

12.33 Certain contracts therefore treat a contractor's entitlement to money differently from a contractor's entitlement to time.[27] Under the ICC and FIDIC contracts, a variation to the works is defined and that definition of a variation is then used consistently in the provisions that deal with the evaluation of both money and time. Under other contracts, such as JCT, a variation under the money (valuation) provisions is defined differently from a variation under the time (extension of time) provisions.

12.34 It should be recognised that most extension of time provisions refer to a variation being a named event without any qualification as to why it was required. It can be the case that a variation is required because of an act or default on the part of the contractor.[28] However, many contracts ignore the distinction in the same way as they do in relation to the entitlement to be paid extra for variations. One exception is NEC3, which states at Clause 60.1:

26. As to deemed variations under JCT: see Chapter 3, section G.

27. The term 'money' in this context is used to mean the entitlement to be paid for the cost of undertaking the changed works. However, time will often also bring compensation for time-related costs since an entitlement to time will often be the precursor to a claim for loss and expense.

28. See Chapter 6, and Chapter 7, section C.

'(1) The Project Manager gives an instruction changing the Works Information except

- a change made in order to accept a Defect or
- a change to the Works Information provided by the Contractor for his design which is made either at his request or to comply with other Works Information provided by the Employer.'

12.35 Many contracts, but particularly design and build agreements, seek to encourage the parties to agree the time impact of variations when they are instructed. Such an approach ensures that the parties have certainty as to their exposure before agreeing to the change. This is particularly important with a design and build obligation where the nature and extent of the changed work that will be implemented will typically be more uncertain and difficult to control from the employer's perspective.[29]

Other grounds for an extension of time

12.36 Whilst contracts will normally identify a variation as an extension of time event, they will refer to various other events that can be relevant when considering the entitlement to additional time because of changes to the scope.

12.37 Under a measurement contract, a substantial increase above the planned quantities will often amount to a reason for an extension of time.[30]

12.38 Civil engineering contracts will often contain clauses which specifically deal with the risks associated with the ground conditions being worse than expected. In those circumstances, the ground conditions may in themselves justify an extension of time irrespective of whether or not a variation has been formally instructed.[31]

12.39 Certain contracts provide for deemed variations, such that there is a deemed adjustment to the work that the contractor is required to build under the terms of the contract. Rather than this change being instructed by the employer, the variation is deemed to have been instructed as a result of being triggered by an event, or arising because of an inconsistency between documents. Such a deemed variation will also normally be a named extension of time event.[32]

12.40 Most contracts will also contain widely drafted catch-all provisions which cover other acts of the employer which could critically delay the contractor.[33]

29. See Chapter 3, section F.
30. See FIDIC Red Book 1999, Clause 8.4(a): 'other substantial change in the quantity of work included in the Contract'.
31. See Chapter 9, section H.
32. Deemed variations are considered at Chapter 3, section G.
33. The purpose of such provisions is to ensure that the extension of time clause entitles the contractor to extra time so as to avoid a situation whereby time is at large. See section D of this chapter, which considers this issue further.

FIDIC Red Book 1999, Clause 8.4, includes the following catch-all category: **12.41**

> '(e) any delay, impediment or prevention caused by or attributable to the Employer, the Employer's Personnel, or the Employer's other contractors on the Site.'

NEC3, Clause 60.1, includes two widely worded compensation events which could justify an extension of time: **12.42**

> '(18) A breach of contract by the Employer which is not one of the other compensation events in this contract.
>
> (19) An event which:
>
> - stops the Contractor completing the works or
> - stops the Contractor completing the works by the date shown on the Accepted Programme,
>
> and which
>
> - neither Party could prevent,
> - an experienced contractor would have judged at the Contract Date to have such a small chance of occurring that it would have been unreasonable for him to have allowed for it, and
> - is not one of the other compensation events stated in this contract.'

This type of provision is designed to capture a broad range of delaying events that the employer may be responsible for and would not be otherwise captured by the extension of time mechanism. In the absence of such a provision, the completion date could not be extended and time would be at large. Such a provision may be relevant where the contractor has undertaken changes to the scope which have not been formally instructed. **12.43**

In *Multiplex* v. *Honeywell*[34] the main contractor issued the subcontractor with revised programmes which it was required to work to. The programmes did not amount to an instructed variation under the extension of time clause. The subcontractor contended that the extension of time clause did not contain a mechanism for extending time in respect of delay caused by such revised programmes and time had therefore been put at large. The court found that the issuance of the revised programmes justified an extension under the catch-all 'act of prevention' category in the clause. **12.44**

The relevance of these various events which can justify an extension of time in the absence of a formally instructed variation are considered in the context of changes to the scope of works in section E of this chapter. **12.45**

34. *Multiplex Construction (UK) Limited* v. *Honeywell Control Systems Limited* [2007] BLR 195.

