RICS PRACTICE INFORMATION

Extensions of time

UK

1st edition, November 2014

RICS®

Extensions of time

RICS practice information, UK

1st edition, November 2014

Effective from 10 February 2015

Published by the Royal Institution of Chartered Surveyors (RICS)
Parliament Square
London
SW1P 3AD

www.rics.org

Produced by the QS and Construction Working Group of the Royal Institution of Chartered Surveyors.

This document was originally published in November 2014 as an RICS guidance note and reissued in July 2024 as RICS practice information.

ISBN 978 1 78321 085 5

Acknowledgements

RICS would like to thank the following for their contribution to this practice information.

Technical author:

Christopher M Linnett FRICS, Christopher Linnet Limited

Co-authors:

Camilla de Moraes, K&L Gates LLP

Stephen Lowsley, Driver Trett

Matthew Smith, K&L Gates LLP

Working group:

Chair: Andrew Smith MRICS, Laing O'Rourke

John G Campbell, BAM Construction Limited

David Cohen, Amicus Development Solutions

Stuart Earl FRICS, Gleeds

Roland Finch FRICS, NBS

Christopher Green, Capita Symonds Ltd

William Hall MRICS, Lend Lease

Roy Morledge, Nottingham Trent University

Michelle Murray, Turner & Townsend plc

Michael T O'Connor, Carillion Construction Limited

Kevin Whitehead, McBains Cooper Consulting Limited

Alan Muse, RICS

Contents

RICS standards framework

RICS' standards setting is governed and overseen by the Standards and Regulation Board (SRB). The SRB's aims are to operate in the public interest, and to develop the technical and ethical competence of the profession and its ability to deliver ethical practice to high standards globally.

The RICS Rules of Conduct set high-level professional requirements for the global chartered surveying profession. These are supported by more detailed standards and information relating to professional conduct and technical competency.

The SRB focuses on the conduct and competence of RICS members, to set standards that are proportionate, in the public interest and based on risk. Its approach is to foster a supportive atmosphere that encourages a strong, diverse, inclusive, effective and sustainable surveying profession.

As well as developing its own standards, RICS works collaboratively with other bodies at a national and international level to develop documents relevant to professional practice, such as cross-sector guidance, codes and standards. The application of these collaborative documents by RICS members will be defined either within the document itself or in associated RICS-published documents.

Document definitions

Document type	Definition
RICS professional standards	**Set requirements or expectations for RICS members and regulated firms about how they provide services or the outcomes of their actions.** RICS professional standards are principles-based and focused on outcomes and good practice. Any requirements included set a baseline expectation for competent delivery or ethical behaviour. They include practices and behaviours intended to protect clients and other stakeholders, as well as ensuring their reasonable expectations of ethics, integrity, technical competence and diligence are met. Members must comply with an RICS professional standard. They may include: • mandatory requirements, which use the word 'must' and must be complied with, and/or • recommended best practice, which uses the word 'should'. It is recognised that there may be acceptable alternatives to best practice that achieve the same or a better outcome. In regulatory or disciplinary proceedings, RICS will take into account relevant professional standards when deciding whether an RICS member or regulated firm acted appropriately and with reasonable competence. It is also likely that during any legal proceedings a judge, adjudicator or equivalent will take RICS professional standards into account.
RICS practice information	**Information to support the practice, knowledge and performance of RICS members and regulated firms, and the demand for professional services.** Practice information includes definitions, processes, toolkits, checklists, insights, research and technical information or advice. It also includes documents that aim to provide common benchmarks or approaches across a sector to help build efficient and consistent practice. This information is not mandatory and does not set requirements for RICS members or make explicit recommendations.

1 Introduction

Delays occur on most construction projects, and always have done. At some point during a project, particular parts of the works, or the works as a whole, will not progress as quickly as planned, with the risk that the contractual completion date will not be met. Sometimes, the lack of progress will be due to events that are the employer's responsibility under the contract; sometimes, the lack of progress will be due to events that are the contractor's responsibility.

For example, where traditional methods of procurement have been adopted, most construction contracts provide that delays caused by labour shortages or late delivery of materials will be the responsibility of the main contractor (or the subcontractor under a subcontract agreement), while delays caused by variations and/or the late provision of design information will be the responsibility of the employer (or the main contractor under a subcontract agreement).

If a delay has been caused by an event that is the employer's responsibility, then in general, the contractor will be entitled to an extension of time. An extension of time defers the contract completion date and thereby gives the contractor a longer period within which to complete the works. In order to decide whether a contractor is entitled to an extension of time, it is necessary to establish the cause of the delay and the period of delay. In some cases this will be very easy but in many cases it will be very difficult and can be controversial.

Few contracts expressly make the quantity surveyor responsible for the assessment of an extension of time claim; the task more commonly falls on the architect, contract administrator, engineer or project manager. However, in practice, it is likely that quantity surveyors will be asked at least to assist with the preparation or assessment of a delay claim. The quantity surveyor's analytical training and methods of working are wellsuited to dealing with the complexities of delay analysis.

2 General principles (Level 1 – Knowing)

2.1 Costs of delay

If a project is delayed, it is likely that both the employer and the contractor will incur additional costs. The employer may incur additional finance costs and/or lost rent and/or additional fees for professional services and/or a variety of other additional costs. The contractor may incur additional costs of site supervision, site offices and facilities, site security, head office management and overheads, general plant hire, insurance and other costs. The contractor's delay costs are sometimes referred to as 'prolongation costs' or 'time-related costs'.

In the vast majority of cases, the employer's additional costs will be estimated, prior to tender enquiries going out, and will be expressed in the contract as a rate for 'liquidated damages'. Damages are amounts awarded by a court as compensation for loss or injury suffered by one party due to a breach of contract or breach of duty by another party; liquidated damages are amounts for damages that are ascertained and fixed in advance.

The benefit of having a set rate for liquidated damages is that the parties know, in advance, the level of damages that will be applied in the event of a project overrun. This allows the contractor to assess risk, prior to submitting its tender for the works, and it allows the employer to recover damages without having to go to the time and trouble of proving the amount of damages actually incurred.

Contractor's additional delay costs are rarely (if at all) included as liquidated damages in a construction contract. This is because the contractor's delay costs are generally more wide-ranging, more uncertain and more variable than the employer's costs. Therefore, most contracts provide express terms for the assessment and reimbursement of delay costs, where appropriate, to the contractor.

In the standard forms issued by the Joint Contracts Tribunal (JCT), and in many other forms of contract, the contractor's delay costs are referred to by the term 'loss and expense'. Delay costs in the NEC3 Engineering and Construction Contract are valued within 'compensation events'.

