RIDER 1

THE SOCIETY OF CONSTRUCTION LAW DELAY AND DISRUPTION PROTOCOL

July 2015

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PREAMBLE for Rider 1 to the SCL Delay and Disruption Protocol

1. The review of the Protocol (which has led to the publication of Rider 1) was prompted by discussion at a Society event in London in April 2013 attended by over 100 individuals to honour the tenth anniversary of the publication of the Protocol.

2. Following that event, a decision was taken by the Society Council to establish a committee to review limited aspects of the Protocol.

3. This was against the background of: (a) developments in the law and construction industry practices since the Protocol was first published in 2002; (b) feedback on the uptake of the Protocol since that time; (c) developments in technology since 2002; (d) the scale of large projects having increased, leading to a wider divergence between small scale and large scale projects; and (e) anecdotal evidence that the Protocol is being used for international projects as well as domestic UK projects. On this latter point, while it may be the case that participants in the international construction legal market find the Protocol a useful reference document, the review committee decided that the Protocol should continue to focus upon the UK construction legal market.

4. Eight issues were included in the terms of reference for this review and hence what will be ultimately the 2nd edition of the Protocol:

(a) Whether the expressed preference should remain for time impact analysis as a programming methodology where the effects of delay events are known;

(b) The menu and descriptions of delay methodologies for after the event analysis – including to incorporate additional commonly used methodologies;

(c) Whether the Protocol should identify case law (UK and international) that has referenced the Protocol;

(d) Record keeping;

(e) Global claims and concurrent delay;
(f) Approach to consideration of claims (prolongation / disruption – time and money) during currency of project;

(g) Model clauses; and

(h) Disruption.

5. This review has been bifurcated with issues (a) and (b) addressed in Rider 1. This will be followed by a 2nd edition of the Protocol (which will include the amendments in Rider 1) once the review on all issues is complete.

6. Accordingly, Rider 1 to the Protocol (and what will be the 2nd edition) is not the product of a wholesale review of the 1st edition and should not be seen as such.

7. Like the 1st edition, the objective of Rider 1 to the Protocol (and the 2nd edition) is the provision of useful guidance on some of the common issues that arise out of construction contracts and to provide a means by which the parties can resolve these matters and avoid unnecessary disputes. A focus of Rider 1 (and the 2nd edition) therefore is the provision of practical and principled guidance on proportionate measures that can be applied in relation to all projects, regardless of complexity or scale, to avoid disputes and, where disputes are unavoidable, to limit the costs of those disputes. On certain issues, the Protocol identifies various options, with the choice of the most appropriate being dependent on the nature, scale and level of complexity of a particular project and the circumstances in which the issue is being considered.

8. Overall, the Protocol aims to set out good practice (rather than best practice) so as to be more attainable by project participants. That is not intended to detract from the benefits to the project participants of applying best practice.

9. As always, however, the Protocol must be considered against (and give way to) the contract/s and governing laws which regulate the relationships between project participants. In this regard, like the 1st edition, Rider 1 to the Protocol (and the 2nd edition) is not intended to be a contract document. As a result, the guidance provided in the Protocol must give way to the terms of
the contract and, to the extent applicable, the relevant governing laws. In other words, to the extent the contract and governing laws contain anything inconsistent with the Protocol, the contract and governing laws must prevail.

10. The guidance in the Protocol is general in nature and has not been developed with reference to any specific standard form contracts in mind. To do otherwise would not have been practical given the multitude and divergence of standard form contracts. Hence, it is necessary to check the Protocol against the Contract for a particular project to identify any requisite departures from the Protocol in deference to the Contract.

11. As part of the review there was a strong argument put forward that contemporaneously submitting and assessing an EOT application and awarding an EOT on a prospective basis (specifically, through the use of time impact analysis) can sometimes lead to unrealistic results if it subsequently transpires that the EOT claimed is significantly more than the delay attributable to the Employer Risk Event. The drafters of the 1st edition faced the same dilemma and concluded that having clarity was of greater value for all parties than a ‘wait and see approach’.

12. The review committee too promotes the value of clarity to the project participants. In recognition of this point, in Rider 1 to the Protocol (and the 2nd edition), the contemporaneous submission and assessment of EOT claims is elevated to a core principle. This allows appropriate mitigation measures to be considered by the project participants so as to limit the impact of the delay event. It also provides the Employer and the Contractor with clarity around the completion date so that they can understand their risks and obligations and act accordingly. These objectives cannot be met if the Contractor does not submit timely notices, particulars and appropriate substantiation for its EOT claims, or if the CA does not assess those claims contemporaneously. These are key issues for minimising time related disputes.