SECTION D: DELAYS CAUSED BY EVENTS NOT COVERED BY THE EXTENSION OF TIME MECHANISM

12.46 As discussed in section B, if a contract does not include an extension of time mechanism and the employer critically delays the works, the contractor is no longer bound by the original completion date. It will instead be entitled to a reasonable period of time to complete because of the implied duty not to prevent performance. This is often referred to as the prevention principle.[35]

12.47 This section considers the position where the contract includes an extension of time mechanism but that mechanism is inadequate because it does not provide for extensions to be given in relation to certain employer delaying events. For example, it does not specify what happens if delay is caused by the employer instructing additional work. As with the situation where there was no extension of time mechanism at all, the contractor is entitled to a reasonable period of time to complete because the contract does not contain a provision for moving the completion date. Again, this is because the prevention principle means that the employer has a duty not to prevent performance and, if it does, the implied duty will mean that the contractor will have further time to finish the works.[36]

Liquidated damages entitlement when event not covered by extension of time mechanism

12.48 It is important to recognise that this entitlement to a reasonable time to complete arises because of an implied duty. As with any implied obligation, it is subject to express provisions to the contrary in the contract. See paragraph 12.58, where this is discussed further.

12.49 This has very important ramifications in relation to the operation of liquidated damages under the contract.

12.50 Liquidated damages provisions are narrowly construed by the courts. As Salmon LJ said in *Peak Construction (Liverpool) Ltd* v. *McKinney Foundations Ltd*:[37]

> 'The liquidated damages and extensions of time clauses in printed forms of contract must be construed strictly *contra proferentem*. If the employer wishes to recover liquidated damages for failure by the contractors to complete on time in spite of the fact that some of the delay is due to the employers' own fault or breach of contract, then the extension of time clause should provide, expressly or by necessary inference, for an extension on account of such a fault or breach on the part of the employer.'

12.51 Therefore, for an employer to establish an entitlement to liquidated damages it must be possible to identify the completion date with certainty so as to know the point at which they may be claimed or deducted.

35. See *supra*, paras. 12.14–12.21, where this is discussed further.
36. As discussed further below, this is an implied duty and is subject to express provision.
37. (1970) 1 BLR 111 at 121.

12.52 If a delay occurs which the extension of time clause does not address, then in accordance with the prevention principle the contractor will be entitled to reasonable time to complete. Since the extension of time mechanism does not operate to refix the completion date, in these circumstances liquidated damages can no longer be enforced. Where these circumstances arise and the contractor only has to complete within a reasonable period of time, it is commonly said that time is 'at large'. It is for this reason that it is sometimes said that the purpose of the extension of time clause is to preserve the right to liquidated damages.

12.53 Discussion of the prevention principle generally focuses on the way that it prevents liquidated damages[38] being imposed where the contractor is late only because the employer has delayed:[39]

> '. . . [I]t is well settled that in building contracts. . . where there is a stipulation for work to be done in a limited time, if one party by his conduct – it may be quite legitimate conduct, such as ordering extra work – renders it impossible or impracticable for the other party to do his work within the stipulated time, then the one whose conduct caused the trouble can no longer insist on strict adherence to the time stated. He cannot claim any penalties or liquidated damages for non-completion in that time.'

12.54 Liquidated damages provisions need to preserve a clearly identifiable completion date. If as a result of the operation of the prevention principle the contractor is under an obligation to complete within a reasonable time, there will no longer be a clearly identifiable completion date and the right to liquidated damages falls away entirely.

12.55 If the prevention principle applies, the contractor is required to complete within a reasonable period. This does not mean that the contractor therefore has free rein in terms of ongoing progress. The contractor may still fail to achieve completion within such a time span. The contractor will then be liable for general damages rather than the previously applicable liquidated damages, albeit that the level of liquidated damages stated in the contract is likely to amount to a cap on the general damages that can be recovered.[40] It will be important to the employer to preserve the right to liquidated damages because general damages are much less attractive in comparison. There may be evidential difficulties in establishing loss and the employer will have no right to deduct damages as of right from payments otherwise due.