In order to recover delay costs and/or to avoid liability for liquidated damages, a contractor will generally have to show that the delay was caused by events that are the employer's responsibility under the contract. The contractor does this by applying for an extension of time under the contract.

2.2 Background to extension of time clauses

The need for comprehensive extension of time provisions in construction contracts was illustrated by judgments made in two cases: *Holme v Guppy* (1838) 3 M&W 387 and *Wells v Army & Navy Co-operative Society Ltd* (1902) 86 LT 764.

The case of *Holme v Guppy* concerned the deduction of liquidated damages following late completion of carpentry and joinery works by Holme at Guppy's brewery in Liverpool. During the project, Holme had had some labour problems and Guppy thought it was entitled to deduct liquidated damages at the rate in the contract. At first instance, the court agreed with Guppy, but on appeal, the judgment was overturned. The Court of Exchequer held that Guppy was not entitled to recover the liquidated damages, because it had also been responsible for delays to the works. In particular, it was found that Holme had been significantly delayed by Guppy's masons and the late handing over of the site, and that these delays had prevented Holme from completing on time. The court referred to each of these delays as 'an act of prevention' and, in the absence of an extension of time clause (or alternatively, a revised contract with a longer period provided for completion), it held that time was left 'at large'. With time at large, the liquidated damages provisions were unenforceable.

In *Wells v Army & Navy Co-operative Society*, the parties' contract included an extension of time clause. It was operated by the Army & Navy Co-operative Society (the employer) to give Wells (the contractor) an extension of time of three months to the completion date. However, the project finished over a year late and the Army & Navy Co-operative Society applied liquidated damages, at the contract rate, to the balance of the overrun period. Wells objected on the grounds that the extension of time clause only dealt with third-party delays and did not provide extensions due to delays caused by the employer or the architect.

The Court of Appeal found in Wells' favour. It decided that delays had been caused by the employer (late possession) and the architect (late drawings) and so at least part of the cause of delay to the works was due to acts of prevention by the employer. These acts of prevention were not catered for in the extension of time clause in the contract. Thus, it was held that the liquidated damages provisions were ineffective and could not be applied to the delay period.

In the light of these cases, it is not surprising that almost all construction contracts now provide extension of time clauses and that these clauses are wide-ranging and comprehensive.

2.3 Extensions of time under standard forms of contract

This section considers the JCT Standard Building Contract 2011, the NEC3 form of contract 2013, the Institution of Civil Engineers (ICE) Conditions of Contract 2013 and the International Federation of Consulting Engineers (FIDIC) contracts 1999.

2.3.1 JCT Standard Building Contract 2011

Adjustment of the completion date under the JCT Standard Building Contract 2011 is dealt with in clauses 2.26 to 2.29. These clauses are similar to clauses 2.16 to 2.19 of the JCT Standard Building Subcontract 2011.

2.3.1.1 Delay events

Under JCT forms of contract, the reasons why a completion date may be adjusted are set out in a list of 'Relevant Events'.

The list of Relevant Events under the JCT Standard Building Contract 2011 includes

- variations
- instructions
- deferment of possession of the site
- suspension
- works by statutory undertakers
- exceptionally adverse weather
- civil commotion
- terrorism and strikes; and
- 'any impediment, prevention or default … by the Employer'.

2.3.1.2 Delay notices

Clause 2.27 of the JCT contract requires the contractor to give notice if and whenever it becomes reasonably apparent that the progress of the works is being or is likely to be delayed. The notice must set out 'the material circumstances', including the cause or causes of the delay, and must specifically identify any event that is considered to be a Relevant Event. The contractor must also give particulars of the expected effects of the delay upon the completion date, either in the original notice or in writing as soon as possible thereafter.

2.3.1.3 Assessment

Under clause 2.28, the architect is required to consider any notice of delay given by the contractor and to fix a new (later) completion date if it is considered fair and reasonable to do so (a main contractor has similar obligations under clause 2.18 of the JCT subcontract). The architect must provide a written notice of the decision about the delay as soon as reasonably practicable, but in any event, within 12 weeks of receipt of 'the required particulars'.

If the time period for a decision commences only once 'the required particulars' have been received, the question arises as to what these particulars are. The contract does not provide an answer; no doubt because the type of particulars required are likely to vary from one case to another.

Sometimes, an architect's request for further particulars of the delay can be vague or generic. On occasions, contractors have simply been told that a delay notice cannot be considered until a claim is provided showing 'cause and effect'.

It is suggested that where requests for further information are not clear, contractors should seek clarification. Otherwise, a great deal of time and effort may be expended producing information that the architect or contract administrator finds to be of little assistance.

If an extension of time is awarded by the architect during the project, the period of the extension must be reviewed after completion of the works (clause 2.28.5). A review of the time originally awarded for an extension of time must be made within 12 weeks of practical completion.

Any revision to the extension of time decided upon after this review must either confirm or increase the extension of time period, unless there has been an omission to the works that justifies a reduction. In other words, a review cannot 'take back' time that has already been awarded, even if subsequent events show that the award was more generous than perhaps it might have been. This provision may lead some architects or contract administrators to take a conservative view of any delay claim submitted by a contractor; however, such an approach is not justifiable under the terms of the contract. An extension of time must be 'fair and reasonable', not cautious or understated, pending a further review after completion.

2.3.1.4 Delay avoidance

Under clause 2.28.6.1, the contractor is required to

> 'constantly use his best endeavours to prevent delay in the progress of the Works or any Section, however caused, and to prevent the completion of the Works or Section being delayed or further delayed' and, under clause 2.28.6.2, must 'do all that may reasonably be required to the satisfaction of the Architect/ Contract Administrator to proceed with the Works or Section'.

Subcontractors have similar obligations under clauses 2.18.6.1 and 2.18.6.2 of the subcontract.

These clauses are considered in the current edition of RICS' *Acceleration*, where it is suggested that the scope of such obligations should not be overstated. A duty to 'prevent delay' and to proceed with the works to the satisfaction of the architect or contract administrator does not appear to impose a positive duty on the contractor to accelerate progress or to take any action that a reasonable and prudent contractor would not ordinarily take.

2.3.2 NEC3 form of contract 2013

Unlike the JCT standard forms, the NEC3 form is not intended to be simply a standard set of contract conditions; it also seeks, as stated in page 3 of the NEC3 guidance notes, to be a 'stimulus to good management'. To meet this aim, the NEC3 is far more prescriptive about what each party should do and the time by which this should be done.

Delay events are dealt with mainly in the first section of the contract (the 'Core Clauses'), particularly at clause 16 of section 1, and also in sections 3 and 6. Clause 16 deals with notices or 'early warnings', section 3 deals generally with 'time', and section 6 considers 'compensation events'.