13. When it comes to financial losses, however, the opposite approach is considered to be usually correct (i.e. compensation is usually awarded only from a retrospective perspective, recognising actual costs incurred). This may
vary in the context of a proposed variation where the Employer requests a Contractor’s proposal in advance of the variation instruction.

14. Another key difference introduced by Rider 1 to the Protocol (and the 2nd edition) is the removal of the preference for a particular delay analysis methodology where that analysis is carried out time distant from the delay event or its effect. This is because the Contract terms, the circumstances of the project, the claim or the dispute and the available project records (amongst other matters) are all crucial factors in determining the most appropriate methodology and these matters will vary between projects. This change in approach had general support at the Society event in London in April 2013 referred to in paragraph 1 above. Despite this change, irrespective of the methodology, fundamentally the conclusions of the delay analysis must be sound from a common sense perspective in light of the facts that actually transpired on the project. This is because a theoretical delay analysis which is divorced from the facts and common sense is unhelpful in ascertaining whether in fact the relevant delay event caused critical delay to the completion date and the amount of that delay.

15. Instead of providing a preference for a particular delay analysis methodology in this situation, Rider 1 to the Protocol (and the 2nd edition) identifies the factors that ought to be taken into account in selecting the most appropriate methodology and provides an explanation of a number of delay analysis methodologies in common use as at the date of Rider 1.

16. By way of clarification, Rider 1 introduces amendments to various sections of the Protocol. The amended sections are set out below. In particular, section 4 has been replaced in its entirety. All other sections that are not addressed in Rider 1 remain as set out in the 1st edition of the Protocol.

17. Rider 1 to the Protocol has been produced by the review committee which consists of a group of members of the Society of Construction Law. The views and opinions expressed and the aims identified in the Protocol are those adopted by the review committee. They are not necessarily the views
and opinions or aims either of any particular member of the review committee or of all the members of the Society as a whole.

18. The information, recommendations and/or advice contained in this Rider 1 to the Protocol (including its Guidance Sections) are intended for use as a general statement and guide only. Neither the Society nor any committee or member of the Society or any member of the group that drafted Rider 1 to the Protocol accept any liability for any loss or damage which may be suffered as a result of the use in any way of the information, recommendations and/or advice contained herein and any person using such information or drafting contracts, specifications or other documents based thereon must in all cases take appropriate professional advice on the matters referred to in this publication and are themselves solely responsible for ensuring that any wording taken from this document is consistent with and appropriate to the remainder of their material.

19. The work involved in drafting Rider 1 to the Protocol was carried out by the following individuals:

   **Drafting committee**

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20. Thanks also to Finola O’Farrell QC for her contribution.

*The Society of Construction Law welcomes feedback on the Protocol and the Guidance Notes: please contact the Society at feedback@eotprotocol.com.*
The Protocol is amended as follows:

**CORE PRINCIPLES RELATING TO DELAY AND COMPENSATION**

3. **Entitlement to extension of time**

The parties and the CA should comply with the contractual procedural requirements relating to notices, particulars, substantiation and assessment in relation to delay events. Applications for EOT should be made and dealt with as close in time as possible to the delay event that gives rise to the application (see Guidance Section 1.2.4). A ‘wait and see’ approach to assessing EOT is discouraged and, where the Contractor has complied with his contractual obligations regarding delay events and EOT applications, the Contractor should not be prejudiced in any dispute with the Employer as a result of the CA failing to assess EOT applications within a reasonable time after submission (see Guidance Section 1.2.8). The Contractor will potentially be entitled to an EOT only for those events or causes of delay in respect of which the Employer has assumed risk and responsibility (called in the Protocol Employer Risk Events). The parties should attempt so far as possible to deal with the impact of Employer Risk Events as the work proceeds, both in terms of EOT and compensation.

4. **Procedure for granting extension of time**

Subject to the Contract requirements, the EOT should be granted to the extent that the Employer Risk Event is reasonably predicted to prevent the works being completed by the then prevailing contract completion date (see Guidance Section 3.2.6). This should be based upon an appropriate delay analysis, the conclusions derived from which are sound from a common sense perspective. The goal of the EOT procedure is the ascertainment of the appropriate contractual entitlement to an EOT; the procedure is not to be based on whether or not the Contractor needs an EOT in order not to be liable for liquidated damages (see Guidance Section 1.2.9).