12.56 A critical delay caused by an event not covered by the extension of time provision will put time at large, even if this is only one delay of many and the other events are provided for

38. The operation of the prevention principle, in giving an implied entitlement to further time, is not only relevant to contracts with liquidated damages provisions. It is also applicable to contracts with general damages (see section B of this chapter). In both circumstances the rule operates to give the contractor a reasonable period of time so as to stop the employer benefiting from the delay it has caused.

39. *Trollope & Colls* v. *NW Metropolitan Regional Hospital Board* [1973] 1 WLR 601 at 607, in which the House of Lords expressly approved a passage from the judgment of Lord Denning MR in the Court of Appeal.

40. In circumstances where an employer delay results in the contractor being no longer bound by the completion date, with the consequence that the liquidated damages clause have been invalidated, the employer will not be entitled to recover a larger weekly or other sum as unliquidated damages on establishing failure by the contractor to complete within a reasonable time: see *Elsley* v. *J.G. Collins Insurance Agencies Ltd* (1978) 2 SCR 1. The rationale to this approach is that there is no reason to deprive the contractor of an agreed contractual benefit previously capping its liability; alternatively, the employer could profit from its own act of prevention.

by the clause. Suppose, for example, that there have been several major delays on a project concerning site access and the contract adequately provides for extensions to be awarded for those delay events. Additional work is then instructed which causes a comparatively limited critical delay but is not covered by the extension of time clause. Even though this additional cause of critical delay may be limited, it will set time at large, resulting in the contractor being required to complete in a reasonable period and defeating the liquidated damages provision. The question of who has caused the delay in the context of variations can be particularly complex.[41]

12.57 In order for the principle to apply, it is not necessary for the delay to amount to a breach of contract by the employer. It will therefore apply to variations where these are provided for and contemplated by the contract. In *Dodd* v. *Churton*[42] a builder was employed to construct a house under a contract which allowed the owner's architect to instruct variations. The contract also fixed a completion date and stipulated a weekly liquidated damages rate for delay but contained no provisions for extending the date. The Court of Appeal found that the owner was not entitled to levy liquidated damages despite the fact that the contract contemplated variations being instructed:[43]

> 'It was, no doubt, part of the original Contract that the building owner should have a right to call upon the builder to do that extra work, and if he did give an order for it, the builder could not refuse to do it. The principle was laid down in *Comyn's Digest*, Condition L(6.), that, where one party to a contract is prevented from performing it by the act of the other, he is not liable in law for that default; and, accordingly, a well recognised rule has been established in cases of this kind, beginning with *Holme* v. *Guppy*, to the effect that, if the building owner has ordered extra work beyond that specified by the original contract which has necessarily increased the time requisite for finishing the work, he is thereby disentitled to claim the penalties for non-completion provided by the contract.'

Implied duty excluded by express provision

12.58 Because the prevention principle derives from the implied duty of cooperation, its operation can be excluded by the express terms of the contract. The contractor is only entitled to a reasonable period to complete where the contract is silent as to how delay arising from the relevant event will be treated.

41. Establishing who has caused the delay will often be controversial. For example, the employer may instruct a variation which is only required due to an act or default of the contractor, such as a failure of the contractor's design or its poor workmanship necessitating a change (see Chapter 7, section C). The variation may be instructed because of a number of factors, some of which the employer is responsible for and some of which the contractor is responsible for (see Chapter 6, section C). The fact that the employer has issued a variation instruction will not necessarily mean that it has caused the delay in the context of the prevention principle.

42. [1897] 1 QB 562.

43. *Ibid*. at 566, Lord Esher MR. This passage refers to *Holme* v. *Guppy* [1838] 3 M&W 387, an older precedent on the same issue. The contractor in that case was liable to pay liquidated damages if it failed to complete its works within a four-and-a-half-month period, but it was prevented from starting by the employer's other workmen. The court held that there was nothing to show a new contract to perform in four and a half months ending at a later date and as a result liquidated damages could not be deducted from the contractor's claim for the price of the work.

12.59 The contract may expressly deal with the delaying effect of the event, in which case it is not possible to imply a reasonable period. For example, a contract may provide that the contractor will have no right to additional time in relation to extra work instructed by the employer. Clearly, this would be an unusual provision but, as the cases below indicate, there is no reason why the parties cannot agree this.