Other relevant clauses may be found in other parts of the NEC3 contract, including the 'Main Option Clauses', the 'Secondary Option Clauses' and the 'Contract Data' section.

2.3.2.1 NEC3 terminology

The NEC3 contract is, according to page 2 of the NEC3 guidance notes, 'written in ordinary language' and 'as far as possible … only uses words which are in common usage', making it 'easier to understand by people who are not used to using formal contracts and by people whose first language is not English'. However, a number of words and terms used in the contract do require explanation. Definitions of terms can be found in the NEC3 guidance notes. The terms defined below are of particular relevance to the assessment of delay.

- **'Float':** this term is used in section 3 of the Core Clauses. It is defined as 'any spare time within the programme after the time risk allowances have been included'.
- **'Time risk allowances':** this term is defined as durations allowed within programme activities to cover contractors' 'realistic' risks. Time risk allowances cannot be used to off-set the effects of 'compensation events'.
- **'Compensation events':** this term is defined as 'events which, if they occur, and do not arise from the Contractor's fault, entitle the Contractor to be compensated for any effect the event has on the Prices and the Completion Date or a Key Date'.

The terms 'prices', 'completion date' and 'key date', used in the definition of 'compensation events', and other terms such as 'others', 'access date' and 'weather record' are defined either in Core Clause 11.2 (the second clause in the contract), one of the Main Option Clauses, or the Contract Data section of the contract.

Under the NEC3 contract, 'compensation events' are subject to a quotation procedure, which is set out in clause 62 of the Core Clauses. However, at page 75 of the NEC3 guidance notes it states that: 'the term 'quotation' is not the same as the normal use in commerce'. Therefore, at least in this instance, the NEC3 departs from 'ordinary language' and attributes its own, different, meaning to a word in common usage.

The definitions of terms provided above are from the NEC3 guidance notes. Note that only the definitions found in the contract itself can be used for legal interpretation. The guidance notes point out that definitions in the notes cannot be relied upon for legal interpretation.

2.3.2.2 Delay events

Like the JCT's list of Relevant Events, the NEC3's list of 'compensation events' (as set out in clause 60.1) that may entitle the contractor to more time to carry out the works, includes

- variations
- instructions

- deferment of possession of the site
- suspension
- works by others (which would include works by statutory undertakers)
- unusually adverse weather; and
- events causing delay that neither party could prevent or foresee (which would include civil commotion, terrorism and strikes, if these are 'Employer's risks' under clause 80.1).

2.3.2.3 Delay notices

Under the NEC3, if there is a delay to the project that could have an impact on the completion date, an 'early warning notice' must be given, by either the contractor or the project manager, in accordance with clause 16.1. On receipt of such notice, the contractor or project manager may, by virtue of clause 16.2, instruct the other to attend a 'risk reduction meeting' to discuss the early warning event. Clause 16.3 specifies what the parties must do at that meeting, including considering how the risk of delay can be avoided or reduced. However, at this meeting, consideration will not be given to extending the period for completion of the works. Changes to the completion date are dealt with as part of the 'compensation event' assessment under clause 61.

Clause 61.1 provides that the project manager is obliged to notify the contractor of any delay arising from an instruction, at the time the instruction is given. If no notice is given by the project manager, the contractor is required, by clause 61.3, to notify the project manager of an event 'which has happened or which he expects to happen as a compensation event'.

Under clause 61.3, the contractor has eight weeks from becoming aware of the event to give notice of a compensation event. If the contractor fails to give notice within eight weeks, the entitlement to an extension of time (or change to the 'Completion Date') is waived (unless the project manager should have notified under clause 61.1, but did not do so).

After receipt of a compensation event notice, the project manager has just one week, under clause 61.4, to notify the contractor of their decision as to whether the event is a compensation event or not (although this short time period can be extended with the agreement of the contractor). Failure by the project manager to comply with this provision entitles the contractor to confirm the failure, at which point the project manager has a further two weeks to reply. If no reply is made within this extended time period, the notified event is deemed to be a compensation event.

2.3.2.4 Assessment

The NEC3 form adopts an entirely different approach to most other forms of construction contract to the assessment of delays and revisions to the completion date. The NEC3 procedure aims to have delays fully and finally assessed at or around the time the delays occur, with this assessment not subject to review after completion or at any other time (unless the assessment was expressly stated to be based on assumptions). Clause 65.2 expressly provides that an assessment of a delay will not be revised even if a forecast upon which it is based is shown by later recorded information to have been wrong.

This prospective assessment of what impact a delay event will have on the completion date must be based on the current programme for the works. In order to operate this procedure, the programme must be thorough and up-to-date. To meet these objectives, the contract prescribes the requirements for the format of the programme and how often it must be updated.

Clause 31.2 requires that each programme must show the following:

- the start date, access dates, key dates and completion date
- the planned completion
- the order and timing of the operations
- the order and timing of the work to be carried out by the employer and others
- the dates when the contractor plans to meet each 'condition' stated for the key dates and to complete other work needed to allow the employer and others to do their work; and
- the dates when the contractor needs:
  - access to a part of the site, if later than its 'access date'
  - acceptances
  - plant and materials and other things; and
  - information from 'others'.

The programme must also show 'float', 'time risk allowances' and health and safety requirements and procedures set out in the contract. In conjunction with the programme, the contractor is required to provide a method statement for each operation.

Producing this level of information at the outset and then keeping it up-to-date may be considered to be a tall order but, if extensions of time are to be determined once and for all, at or around the time they happen, then a high level of accurate information will need to be immediately to hand.

The contractor's latest programme must be approved before it can become the document upon which extensions of time are assessed. By virtue of clause 31.3, the employer's project manager must agree each programme submitted by the contractor within two weeks or, if they cannot agree a programme, must inform the contractor of the reasons why.

Clause 31.3 prescribes the reasons why a programme may not be accepted. These are as follows:

- the programme is not practicable
- the programme does not provide all the necessary information
- the programme is not realistic; and/or
- the programme does not comply with the 'Works Information' (as defined in Core Clause 11.2).

It is probably rare for a project manager confidently to assert that a contractor's programme is impractical or unrealistic, unless there has been a fundamental error in the sequencing of activities. The length of time allowed on a contractor's programme for individual activities may look optimistic or pessimistic to a project manager, but it is solely the contractor who will decide what level of resources to use on each part of the works, and on the degree of overlap that can be achieved between activities. The contractor therefore ought to be best placed to decide the duration of each programme activity.

Once agreed, the programme must be kept up-to-date. Clause 32.2 requires the contractor to provide revised programmes throughout the period of the works.