…

12. **Analysis time distant from the event**

The Protocol recommends that delay analysis considerably distant in time from the occurrence of the event or its impact should be avoided so far as is practicable and that EOT entitlement should be considered as early as possible by the Contractor and the CA. EOT entitlement should be assessed by the CA within a reasonable time after submission of an EOT application by the Contractor. However, where an EOT application is assessed after completion of the works, or significantly after the effect of an Employer Risk Event, then the prospective analysis of delay referred to in Guidance Section 3 may no longer be appropriate (see Guidance Section 4).

…
 Guidance Section 1

1. Guidelines on the Protocol’s position on Core Principles and on other matters relating to delay and compensation

... 

1.2.4 The parties and the CA should comply with the contractual procedural requirements relating to notices, particulars, substantiation and assessment in relation to delay events. Applications for EOT should be made and dealt with as close in time as possible to the delay event that gives rise to the application.

Guidance

1.2.5 As noted in Appendix A, ‘CA’ is the Contract Administrator, which includes the Architect, Engineer or Project Manager and the Employer itself where there is no independent person appointed under the contract to deal with matters such as extensions of time.

1.2.6 As explained in Guidance Section 1.2.2, entitlement to an EOT does not automatically lead to an entitlement to compensation for prolongation. Standard forms of contract often provide that some kinds of delay events which are at the risk of the Employer so far as time for completion is concerned carry no entitlement to compensation for prolongation; delay resulting from adverse weather conditions being the most common example. They are sometimes misleadingly called 'neutral events'; in fact, they are only neutral in the sense that one party bears the time risk and the other party bears the cost risk. The Protocol calls them 'non-compensable Employer Risk Events'.

1.2.7 Most if not all the standard forms of contract contain obligations on the part of the Contractor to give notice to the CA as soon as an Employer Risk Event occurs that the Contractor considers entitles it to an EOT. Some require notice of the occurrence of an Employer Risk Event irrespective of whether it is likely to affect the contract completion date (i.e. what the Protocol refers to as Employer Delay to Completion), and some require notice of all events that adversely affect progress irrespective of liability or consequence. In some standard forms these notices are expressed to be conditions precedent (i.e. pre-conditions) to entitlement. The Contractor should comply with the contractual procedural requirements relating to notices, particulars and substantiation in relation to delay events. However, whatever the contract says, the Contractor should give notice to the CA of any Employer Delays as soon as possible. The CA should also notify the Contractor as early as possible of any Employer Delays of which it is aware.

1.2.8 The parties should attempt so far as possible to deal with the impact of Employer Risk Events as the work proceeds, both in terms of EOT and compensation. Each EOT application should be assessed as soon as possible,
and in any event not later than one month after the application has been received by the CA. A ‘wait and see’ approach to assessing EOT is discouraged. CAs should bear in mind that it is permissible to deal with EOTs incrementally (see Guidance Section 1.2.14). The Protocol's recommended procedure for assessing EOTs using the programme is set out in Guidance Section 3. Where the Contractor has complied with the contractual procedural requirements for EOT entitlement, the Contractor should not be prejudiced by the fact that the CA has not then followed the Protocol’s recommendation to deal with an EOT application as soon as possible.
Guidance Section 3

3. Guidelines on dealing with extensions of time during the course of the project

Introduction

3.1 This part of the Protocol sets out a recommended procedure to be followed in order to deal efficiently and accurately with extension of time applications. It requires that the parties to the contract will have followed the recommended good practice on programmes and records set out in Guidance Section 2 above. It is not intended that these Guidance Notes should be incorporated into a contract.

3.2 Extension of time procedure

3.2.1 All the requirements of the conditions of contract relating to the application for and the granting of extensions of time should be followed strictly.

3.2.2 As well as the particulars that may be required under the form of contract, the Contractor should generally submit a sub-network (sometimes called a “fragnet”) to be inserted into the Updated Programme, as close as possible to the date of what the Contractor alleges to be the Employer Risk Event, showing the actual or anticipated effect of the Employer Risk Event and its linkage into the Updated Programme. Further guidance on the form of the sub-network is given in Guidance Section 3.2.9. It should also be accompanied by such documents and records as are necessary to demonstrate the entitlement in principle to an EOT. Simply stating that Employer Risk Events have occurred and claiming the whole of any delay apparent at the time of the events is not a proper demonstration of entitlement.