12.60 The following passage from the judgment of Salmon J in *Peak Construction (Liverpool) Limited* v. *McKinney Foundations Limited*[44] comments on the prevention principle and, as the initial sentence makes clear, express terms can exclude the operation of the prevention principle:[45]

> '. . . [U]nless the contract expresses a contrary intention, the employer, in the circumstances postulated, is left to his ordinary remedy; that is to say, to recover such damages as he can prove flow from the contractor's breach. No doubt if the extension of time clause provided for a postponement of the completion date on account of delay caused by some breach or fault on the part of the employer, the position would be different. This would mean that the parties had intended that the employer could recover liquidated damages notwithstanding that he was partly to blame for the failure to achieve the completion date. In such a case the architect would extend the date for completion, and the contractor would then be liable to pay liquidated damages for delay as from the extended completion date.'

12.61 In *Jones* v. *St John's College, Oxford*[46] the contractor undertook to build a new farmhouse by a specified date, but the contractor's obligation was subject to any extras that might be ordered, and included a requirement to pay liquidated damages for failure to complete. The decision of the employer's inspector as to the time within which the extra work was to be completed was final. The contract provided that the contractor was to carry out the original works, with any extra work ordered, in the same manner as if they had been comprised in the original works of the contract. It provided that the period for completing the entire works should not exceed the contract period unless a written extension of time was given. Extras were ordered, but no extension of time was given. It was held that on the proper construction of the contract the contractor had undertaken to complete by the stipulated date, whatever extras might be ordered.[47]

12.62 In *SMK Cabinets* v. *Hili Modern Electrics Pty Ltd*, a case dealing with a similar situation, Brooking J stated:[48]

> 'It has long been recognised that the proprietor cannot recover liquidated damages for delay in completion where he himself delays completion by ordering extras or other

44. (1970) 1 BLR 111.
45. *Ibid*. at 121.
46. (1870) LR 6 QB 115.
47. A comparison can be made to contract provisions which give the employer the option to alter an aspect of the contractor's work which are not traditional variations clauses and do not give an entitlement to extra money and time: see *supra*, paras. 5.13–5.14. See *Kitsons Sheet Metal Ltd* v. *Matthew Hall Mechanical & Electrical Engineers Ltd* (1989) 47 BLR 82: see *supra*, para. 3.114.
48. [1984] VR 391.

variations, unless the contract makes clear that the contractor is undertaking to complete by the due date notwithstanding extras or other variations or unless resort can be had to an extension of time clause.'

12.63 It would, of course, be commercially unwise for a contractor to agree to contract conditions which required it to undertake additional work with a corresponding provision that expressly entitled it to no additional time. [49]

12.64 In practice, however, modern construction contracts almost always entitle contractors to extensions of time for delays caused by the employer. As a result, there is very limited modern case law dealing with this type of provision. Indeed, the possibility that a contract may expressly provide that no extension of time is due in these circumstances is not something that is often discussed. Faced with a situation where the employer has delayed the works, but the contract expressly denies the contractor an extension, a tribunal may well seek to find a way to stop an employer taking advantage of such a provision. [50]

12.65 It is also important to note that cases where the contract has expressly excluded the right to more time, such as *Jones*, concern variations. It seems more likely that a tribunal would respect an agreement between the parties to this effect where extra work had caused this delay, as opposed to a provision that denied the contractor time because of an employer's breach, such as denial of site access.

SECTION E: APPLICATION OF DELAY PRINCIPLES TO VARIATIONS

12.66 If a change to the scope of works has been instructed under the contract, the contractor's entitlement to an extension of time is likely to be relatively straightforward. The position will be more complex where the contractor undertakes additional work which has not been formally instructed.

The parties agree changes to the scope without a formal instruction

12.67 The variations clause in a contract allows changes to be ordered by the employer unilaterally. However, there is no reason why the parties cannot agree to a change to the scope of works. Such a variation is not instructed under the formal contract procedure but is agreed between the parties. The agreement to vary the scope may be recorded in a formal written document or it may be ad hoc and oral. The contract administrator will not normally have authority to agree such changes on the employer's behalf.[51]

49. If faced with such a provision, a contractor should consider the degree to which the amount of additional work that the contractor is entitled to instruct will be impliedly limited. See Chapter 5, section C, and in particular paras. 5.117–5.119.

50. As discussed in section C of this chapter, modern construction contracts go the other way and identify a very extensive range of events that will give the contractor the right to an extension of time.

51. Chapter 9, section B, discusses such consensual variations in detail.

12.68 It is possible, but unlikely, that the delaying effect of such a change will be covered by an extension of time provision. It is not likely to fall under the usual catch-all event in the extension of time clause because it amounts to an agreed change to the scope rather than an impediment, default or act of prevention, which are the usual terms used in such catch-all clauses.