The latest 'accepted programme' will be used as the baseline for assessing delay events and their impact upon the completion date. As stated in subsection 2.3.2.1, the NEC3 contract deals with delays to completion as 'compensation events', with clause 62 setting out the procedure for the provision of 'compensation event' quotations.

If a 'compensation event' is expected to have an impact on the progress of works, the quotation must include a revised programme (clause 62.2). The procedure and timetable for submitting and agreeing quotations is set out in clauses 62.3 to 62.6. In the guidance notes to the NEC3, it is acknowledged that producing a new programme for every minor change may be 'counter-productive': if several minor events occur within a short period of time, some project managers may allow the effects of such changes to be shown on one revised programme that incorporates all these minor events.

Clause 64 deals with circumstances in which:

- the contractor has not submitted a quotation for a 'compensation event'
- the quotation is 'incorrect'
- the contractor has not submitted a revised programme; or
- there is no agreed programme.

In these circumstances, the project manager must make an assessment of the compensation event, including any extension of time. This is unlikely to be an easy task, particularly if the project manager does not have an up-to-date programme from the contractor. It is also unlikely that contractors' and project managers' views about delays will always match.

If the project manager fails to make an assessment then, by virtue of clause 64.4, the contractor's quotation is deemed accepted after a set period of time.

By virtue of clause 65.1, a compensation event is implemented when the quotation is accepted (or treated as accepted) or when the project manager notifies the contractor of their own assessment.

Therefore, under NEC3 a prospective assessment of delay is made and, once made, it is not subject to review, even if it proves to be wrong.

2.3.3 ICE Conditions of Contract, 7th edition

Publication of the ICE Conditions of Contract, 7th edition, ended on 1 August 2011 and ownership of the contracts has since been transferred to the Association for Consultancy and Engineering (ACE) and the Civil Engineering Contractors' Association (CECA). The ACE and CECA have rebranded the form as the Infrastructure Conditions of Contract (ICC). Given the existence of the rebranded form, and given that other forms that are still in use have similar terms to those in the ICE Conditions, a review of the delay provisions in the ICE Contract is provided here.

The majority of the provisions relating to time issues in the ICE Conditions of Contract, 7th edition are found in clauses 41 to 48. There are also a number of other important subclauses dealing with delay and extra cost.

2.3.3.1 Delay events

As with the JCT and NEC3 standard forms, the ICE Conditions of Contract provide a list of events that may give rise to an extension of time, set out in clause 44(1). The list includes

- variations
- increases in the quantity of works
- exceptionally adverse weather; and
- two general catch-alls of:
  - any delay, impediment, prevention or default by the employer; and
  - any 'other special circumstances of any kind whatsoever' that may occur

The list of Relevant Events in this contract also includes:

- a failure by the engineer to issue the necessary drawings and specifications (clause 7(4))
- the discovery of unforeseen 'physical conditions' or 'artificial obstructions' (clause 12(6))
- compliance with instructions (clause 13(3))
- late approval of construction methods or unforeseen limitations imposed by design criteria (clause 14(8)); and
- the provision of site facilities for others (clause 31(2)).

2.3.3.2 Delay notices

If the contractor considers that the works will be delayed by one or more of the delay events listed, it must, by virtue of clause 44(1), provide full and detailed particulars to justify the period of extension claimed. This information must be provided within 28 days of the cause of the delay arising, or as soon thereafter as is reasonable.

2.3.3.3 Assessments

Clauses 44(2) and 44(3) of the ICE form deal with the assessment and granting of an extension by the engineer.

Clause 44(2) provides that the engineer must make an assessment of any delay that has been suffered and notify the contractor of that assessment. An assessment must be made upon receipt of particulars from the contractor (clause 44(2)(a)) or may be made in the absence of any claim (clause 44(2)(b)).

Clause 44(3) provides that the engineer must make an interim extension of time award as soon as it is considered that the delay fairly entitles the contractor to more time to complete.

Clauses 44(4) and 44(5) impose further duties on the engineer at and shortly after completion of the works to make a final determination of the extension of time due.

Clause 44(4) provides that the engineer must, within 14 days of the completion date, decide whether the contractor is entitled to an extension of time or further extension, regardless of whether an application for an extension has been made by the contractor.

Clause 44(5) provides that the engineer must, within 28 days of the issue of the 'Certificate of Substantial Completion' for the works, review and finally determine the extension of time. Certification of 'Substantial Completion' is covered by clause 48 of the contract. As with the review under the JCT standard form, the engineer under the ICE form cannot decrease the period of any extension of time previously awarded.

2.3.4 FIDIC Contracts 1999

FIDIC produces a suite of standard forms of contracts (known as the Red, Yellow, Silver and Gold Books). In this section, reference is made to the 1999 first edition of the Red, Yellow and Silver Books.

2.3.4.1 Delay events

Clause 8.4 of the FIDIC contracts provides that a contractor shall be entitled to an extension of time if the contractor is or will be delayed by:

- variations
- exceptionally adverse climatic conditions
- unforeseeable shortages in the availability of personnel or goods (as defined) caused by epidemic or governmental actions
- any delay, impediment or prevention caused by or attributable to the employer or to their personnel; and
- events that entitle the contractor to an extension of time under any of the other clauses of the contract.

The other clauses are spread throughout the contract and include, for example, delays due to late access to the site (clause 2.1).

It is clear from the wording of clause 8.4 that an extension of time will only be awarded if the delaying event causes completion to be delayed, rather than simply causing delay to the contractor's progress.

2.3.4.2 Delay notices

A contractor's entitlement to an extension of time under clause 8.4 (and the other delay event clauses) is subject to compliance with the notice procedure set out in clause 20.1. (Clause 20.1 applies where the contractor 'considers himself to be entitled to any extension of the Time for Completion and/or any additional payment, under any Clause of these Conditions or otherwise in connection with the Contract …').

The procedure at clause 20.1 requires the contractor to:

- Notify the contract administrator and describe the event or circumstance giving rise to the claim. This notice must be given 'as soon as practicable, and not later than 28 days after the Contractor became aware, or should have become aware, of the event or circumstance.'
- Provide to the contract administrator a 'fully detailed claim which includes full supporting particulars of the basis of the claim', within 42 days of becoming aware of the claim, or within 42 days of when the contractor should have become aware, or within such other period as may be agreed by the parties.
- Keep such contemporary records as may be necessary to substantiate any claim. These records may be monitored and inspected by the contract administrator.
- Submit other notices, if required by the contract, as well as supporting particulars for the claim. If the event or circumstance giving rise to the claim has a continuing effect, then the contract includes additional reporting requirements, including making interim claims at monthly intervals.

