In October 2002, the Society of Construction Law published the first edition of Delay and Disruption Protocol.

The intention of the first edition was to provide guidance on some of the issues that arise in construction contracts in relation to extensions of time and/or delays. As with the second edition, it was not intended to be a contract document or a statement of law, but instead represents a “scheme for dealing with delay and disruption issues that is balanced and viable”.

In February 2017, some 15 years after the first publication and subsequently Rider 1, the second edition has been published, following various developments and changes in the field of disputes relating to delay and disruption in construction. The changes can be summarised as follows:

1. There is no longer one preferred delay analysis methodology. Instead, there is a list of factors that should be considered before considering the most appropriate methodology for those particular circumstances, factors considered include available contemporaneous information and the format of available documents. An overview of the various methodologies currently in use is provided;
2. The guidance on record keeping throughout the duration of a project has now been developed. The focus is on the general principles which are applicable to all projects, of varying sizes and complexity;
3. There is an addition of a new core principle – The contemporaneous submission and assessment of extension of time claims (rather than a ‘wait and see’ approach);
4. The approach to concurrent delay has been updated to reflect recent case law;
5. Recognition of an apparent trend for the construction legal industry and the courts to take a more lenient approach towards global claims; and
6. The second edition has developed the guidance on disruption and a broader list of different types of analyses that might be used to support a disruption claim. As with the first edition, the ‘measured mile’ analysis remains the preferred approach.

This article seeks to provide a brief overview and commentary of some of the key areas that have been updated since the 2002 edition¹.

## Delay Methodologies

The first edition of the protocol included 4 different methods for undertaking delay analyses after completion of the works; the second edition however, now recognises 6 methods for undertaking delay analysis.

The appropriate methodology used in analysing the delay depends largely on the information available and the different methodologies can be summarised below:

1. Impacted as-planned analysis: This method requires a baseline programme and as-built data in relation to the delay events. This method imposes delays on the original planned programme which is then re-calculated to establish the revised completion date. The difference between the original completion date and each increment of the impacted programme represents the period of delay attributable to the delaying event. It should be noted that the original programme is not updated for the actual progress up until the delaying event occurring and therefore assumes that progress has been exactly as envisaged at commencement. This seldom reflects what happens in reality and can be considered theoretical in nature.

2. Time impact analysis: This method is similar to the impacted as-planned analysis, it requires a logic linked baseline programme, programme updates and a selection of delay events that require modelling. There is one important difference to the impacted as-planned analysis, the original programme is updated with the as-built progress data to determine the progress of the works as at the time of the delaying event. Each delay event is then impacted at the time of which it took place and the re-forecast programme is analysed chronologically and cumulatively. This is considered a better analysis than the impacted as-planned analysis as it produces an outcome that is more likely to reflect the progress of the works when delay events were occurring.

3. Time slice windows analysis: This method requires a contemporaneously updated baseline programme which reflects the status of the works at a particular point in time (snapshots or ‘time slices’). This method reveals the progress, the critical path and the delays within each time slice, which in turn enables a detailed picture to be formed with regard to what was happening within each of the time slices. Delaying events are analysed in order to determine what events caused the critical delay within each time slice period.

4. As-planned versus as-built analysis: This method again requires a baseline programme and as-built data. It compares how the works were planned against how the works were actually completed in a more general manner (than that undertaken in a ‘time slice windows’ analysis). This method is a good way of ascertaining which events actually affected to completion of the work. It should be noted that the accuracy of this method depends on the accuracy of the planned and as-built programmes (in particular, how achievable the baseline programme was and how accurately the as-built programme reflects what was happening on site).

5. Retrospective longest path analysis: This requires a baseline programme and an as built programme. This method involves the determination of the retrospective as-built critical path. In this method, the analyst must first verify or develop the detailed as-built programme. Once completed, the analyst traces the longest continuous path backwards in order to determine the critical path. The key dates along the critical path are then analysed to determine what the critical delays were compared to the planned dates in the baseline programme. The weakness of this method is the possibility that it does not take into account any switches and changes in activities on the critical path throughout the course of the works.

6. Collapsed as-built analysis: This form of analysis requires a logic linked as-built programme incorporating the delay events which have taken place. This method requires the incorporation of logic links for each of the activities followed by the creation retrospectively of ‘fragnets’ (otherwise known as “sub-networks”) to represent each delay event. Once created, these delay fragnets are removed systematically and sequentially from the as-built schedule in order to show the improvements to the project completion date “but for” the delaying events. This method attempts to create the delaying event and then remove it from the as-built programme in order to show how much earlier the completion date would be had each delaying event not occurred.

**Record Keeping**

Parties should seek at the outset a clear agreement with regard to record keeping. Parties should consider:

1. The types of records to be produced and the information contained therein;
2. Who is responsible for both producing and checking the records;
3. The frequency in which those records are to be updated and produced;
4. Distribution list for those records;
5. What format the records will take; and
6. The ownership (including any relevant intellectual property rights) and storage of, and access to, those records.

Good record keeping requires an investment by both parties in time, cost and commitment, both parties should ensure that correct levels of resources are allocated to record keeping for the duration of the project. Any records produced that relate to the progress and delay and disruption should be produced contemporaneously as the work progresses, not retrospectively. The records should document all work being undertaken and should relate to the various activities within the programme.