3.2.3 Before doing anything else, the CA should consider whether or not the claimed event or cause of delay is in fact one in respect of which the Employer has assumed risk and responsibility (i.e. that it is an Employer Risk Event). The Contractor will potentially be entitled to an EOT only for those events or causes listed in the contract as being at the Employer's risk as to time. These events vary between the different standard forms of contract, and care is needed when reading them. If the CA concludes that the event or cause of delay is not an Employer Risk Event, the CA should so notify the Contractor. Without prejudice to that, the CA may wish to comment on other aspects of the Contractor's submission. When granting or refusing an EOT, the CA should provide sufficient information to allow the Contractor to understand the reasons for the CA's decision.

3.2.4 In the absence of a submission that complies with this section, the CA (unless the contract otherwise provides) should make its own
determination of the EOT (if any) that is due, based on such information as is available to it. Given that it is difficult if not impossible to withdraw an EOT once granted, it is reasonably to be expected that, where the CA has not been presented with the information on which to base its decision, the CA will award only the minimum EOT that can be justified at the time.

3.2.5 If the Contractor does not agree with the CA's decision, it should so inform the CA immediately. Disagreements on EOT matters should not be left to be resolved at the end of the project. If no agreement can be reached quickly, steps should be taken by either party to have the dispute or difference resolved in accordance with the dispute resolution procedures applicable to the contract.

3.2.6 The Protocol recommends that the Updated Programme should be the primary tool used to guide the CA in determining the amount of the EOT. The EOT should be granted to the extent that the Employer Risk Event is predicted to prevent the works being completed by the then prevailing contract completion date.

**Guidance**

3.2.7 A guide to the amount of EOT is obtained by using the Updated Programme. The steps to be taken are as follows:

3.2.7.1 the Programme should be brought fully up to date (as to progress and the effect of all delays that have occurred up to that date, whether Employer Delays or Contractor Delays) to the point immediately before the occurrence of the Employer Risk Event;

3.2.7.2 the Programme should then be modified to reflect the Contractor's reasonable, realistic and achievable plans to recover any delays that have occurred, including any changes in the logic of the Programme proposed for that purpose (subject to CA review and acceptance as provided in Guidance Section 2.2.3);

3.2.7.3 the sub-network representing the Employer Risk Event should then be entered into the programme; and

3.2.7.4 the impact on the contract completion dates should be noted.

3.2.8 Prior to determining the effect of an Employer Risk Event on the programme, any patently unreasonable or unrealistic logic, constraints or durations should be corrected by agreement, failing which the CA's view should prevail unless and until overturned under the contract dispute resolution provisions.

3.2.9 The sub-network referred to above should be prepared by the Contractor in the same manner and using the same software as the
Accepted Programme. It should comprise the activities and durations resulting from the Employer Risk Event. For example, the sub-network for a variation would comprise the instruction for the variation, the activities required to carry out that variation and its linkage to the Updated Programme. For a breach of contract, the sub-network would represent the consequences of that breach. The Contractor should submit the sub-network to the CA for agreement. The CA should agree the sub-network and, once agreed, the sub-network should be inserted into the Contractor's Updated Programme. Any disagreement about the sub-network should be resolved quickly and (like all delay issues) not left till after completion of the project.

3.2.10 The assessment of the impact of delays (whether Contractor Delays or Employer Delays) should be at a level appropriate to the level of detail included in the Accepted Programme and taking into account the size and complexity of the works and the delays being analysed.

3.2.11 The methodology described in this section is known as ‘time impact analysis’. This methodology requires a proper baseline programme to have been prepared and contemporaneously updated. To limit disputes, it is good practice for that baseline programme to have been accepted (i.e. the Accepted Programme) and to have been contemporaneously updated (Updated Programmes) as recommended in Guidance Section 2 above.

3.2.12 As noted in Guidance Section 1.4.7, where Employer Risk Events and Contractor Risk Events occur sequentially but have concurrent effects, the time impact analysis method described in Guidance Section 1.2 should be applied to determine whether an EOT is due. In this situation any Contractor Delay should not reduce the amount of EOT due to the Contractor as a result of the Employer Delay. Analyses should be carried out for each event separately and strictly in the sequence in which they arose.