On receipt of such notice, the contract administrator is required to:

- Respond to the contractor within 42 days of receiving a claim, or any further particulars supporting a previous claim. The response must either approve or disapprove the claim and must provide detailed comments.
- Proceed in accordance with clause 3.5 to agree or determine any extension of time and/or any additional payment to which the contractor is entitled.

The contract makes it clear that the requirements of clause 20.1 are in addition to those of any other clauses that may apply to a claim. The final paragraph of clause 20.1 states that if the contractor fails to comply with the procedural requirements under the contract, in relation to a claim, any extension of time (and/or additional payment) awarded shall take account of the extent to which the failure has prevented or prejudiced the proper investigation of the claim (unless the claim has already been excluded by virtue of the time bar set out in the second paragraph of clause 20.1).

FIDIC seeks to make the 28-day notice requirement in clause 20.1 a condition precedent to an award of an extension of time and/or additional payment. Clause 20.1 provides that if the contractor fails to give notice of a claim within the 28-day period, the contractor shall not be entitled to an extension of time (or any additional payment) and the employer shall have no

liability in respect of such claims. (In contrast, the obligation on the contractor to provide a detailed claim within the 42-day period is not expressed as a condition precedent.)

Given the significance of the 28-day notice requirement, it is vital to know when the 28-day period starts, and accordingly, when it expires. It is clear that it does not run from the occurrence of the event or circumstance giving rise to the claim, but from when the contractor 'became aware, or should have become aware, of the event or circumstance' giving rise to the claim. However, what is less clear is whether the 28- day period only starts running at the point of the contractor's awareness (or deemed awareness) or rather, when the contractor becomes aware that the event or circumstance is to have time and/or cost consequences such that it is entitled to an extension of time (or additional payment). The question of whether the contractor had, or should have had, the requisite knowledge is an evidential issue that would have to be determined on the particular facts.

2.3.4.3 Assessments

Clause 8.4 of the contract entitles the contractor to an extension of time 'if and to the extent that completion … is or will be delayed …'

The method of assessment will depend on the specific facts, namely, whether the delaying effect has occurred (or whether it is likely to occur in the future). The parties will be bound by the contract administrator's assessment (subject to any challenge raised by the contractor at the time), unless the contractor makes a further extension of time claim or the delaying event has a continuing effect. If the contractor makes further claims for an extension of time, then the contract administrator may take into account whether the previous prospective assessments reflected actual events, but may only increase, and not decrease, the total extension of time awarded.

3 Practical application (Level 2 – Doing)

3.1 Submission of delay notices

The standard forms of contract referred to above, and most other forms of construction contract, require the contractor to formally notify the employer in writing of delays to the works, either in advance of the delay event or as soon as possible thereafter. In general, the contractor is required to say whether it thinks the delay is likely to impact upon the contract completion date and, if so, by how much. In most cases, the written notice does not have to be in a specific format and, usually, it will be nothing more than a letter or e-mail notifying the employer of the delay and providing any other information required under the provisions of the contract.

Sending an employer a formal letter about a delay can seem an odd thing to do if those delays have been discussed in detail at formal site meetings, informal meetings and over the telephone. In these circumstances, a contractor may well feel that the employer is fully aware that the works are in delay and the reasons for and likely duration of the delay. However, if the contract requires formal written notification to be provided, then a contractor should give that notice, even if this merely confirms what has been discussed. Arguments about a failure to provide proper notice of delay often crop up if a dispute develops; sometimes, an employer may seek to avoid a claim due to a lack of contractual notices.

Whether or not a 'no notice defence' to an extension of time claim will succeed is likely to turn on the precise wording of the contract and the state of the law at the time. However, it is clearly better for the contractor to remove the risk by issuing a notice as required by the terms of the contract, regardless of whether the notice merely repeats points already well-known to all those involved in the project.

3.2 Measurement of delay

The measurement of delay to a project is the difference between the date of completion of the works and the current contract completion date. If the works have been completed, then this retrospective exercise will be simple. However, measuring the delay period is only part of the task. A contractor will only be entitled to an extension of time for the period of delay for which the employer is responsible under the contract. Therefore, once the delay period has been established, it is necessary to work out whether the contractor is entitled to all, some or none of the additional time taken to complete the works.

Furthermore, in many cases, the actual period of delay will not be known when an extension of time claim is being made and assessed, because extensions of time are often dealt with

prospectively (that is, before the actual completion date is known). The delay period in these circumstances must be measured as the difference between the projected completion date and the current contract completion date.

A review and analysis of the programme for the works is usually carried out to resolve questions of culpability for delay and/or to estimate the likely delay period. Sometimes it can be difficult for parties to agree which programme should be used to carry out the review, as programmes often change and/or are updated during a project. It is important to agree a programme as the benchmark for assessing an extension of time, otherwise the chances of agreeing the cause and extent (or likely cause and extent) of delays to completion will be greatly reduced.

3.3 Methods of delay analysis

3.3.1 Introduction

There are a number of methods of analysing and assessing delays. Some methods are simple and relatively superficial; others are more detailed and complex.

One of the simpler methods is an overview of the facts. Another relatively simple method is to compare actual progress achieved with the planned progress shown on the programme for the works.

More detailed, forensic, exercises can be undertaken by adopting critical path analyses (sometimes abbreviated to CPA).

A further option would be to use one or more of the basic methods to review a narrow time period. This approach may produce a more focused and reliable analysis of delay events.

3.3.2 Overview of the facts

The simplest way of assessing delay, either prospectively or retrospectively, is by undertaking a review of the facts. The facts will be evidenced by letters, emails, meeting minutes, progress records, photographs, instructions, drawings and other contemporaneous documents, and possibly by personal first-hand knowledge of the project.

This approach is likely to be suitable for dealing with relatively straightforward claims, where the cause and effect are reasonably apparent. For example, if the commencement date for a project is deferred, or if the whole of the works are suspended, it is highly likely that there will be a corresponding delay to the completion date. Similarly, if a significant variation is instructed as the works are being completed, then it is likely that any subsequent delay will be the result of the variation instruction.

In these types of case, the cause and extent of delay will generally be apparent and uncontroversial and the extension of time will not require any detailed analysis. A claim may comprise little more than a brief narrative statement, setting out dates, events and consequences.

An overview of the facts may also be used to assess less straightforward claims, particularly where the difference between the claim and assessment is not great.

3.3.3 Comparing actual and planned progress

This method of analysis is often referred to by programmers as the 'as-planned versus as-built' method. As the name suggests, it is the technique of comparing the planned timings of the various programme activities with the actual or 'as-built' timings.

It is a simple method to use and understand and does not require any specialist programming knowledge or computer software. Quite simply, the duration of the work activities, as actually carried out on site, are plotted on the planned programme, thereby illustrating discrepancies.