It should be noted that records kept should contain objective information and not offer any opinions. Where practicable, records should be signed by representatives of the employer and contractor.
Avoid a ‘Wait and See’ Approach; Assess Delays on a Contemporaneous Basis

The parties should attempt (as far as is possible) to assess the impact of any delaying event as the works proceed in order that any applications for an extension of time can be made and dealt with as close in time as possible to the delaying event’s occurrence. The ‘wait and see’ approach is discouraged; however the reality is that this is still widely used today. There are a number of reasons why the ‘wait and see’ approach is used by some contractors:

1. At times, it is unclear whether or not a delaying event will cause a delay, contractors will at times attempt to re-sequence or reduce the length of some activities so that any delay to the completion date can be eliminated. Contractors may also believe that there is enough float in the programme to absorb the delays without having an impact on the completion date; and

2. It can be difficult to assess the impact of a delaying event immediately after it occurs, long lead-in times, abilities to mitigate and resource availabilities may vary, meaning that accurately assessing the delay accurately from the outset can be challenging.

In theory, the approach recommended in this section of the protocol is ideal and the correct approach to take when a delaying event occurs. In practice however, it can sometimes be difficult to understand the full extent of the delay caused by the delaying event, particularly in large complex projects with vast amounts of activities. This may mean that there could be a risk in applying for an extension of time soon after the event because a contractor could find themselves locked into a revised programme that was unachievable from the outset. Accordingly, the approach in this section of the protocol assumes that the full impact can be fully ascertained by the contractor which is not always the case.

Core principle 7 recognises the challenges faced with regard to accurate predictions of the impact of delaying events. The approach in this instance recommends that an extension of time should be granted for the then predictable effect (at the time of the delaying event occurring), thereafter, extensions of time should then be assessed on an incremental basis as and when the actual impact of the delaying event unfolds.

Concurrent Delay

Concurrent delay is a much debated topic. A concurrent delay is where two or more delays occur at the same time, one delay caused by an employer’s risk event and the other caused by a contractor’s risk event, the effects of which are felt at the same time. These delays must be equally effective (i.e. they must both impact the critical path and delay the completion date) before delay is considered concurrent under the protocol. There are inconsistencies when it comes to what is considered the correct approach when dealing with concurrent delays.

The protocol provides guidance on concurrent delay by considering all the competing arguments before approaching concurrent delay in what it considers to be the most appropriate solution.

The protocol’s solution to concurrent delay is that the contractor should be entitled to an extension of time for the employer’s delay to the completion date; the contractor’s delay event should not reduce the amount of extension of time due to the contractor as a result of the employer’s delay.

The protocol’s position with regard to concurrent delay is influenced by the ‘prevention principle’ under English law. In the context of concurrent delay this would mean that an employer would not be able to take advantage of the non-fulfilment of a condition where the employer has itself hindered the contractor. The protocol states, “The Protocol’s approach to the treatment of concurrent delay (once established) prevents arguments about whether an Employer Delay acting concurrently with a Contractor Delay actually hinders the progress of the Contractor in any way”.

It should be noted that although the protocol has a well-reasoned method for dealing with concurrent delay, it is quite common to find amendments to standard forms of contracts which deal specifically with concurrent delay and seek to reverse the position as set out in the protocol and that is defined by common law. These amendments usually state that in any period where there is concurrent delay, the contractor will not be entitled to an extension of time, leaving only periods where delays are caused solely by employer’s risk as events which entitle the contractor to an extension of time. This can lead to instances where parties argue about what delays are concurrent (for example whether or not they are critical or near critical).

Global Claims

It is acknowledged that it is not uncommon for contractors to submit composite or global claims without attempting to link the cause and effect. The protocol discourages this approach, however it has been noted that in certain circumstances, courts have taken a more lenient approach when considering global claims.

Contractors should be able to establish a causal link between the employer’s risk event and the resultant costs and/or losses provided that they maintain accurate and complete records that are proportionate to the project. Failure to keep and maintain such records means that a successful claim is unlikely to succeed.

On occasions where the various causes are impossible to link to the financial consequences, it is acceptable in the SCL protocol to proceed in two stages:

1. Quantify individually the items of a claim where a causal link can be established between the cause and the resultant costs and/or loss claimed; and

2. Claim compensation for the remainder as a composite whole.
Disruption Claims

The SCL also provides some helpful guidance in relation to disruption claims. Disruption is a disturbance, interruption or hindrance to the contractor's progress throughout the duration of a project, the result is a reduction of labour and resource efficiency. Where there has been a departure from the expected efficiency of resources from that expected from the outset, provided this can be linked to an employer's risk event, this reduction in efficiency may be recoverable.

It should be noted that not all loss of productivity is recoverable. It may only be possible for the contractor to recover compensation for disruption to the extent that the contract permits or there is an available cause of action at law. Most standard forms of construction contract do not expressly provide any means for recovery for disruption, although these contracts often address certain events which could lead to the contractor incurring disruption and loss of efficiency.

The main methods recommended are listed in order of preference (but depend largely on information available to the party when forming a disruption claim):

1. Measured Mile Analysis: This is a comparison of productivity of activities undertaken during periods impacted by disruption events and productivity of activities during periods without disruption. The key point to bear in mind whilst undertaking a 'measured mile approach' is that like should be compared with like in order to make the analysis effective, this can be challenging and document sensitive, particularly where a) there is no unimpacted activity to compare and gauge disruption or b) there are factors for which the employer bears no responsibility and are impacting the activities. Any of these would make a like for like comparison inaccurate.

2. Earned Value Analysis: This is a comparison of man-hours included in the tender allowance for completing work activities and the actual man-hours taken to complete the work activities on the project. The progress of activities impacted is compared with the man hours designated to each activity at tender stage, producing an 'earned value'. This method relies heavily upon the tender estimate being accurate and therefore does not allow for any inconsistencies or shortfalls within the tender allowance, this can potentially distort an earned value analysis.

3. Programme Analysis: This is undertaken using 'resource loaded programmes' using specialist software. Based on the information provided, the software assists in calculating the percentage of completion and earned value for activities that are impacted. This is a variant of the earned value analysis and therefore still carries some of the risks and shortfalls.