3.2.13 Although the programme should be the primary tool for guiding the CA in his determination of EOT, it should be used in conjunction with the contemporary evidence, to ensure that any resulting EOT is both reasonable and consistent with the factual circumstances. It will also be necessary for the parties to apply common sense and experience to the process to ensure that all relevant factors are taken into account, and that any anomalous results generated by the programme analysis are properly managed. Overarching these considerations, any resulting EOT must be consistent with the contractual requirements regarding entitlement.
Guidance Section 4

4. Guidelines on delay analyses time distant from the delay event

Introduction

4.1 This part of the Protocol addresses the consideration of EOT applications after completion of the works, or considerably after the occurrence of the delay event or its impact. In those circumstances, the prospective analysis of delay referred to in Guidance Section 3 may no longer be relevant or appropriate.

4.2 Irrespective of which method of delay analysis is deployed, there is an overriding objective of ensuring that the conclusions derived from that analysis are sound from a common sense perspective. This is particularly relevant where the delay analysis relies upon a baseline programme (original or updated, preferably the Accepted Programme and Updated Programmes) and where there is a significant risk that the remaining duration projections, logic links, calendars and constraints within the programme might produce anomalous results.

4.3 The choice of method of delay analysis to be deployed should be determined by reference to the following criteria:

- the relevant conditions of contract;
- the nature of the causative events;
- to ensure a proportionate approach, the value of the project or dispute;
- the time available;
- the nature, extent and quality of the records available;
- the nature, extent and quality of the programme information available;

and

- the forum in which the assessment is being made.

Different methods of delay analysis

4.4 There are six commonly used methods of delay analysis, and these are described more particularly below. By way of general explanation:

4.4.1 Certain methods start with the identification and description of an event (a cause) and thereafter seek to establish its impact (the effect) – these are cause & effect type analyses. Other methods start with identifying critical delay (an effect) and thereafter seek to establish what might have caused that delay – these are effect & cause type analyses.

4.4.2 Typically delay analysis requires the identification of the critical path(s) to works or milestone completion, because delays which
impact such completion must, by definition, reside on the critical path. Oftentimes the critical path is a sequence or chain of activities through the remaining works. However, on some projects the critical path that is driving or determining completion can proceed through a collection of related work activities to distinct sequences (such as when completion is being driven/determined by the rate of pipe welding across the works).

4.4.3 Critical path analysis is not limited to analysis conducted through the use of specialist programming software. While such software can provide a powerful analytical tool, the critical path to completion of the works or milestones may on occasion be more reliably established through a practical analysis of the relevant facts or by analysis of production and/or resource data.

4.4.4 Criticality is determined in one of three different ways. Purely prospective critical path assessments adopt the perspective evident at the outset of the project only and take no account of progress achieved. Contemporaneous critical path assessments adopt an evolving perspective over the course of the works and take account of the effect that both historical progress and changes in the strategy for the future prosecution of the works have on predicted criticality. Retrospective critical path assessments adopt the perspective evident at the end of the project (or window of time).

4.4.5 Delay impact is determined in one of two different ways. A prospective delay analysis identifies the likely impact of historical progress or delay events on the completion milestones. The conclusions of a prospective delay analysis may not match the as-built programme because the Contractor’s actual performance may well have been influenced by the effects of attempted acceleration, re-sequencing or redeployment of resources in order to try to avoid liability for liquidated damages or due to other Employer and Contractor Risk Events. A retrospective delay analysis identifies the actual impact of the delay events on the identified actual or as-built critical path.

4.5 The following table provides a summary of the methods described below.
4.6 Where the analysis requires a baseline programme, to limit disputes, it is good practice for that baseline programme to have been accepted (i.e. the Accepted Programme) and to have been contemporaneously updated (Updated Programmes) as recommended in Guidance Section 2 above.

4.7 The impacted as-planned analysis method involves introducing delay event sub-networks into a logic-linked baseline programme and its recalculation using CPM programming software in order to determine the prospective impact these events have on the predicted completion dates shown within the baseline programme. Before embarking upon the analysis, the analyst needs to confirm that the sequences and durations for the works shown in the programme are reasonable, realistic and achievable and properly logically linked within the software to deal with the risk that the baseline programme contains fundamental flaws which cannot be overcome. In general, this is thought to be the simplest and least expensive form of delay analysis, but has material limitations principally because it does not consider actual progress and changes to the original planned intent. The product of this method of analysis is a conclusion as to the likely effect of the modelled delay events on the baseline programme. In limited circumstances this analysis may be deemed sufficient for assessing EOT entitlement. Such circumstances include where the impacted as-planned method is dictated by the terms of the contract and/or where the delay event being considered occurs right at the outset of the works.