With this form of analysis, the work activities that commence and/or finish later than planned are likely to be the focus of attention. The reasons for any late commencement or completion of work activities will be reviewed, to ascertain why actual progress was not as planned. If, on review, it appears probable that the delay was due to an employer event, such as an instruction to vary the work, an extension of time will usually be appropriate, providing that the delay was considered likely to (or, on balance, did) have an impact upon the completion date.

Like the first method referred to in subsection 3.3.2, this method relies upon a review of contemporaneous documents, and may make use of first-hand knowledge of the project. In this method, however, attention is particularly focused on discrepancies between planned and actual progress.

A claim based on this method would include the programme comparing the planned and actual progress and a narrative explanation of the discrepancies. The explanations may be supported by references to contemporaneous documents.

3.3.4 Critical path analyses

3.3.4.1 Introduction

The primary purpose of a critical path analysis is to show which activities on a programme of works are critical to completion and which are non-critical. A critical path analysis can be produced manually but, due to the number of calculations required, it is in practice only feasible using specialist software uploaded onto a computer.

The calculations made by the computer to establish the critical path are based on 'logic links' between activities. Logic links, which are input by the programmer, act as ties or constraints between the various programme activities.

For example, a link may well be inserted between the end of the load-bearing superstructure brickwork activity and the commencement of the roof construction. If the superstructure brickwork is delayed, and the programme altered to show this delay, the link would cause the

commencement date of roof construction works automatically to be pushed back when the programme is rescheduled by the software.

If the logic link between the completion of superstructure brickwork and commencement of roofing was not made, the programme would not reschedule logically; the revised programme might thus end up showing the roof commencing before the external walls had reached full height.

Once programme activities and the necessary logic links for all activities have been input into the computer, the software will be able, at the press of a button, to calculate the critical path. A delay to an activity that is on the critical path will have an impact upon completion; a delay to an activity that is not on the critical path will (at least initially) have no impact upon completion.

An example of a non-critical activity might be, for example, fencing to rear gardens on a housing estate, which was planned to be carried out in four weeks, commencing at week 30 of a 50-week contract. If fencing is the last activity of external work, it will only become critical to completion if it is commenced after week 46. Any delay to commencement from week 30 to week 46 will not prevent the entire works being completed by week 50.

The time period during which an activity can be deferred, without having any impact upon completion of the project, is usually referred to by programmers as 'float'. In the above example, the fencing activity has a period of 16 weeks float (from week 30 to week 46). Once the float is used up, the activity moves onto the programme's critical path.

In contrast, a delay to a critical activity will have a direct knock-on effect on completion of the project. Therefore, critical activities must (at least in theory) start and finish at the planned start and finish times in order to prevent delay to overall completion.

Critical path analyses can be used to review the impact of delay events on either the planned programme or the as-built programme.

3.3.4.2 Review of the planned programme

This method of analysis is often referred to by programmers as the 'planned impacted' method. The idea is that delay events are added to the computer-generated planned programme to analyse what impact, if any, those events will have upon the completion date.

The method works by adding activities, or amended durations of existing activities, to reflect the impact of delay events. For example, if additional work is instructed, the time required to do this work can be input and the programme rescheduled to see what effect, if any, the additional work has upon the planned programme completion date. Any delay to overall completion will represent the critical delay associated with the instruction.

If, for instance, the time taken to carry out instructed additional works is added to the planned programme, and the completion date moves, on rescheduling, from 14 June to 28 June, that would indicate that the event results in a delay to completion of two weeks. However, it may be that adding additional work will produce no change to the programme

completion date. This would indicate that the additional work does not impact on the critical path and that no extension of time is required to complete the project.

One of the attractions of this method is that once the new data has been input and the programme rescheduled, the computer will not only provide an explanation of the cause of the delay to completion, but will also provide a precise period of delay.

This method can be used before, during or after delay events have occurred, but it is unlikely to be used retrospectively. Once delay events have occurred, it is likely that 'as-built' information will be used to assess and measure the impact of delay events.

A claim using a 'planned impacted' method may well include an electronic version of the programme, showing the logic links and the changes made. The claim should explain both the methodology adopted and the results of the exercise. It should also include a narrative explanation of the programmes and the delays.

3.3.4.3 Review of the 'as-built' programme

This method of analysis is, in some respects, the opposite of the 'planned impacted' method referred to above. Instead of adding delay events to the planned programme, the delay events are removed from the 'as-built' programme.

Providing the as-built programme has been prepared using computer software, and the activities have been 'logic-linked', taking out delay events will cause the programme to shorten or 'collapse' when rescheduled. The difference between the original completion date and the rescheduled date represents the delay period that would have been avoided, but for the events removed from the programme. This method of analysis is often referred to by programmers as the 'collapsed as-built' or the 'as-built but for' method.

If, as is likely, there are a number of delaying events, each event should be removed from the programme sequentially, usually starting with the last event, and the programme rescheduled each time to see whether the completion date changes. If the completion date is shown as being earlier, after rescheduling, this would indicate that the delay event was critical and causative of the delay to the completion date.

For example, if a delay event is removed from the asbuilt programme and the completion date moves from 28 June to 14 June that would indicate that the event caused a delay to completion of two weeks.

As each successive event is removed, the programme collapses backwards to show when the works would have finished, had it not been for the delay events. As with the 'planned impacted' method, this method produces an explanation of the cause of the delay to completion and gives a precise delay period attributable to that cause. However, it can only be used retrospectively, as it is based on the progress that was actually achieved.

A claim using a 'collapsed as-built' method will usually include an electronic version of the as-built programme, showing the logic links and the changes made, and details of the data used to create the programme. The claim should explain the methodology and should

include a narrative explanation of why, and by how much, the programme collapsed when rescheduled.

3.3.5 Focused methods of analysis

The basic methods of programming analysis referred to above usually consider the project as a whole. Such analyses may lack focus. Programmers have therefore developed ways of considering delays in more detail over shorter time periods.

One such method is usually referred to by programmers as 'time impact analysis'. With this method, only the period of time in which the delay event is likely to have an impact is reviewed. If the delay event is an instruction to carry out additional work, the analysis may focus on the period from the date of the instruction to the date the additional work is likely to be completed.

As with the 'planned impacted' technique described in subsection 3.3.4.2, this method involves adding (or 'impacting') delays onto the programme. However, instead of using the original planned programme as a starting point, this method uses an updated programme, showing the progress actually achieved at the start of the review period. In the example given above, this would be at the time the instruction was given.

Time impact analysis is essentially a prospective technique, in that it seeks to predict the likely future delay based on progress achieved prior to the delay event. This technique is prescribed by the NEC3 form of contract for the analysis of delays due to 'compensation events'.