12.69 Since such a consensual variation amounts to an agreement to change the terms of the contract, the basis on which the change is made (in terms of money and time) should form part of that variation agreement. In the same way that, in the absence of agreement as to price, the contractor will be entitled to a reasonable sum, the contractor will be entitled to a reasonable additional period to complete if the effect of the extra work has a critical impact on the project.

12.70 The parties may reach an agreement on time when agreeing the variation. The evidence may indicate that the parties have agreed that the contractor will get no extra time for undertaking the additional work because it was understood that it would be carried out in a manner that would cause no critical delay.

12.71 If the contractor has reasonable additional time to complete, then time will be at large and the liquidated damages provision will fail.[52]

Unapproved changes to the works

12.72 The contractor may undertake a change to the works without approval.[53] Alternatively, the contract administrator may have sought to instruct a change but without proper authority, such that the instruction is not binding on the employer.[54] The contractor will be in breach unless the employer subsequently agrees to waive the breach or retrospectively authorises the variation.[55]

12.73 Since such a change is unauthorised, it is not a delaying event for which the employer is responsible and therefore will not justify an extension of time. One possible exception that may arise is where the contractor undertakes an authorised change because it is necessary to proceed with the works. This is discussed further below.

Impossibility of proceeding with the work as a result of employer risk

12.74 It may be impossible to build the works in accordance with the scope as described in the contract. Whilst a contractor is not entitled to depart from the scope without approval, in order to complete the project it may be necessary to implement such a change.[56]

52. See section D.
53. As to the need for employer approval, see Chapter 2, section A.
54. This may arise because the contract administrator does not follow the correct formal procedures for instructing the change, such as an oral instruction when the order needs to be in writing. See Chapter 8, section C.
55. A variation that is permitted by an employer but not ordered is a concession. See Chapter 9, section B.
56. See Chapter 2, section A.

12.75 If the contractor undertakes work without formal approval, it may not be entitled to money and additional time. If an employer refuses to give an instruction, this may lead to an impasse arising on a project, resulting in risk and cost for both parties.[57] The challenge for construction contracts is to structure the arrangements for managing and compensating change to avoid this problem – for example, the inclusion of provisions that compensate the contractor without the need for a formal instruction in certain circumstances where advance approval is unrealistic.[58] These provisions will often also provide an entitlement for additional time. For example, civil engineering contracts will typically allow compensation and additional time if the ground conditions are worse than expected.[59] Contracts sometimes contain provisions for deemed variations, where an instruction has not been issued but the circumstances on site are such that the contract deems one to have been issued.[60] The valuation of work under measurement contracts will often have the effect of compensating a contractor for additional work arising from unexpected site conditions.[61] A significant increase in the quantities (comparing actual and planned) under a measurement contract will typically be a ground for awarding an extension of time.[62]

12.76 If the contract does not compensate the contractor for the additional work undertaken in such circumstances, it will be necessary to consider whether the employer is under a duty to instruct a variation. In limited circumstances the courts have found that such a duty arises, or that a tribunal has jurisdiction to review a contract administrator's decision to refuse to issue an instruction.[63]

Varied work undertaken outside the contract entirely

12.77 The additional work may be assessed as having been undertaken by the contractor outside the parties' principal contract. The new work may be found to have been undertaken under a new collateral contract.[64] Alternatively, there may be no contract at all, such that the contractor's entitlement to be paid for the work is assessed as a claim in restitution.[65]

12.78 If a collateral contract governs the new work, the terms of that new contract will include the price to be paid and time required to undertake it. These terms may have been expressly agreed but, if not, a reasonable time will be implied. The period of time will, however, concern the period required to undertake the new work under the new contract and not the contract period under the principal contract.

12.79 If the claim for payment of work is in restitution, there is no contractual obligation to undertake the works in a particular period of time.[66]

57. See Chapter 2, section C.
58. See *supra*, paras. 2.33–2.42.
59. See *supra*, para. 12.38.
60. See *supra*, para. 12.39.
61. For example, a tunnelling contract may grade rock types, with a higher unit rate being paid depending on the actual conditions encountered. Therefore, if the nature of the work and level of tunnel reinforcement and support is more extensive than planned, the contractor is compensated: see Chapter 3, section I.
62. See *supra*, para. 12.37.
63. See Chapter 7, section D, and Chapter 9, section E.
64. Chapter 9, section B.
65. Chapter 9, section G.
66. See *supra*, para. 9.242.

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