4.8 The time impact analysis method involves introducing delay event sub-networks into a logic-linked baseline programme (being the “host” programme) that is most contemporaneous with the delay event being considered (preferably an Updated Programme) and recalculation of this updated programme using CPM programming software in order to determine the prospective impact the delay event would have on the then Baseline programme. As-built data.

### Table of Method of Analysis

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predicted completion dates. The host programme for each analysis can be either a contemporaneous programme or a contemporaneously updated baseline programme (ie an Updated Programme) (the difference being the contemporaneous programme may have logic changes / activity / resource changes from the baseline programme). In either case, the analyst needs to verify that the host programme’s historical components reflect the actual progress of the works and its future sequences and durations for the works are reasonable, realistic and achievable and properly logically linked within the software. Mitigation and acceleration already incorporated into the update need to be considered as these can conceal or distort the projected impact of the delay event. The number of delay events being modelled has a significant impact on the complexity and cost of deploying this method. The product of this method of analysis is a conclusion as to the likely delay of the modelled delay event on the programme/critical path that is most reflective of the contemporaneous position when the delay event arose. This method usually does not capture the eventual actual delay caused by the delay event as subsequent project progress is not considered.

4.9 The time slice windows analysis method is the first of two windows analysis methods. This method requires the analyst to verify (or develop) a reliable series of updated baseline programmes or contemporaneous programmes reflecting an accurate status of the works at various snapshots (being the time slices) throughout the course of the works. Through this process, the progress of the works is divided into windows. The time slices are typically carried out at monthly intervals (leading to windows of month long durations). The series of time slice programmes reveal the contemporaneous or actual critical path in each window and the critical delay status at each time slice, thus allowing the analyst to conclude the extent of actual critical delay incurred within the window. Thereafter, the analyst investigates the project records to determine what events might have caused the identified critical delay in each window. For each time slice programme the analyst needs to verify that the historical components reflect the actual progress of the works and its future sequences and durations for the works are reasonable and achievable and properly logically linked within the software.

4.10 The as-planned versus as-built windows analysis method is the second of the windows analysis methods. It is usually applied when there is concern over the validity or reasonableness of the baseline and/or updated programmes and/or where there are few contemporaneous programme updates. In this method the analyst first determines the contemporaneous or actual critical path by a common-sense and practical analysis of the available facts. As this method does not substantially rely on programming software, it is important that the analyst sets out the rationale and reasoning by which criticality has been determined. The incidence and extent of critical delay is then determined by comparing key dates along the contemporaneous or actual critical path against corresponding planned dates in the baseline programme. Thereafter, the analyst investigates the project records to determine what delay events might have caused the identified critical delay.
4.11 The longest path analysis method involves the determination of the retrospective as-built critical path (which should not be confused with the contemporaneous or actual critical path identified in the windows methods above). In this method the analyst must first verify or develop a detailed as-built programme. Once completed, the analyst then traces the longest continuous path backwards from the actual completion date to determine the as-built critical path. The incidence and extent of critical delay is then determined by comparing key dates along the as-built critical path against corresponding planned dates in the baseline programme. Thereafter, the analyst investigates the project records to determine what events might have caused the identified critical delay. A limitation to this method is its more limited capacity to recognise and allow for switches in the critical path during the course of the works.

4.12 The collapsed as-built (or but-for) analysis method involves the extraction of delay events from the as-built programme to provide a hypothesis of what might have happened had the delay event not occurred. This method does not require a baseline programme. This method requires a detailed logic-linked as-built programme. It is rare that such a programme would exist on the project and therefore the analyst is usually required to introduce logic to a verified as-built programme. This can be a time consuming and complex endeavour. Once completed, the delay events within the as-built programme are identified and they are ‘collapsed’ or extracted in order to determine the net impact of the event. A limitation to this method is that it measures only incremental delay to the critical path, because the completion date will not collapse further than the next most critical path.

4.13 Other methods, which may be reasonably deployed in particular circumstances having considered the criteria in paragraph 4.3 above, include: summary level as-planned versus as-built analysis, time chainage analysis, line of balance analysis, resource curve analysis, and earned value analysis.

4.14 In order to avoid or at least minimise disputes over methodology, it is recommended that the disputing parties try to agree an appropriate method of delay analysis before each embarks upon significant work on an after the event delay analysis. Failure to consult the other party on delay analysis methodology is a matter that the Protocol considers might be taken into account by the adjudicator, judge or arbitrator in awarding and allocating recoverable costs of the dispute.
APPENDIX A

Definitions and glossary

[to be updated upon the completion of the outstanding portions of the review in accordance with the terms of reference]