An alternative, but similarly focused approach, would be to restrict the analysis of delays to particular periods of time. Programmers usually refer to this method as a 'window' or 'time slice' analysis.

A 'window' or 'time slice' is a particular period of time; it might, for example, run from one monthly progress report to the next. As with time impact analysis, the planned programme is updated to reflect actual progress achieved up to the commencement of the period; any delay in the period is then analysed.

'Windows' analyses require as-built information to review the delays. This method is thus used retrospectively.

The adoption of a method of analysis that focuses on a relatively short period of time should produce a more sophisticated review and one that is more closely related to the realities of what was actually happening on site. It should also remove or reduce the complexities of trying to review the project as a whole.

As with other claims, a claim using one of these more focused methodologies should include narrative explanations, along with electronic versions of the programmes.

3.4 Delay assessments using BIM

Building information modelling (BIM) seeks to provide detailed information about a building, not just in terms of its three physical dimensions, but also with regard to time and cost issues. Time is usually referred to as the fourth dimension.

By linking a 3D model of a building to the programming software, it is possible to create a model comparing planned and actual progress of the works. Such a model will not necessarily illustrate the cause of a delaying event, but may prove to be invaluable in helping to understand and illustrate, in detail, the consequences of a delay event, or for the comparison of planned and actual progress. In the future, BIM may become an important tool in the analysis of delays on construction projects.

4 Practical considerations (Level 3 – Doing/Advising)

4.1 Which method of delay analysis should be adopted?

Subsection 3.3 describes a number of different methods of delay analysis. Which of these should be adopted when preparing or assessing a delay claim? The answer will depend upon all or some of the following:

- terms of the contract
- type of works being undertaken
- nature of the delay
- information available; and/or
- timing of the analysis.

The terms of most contracts allow any delay methodology to be used, providing it produces a fair and reasonable assessment of any additional time to be allowed to the contractor to complete the works. However, the contract terms should be checked as soon as a delay occurs, as they may prescribe procedures to be followed. As stated in subsection 2.3.2, the NEC3 form of contract is highly prescriptive; the assessment and measurement of delays under this form must be carried out by 'impacting' the delay events onto the latest version of the agreed planned programme.

The type of work undertaken may govern the methodology adopted, as some methods of delay analysis are more suited to some types of construction than others. For example, the use of critical path analysis generally works well when analysing delays during the construction of a structure on a new-build project, where links between programme activities are likely to reflect the reality of the works being undertaken. Delays to the construction of structural columns and beams on one floor, for instance, are likely to have a direct and corresponding impact on the construction of the rest of the structure. The links on a computer-generated programme should reflect this.

Critical path analysis is, however, likely to work less well on a refurbishment of a large building, where delays to work in one part of an existing building may well have little or no direct impact on works in the rest of the building, and where activity links on the programme may not reflect the reality and flexibility of the actual programming of works on site.

The choice of the most suitable method of analysis will also depend, in part, on the nature of the delay event. If the delay and its consequences are relatively straightforward, then a simple review may well suffice. If the situation is more complicated, a critical path analysis may be the best choice.

Regardless of other factors, the information available may constrain the methodology that can be used. For example, if the as-built information is incomplete, contradictory or intermittent, then it will not be possible to use delay methodologies that are based on the use of as-built data.

The timing of the analysis will also influence the method that can be used. Most contracts require extensions of time to be awarded during the works. In these circumstances, the methodology will have to be one that allows for predicting the likely completion date, which would rule out a methodology relying solely on as-built data. In contrast, where the extension of time is being reviewed retrospectively, which is usually the case in adjudication, arbitration and litigation, the methodology is likely to rely on as-built data.

There is therefore no single method of delay analysis that is best to use in all circumstances. Instead, the method chosen to prepare or assess a delay claim will depend on a variety of project-specific factors. Ultimately, if a dispute is referred to adjudication, arbitration or litigation, it will generally be decided on the facts; any programming analysis carried out must thus sit logically with the factual background.

Whichever method is used, it is important to recognise its inherent strengths and weaknesses. If the cause and duration of the delay to completion cannot be agreed, it is likely that the parties will expend considerable time and effort criticising the method of analysis used by the other side. If an agreement is to be reached, however, it must be accepted that all methods have some fundamental weaknesses. This is discussed further in subsection 4.2.

4.2 Strengths and weaknesses of delay analysis methods

The methods of analysis set out in subsection 3.3 above each have their strengths and weaknesses.

4.2.1 Overview of the facts

An overview of the facts is a simple approach and is particularly suitable for dealing with relatively straightforward claims. It is likely to be one of the quickest and least costly methods of making and/or assessing a delay claim. However, it is also likely to be the least analytical approach, with the final conclusion dependent on a broad judgment as to whether the delay events impacted (or were likely to impact) on the completion date.

When a judgment of the facts (and their impact) is made, the parties will frequently reach different conclusions: each viewing the situation in a manner most favourable to their own side. This may lead to disagreements and disputes, which the lack of analysis will make difficult to resolve, other than by a commercial compromise or by referring the matter to an adjudicator, arbitrator or judge. If a formal dispute does ensue, an analysis based on an overview of the facts may not be considered to be sufficiently robust.

To reduce the risk of disagreements, it is important that a review of the facts should be carried out logically and methodically. The assessment of delay should not be speculative or impressionistic.

4.2.2 Comparing actual and planned progress

The attraction of an analysis comparing the as-planned and as-built programmes is that it is simple to understand and does not require any specialist programming knowledge or specialist computer software to produce. A review of significant discrepancies between planned and actual programme durations may well highlight delay areas, and the causes of delays may already be known to the parties and/or easily explained. This is a more analytical method than the overview procedure and allows the parties to focus on problem areas.

However, in isolation, an 'as-planned versus as-built' programme analysis may indicate nothing more than that the original planned start dates and durations were too optimistic (or pessimistic) and/or that the contractor used more (or less) resources than planned, causing the works to be carried out at a different speed to that envisaged. By itself, this method will not provide an analysis of the cause and effect of delay events.

It may, however, be possible to show the cause and effect of delay events by combining the programme analysis with a review and summary of the key facts.

4.2.3 Critical path analyses

In a critical path analysis, a programme is generated by computer software showing the critical path activities. When updated, this programme can react dynamically to show the impact of delay events upon the completion date of the works. Delay events can be 'impacted' onto a planned programme, or removed from an as-built programme, to illustrate the cause and effect of the events.

This analytical and precise methodology can be impressive and captivating but, in order for it to work properly, someone must link the programme activities, and these links may, at times, be more subjective than objective. As even reasonably minor changes to the logic links can have a relatively significant impact on the results of the exercise, these links can become a source of controversy and may lead to concern that the analysis has been manipulated to produce a desired result.

The 'planned impacted' technique may also be criticised as being theoretical, particularly where a contractor departs from the planned sequence and/or resourcing levels and carries out the works in a significantly different way to that shown on the planned programme.

The 'as-built collapsed' method (see subsection 3.3.4.3) avoids allegations of being based on theory, as it relies on the facts of what actually took place, but it can only work if the as-built records are sufficiently detailed and accurate. Even with good records, this method can still run into difficulties if there are questions as to when precisely an activity actually commenced and was completed. There may also be arguments about the links created

between as-built activities and, as stated above, minor changes in links can result in major changes in the results of the exercise.

While a critical path analysis may look precise and detailed, it may therefore be based in part on subjective logic links, on a programme that does not reflect what actually happened or on the subjective interpretation of as-built data.

Critical path analyses are also likely to be expensive to produce, as they require specialist programmers and a significant investment of time.

4.2.4 Focused methods of analysis

'Time impact analysis' is one of the more focused types of analysis described in subsection 3.4. Because this method uses an updated programme to show progress actually achieved at the start of the review period, it avoids one of the potential key weaknesses of the 'planned impacted method', in that it is not based on a theoretical programme, at least up to the point of the commencement of the review. It also has the advantage of being a technique that can be used during the currency of the works.

However, it remains at least partially theoretical, in that the assessment of delay caused to the completion date is based on the future planned programme and not on what actually happened on site. This method could therefore produce an extension of time award at odds with the reality of what ultimately transpired.

The alternative of analysing delays in 'windows' of time also has the advantage of a starting point based on actual progress achieved, with the added benefit of being a review of what actually happened. However, this retrospective approach may not suit the terms of a contract requiring extensions of time to be awarded in advance.

As with the critical path techniques, these focused methods of delay analysis are likely to require specialist programmers and a significant input of time, making them expensive to produce.

4.3 Concurrent liability for delays

It would be nice to think that, if the contract procedures had been properly applied and an appropriate method of analysis agreed and adopted, the problems of delay analysis would be fully dealt with. However, a common residual problem relates to concurrent delays and how to deal with them.

It is not unusual to find a number of separate identifiable delay events occurring at any one time on a busy construction project. Common sense will tell you that some of these events are trivial and cannot sensibly be attributed to the delay (or likely delay) to the completion of the entire project. However, that may still leave some delay events that are the responsibility of the employer (typically due to design choices, variations and works by statutory undertakers) and some that are the responsibility of the contractor (typically, supply of

materials, labour productivity and subcontractors' works). When such concurrent causes of delay exist, is the contractor entitled to an extension of time?

This question was considered in the case of *Walter Lilly & Company Ltd v Mackay & Anor* [2012] EWHC 1773 (TCC). In the judgment, consideration was given to previous cases where the point had also been addressed, namely *Henry Boot Construction (UK) Ltd v Malmaison Hotel (Manchester) Ltd* [1999] 70 Con LR 32, *De Beers v Atos Origin IT Services UK Ltd* [2011] BLR 274 and *Adyard Abu Dhabi v SD Marine Services* [2011] EWHC 848 Comm. The judge concluded:

> 'where there is an extension of time clause such as that agreed upon in this case and where delay is caused by two or more effective causes, one of which entitles the Contractor to an extension of time as being a Relevant Event, the Contractor is entitled to a full extension of time … there is a straight contractual interpretation of Clause 25 which points very strongly in favour of the view that, provided that the Relevant Events can be shown to have delayed the Works, the Contractor is entitled to an extension of time for the whole period of delay caused by the Relevant Events in question … The fact that the Architect has to award a 'fair and reasonable' extension does not imply that there should be some apportionment in the case of concurrent delays'.

This would appear to provide a clear answer to the question. However, it will often remain difficult to decide whether delays are indeed 'concurrent'. For example, if delay events merely overlap, but otherwise start and end at different times, are they to be defined as concurrent? Is there any scope for considering which delay occurred first or which was the dominant cause of delay to completion? These and other questions may leave the issue of concurrency a difficult one to deal with, even in the light of the judgment in *Walter Lilly & Company Ltd v Mackay*.

5 Summary

When delays are likely to occur on a project, the first thing the parties should do is to check their contract. It will, almost always, set out procedural requirements in terms of notices, provision of information and time periods for making claims and/or assessments. These procedural requirements should be followed.

Consideration must then be given to the most appropriate means of assessing the delay. Assessments must identify the cause of delay, the period of delay and whether the delay event will have (or did have) an impact on the completion of the project as a whole.

Under most contracts, the method of assessment will not be prescribed and so a decision will have to be made as to what method should be used. The decision may not be easy as all methods are open to criticism. The quicker and simple methods may be criticised for being too superficial; the more sophisticated, computer-generated methods may be criticised for being impenetrable or manipulated to achieve the desired result; methods using planned programmes may be dismissed as theoretical; and methods using as-built data may be dismissed as being contrived. However, unless the cause and effect of a delay event is unusually straightforward, a choice of delay assessment must be made and, in any given set of circumstances, some methods will prove to be more suitable than others.

In the vast majority of cases, a delay assessment will have to include a written statement explaining the legal basis (usually the terms of the contract that provide for the completion date to be amended) and the facts (the events that caused the delay and the impact of those events on the completion date). If the assessment is based on an analysis of programmes, the purpose of, and conclusions to be derived from, those programmes should be clearly explained.

It should be made clear, when producing written statements, whether references to days and weeks are references to calendar days and weeks or working days and weeks: the two should not then be mixed up.

If there are concurrent causes of delay, then, generally speaking, the contractor will still be entitled to a full extension of time. However, there may be difficulties of defining, with precision, what amounts to a ‘concurrent’ delay.

Delay assessments can be very difficult but it should be borne in mind that the test as to whether a claim should be allowed is ‘on the balance of probabilities’: the claim does not have to be proved beyond all reasonable doubt. This is important to keep in mind because absolute precision will be difficult or, more likely, impossible to achieve when making or assessing a delay to a project. A degree of flexibility may have to be adopted if an agreement is to be reached.

Delivering confidence

We are RICS. As a member-led chartered professional body working in the public interest, we uphold the highest technical and ethical standards.

We inspire professionalism, advance knowledge and support our members across global markets to make an effective contribution for the benefit of society. We independently regulate our members in the management of land, real estate, construction and infrastructure. Our work with others supports their professional practice and pioneers a natural and built environment that is sustainable, resilient and inclusive for all.

General enquiries
contactrics@rics.org

Candidate support
candidatesupport@rics.org

RICS®

rics.org