

# PROSPECTIVE DELAY ANALYSIS AND ADJUDICATION

**Christopher Andrew Gorse, Robert Ellis and Aaron Hudson-Tyreman**

*School of the Built Environment, Brunswick Building, Leeds Metropolitan University, LS2 8BU, UK*

Weaknesses that can affect the validity and reliability of some delay claims have been exposed. In light of such criticism, the Society of Construction Law developed the Delay and Disruption Protocol. Amongst other things, the protocol recommended that delays should be dealt with prospectively and if matters are not resolved they should be referred to an Adjudicator. Even with this advice, some lawyers believe that prospective analysis is too theoretical and that adjudication should not be used to resolve such complicated matters. Using focus groups, the suitability of adjudication for resolving delay disputes prospectively was investigated. Arguments for and against the use of critical path analysis emerged, and the use of prospective analysis in delay claims was challenged. The subjectivity of delay analysis was the focus of much debate. Although opinions differed on the use of prospective and retrospective analysis, the most persuasive argument was for matters to be resolved when delays were first suspected and, if necessary, disputes should be dealt with prospectively by an adjudicator. Dealing with matters early ensured that the facts leading to the delay were less distorted by time and opportunities for the stakeholders to manage and mitigate the risks were highest.

Keywords: adjudication, delay and disruption, dispute resolution

## INTRODUCTION

The UK Society of Construction Law (SCL) Delay and Disruption Protocol was published on the 16th of October 2002 in response to widespread dissatisfaction with the way delay and disruption was being dealt with (Arrand 2002; Nash 2004). The document is intended to influence the drafting of new contracts; act as an aid to the interpretation of standard delay provision; guide the manner in which claims are prepared and, when dealing with the claims, suggest how adjudicators, arbitrators and judges ought to properly determine them (Arrand 2002; Burr & Lane 2003).

The protocol suggests that “wherever possible [the parties] should address any delay prospectively and not retrospectively, in order to keep the contract programme current and establish it as a useful tool for management of the project” (Nash 2002:2). However, the protocol’s advice has tended to attract controversy (McCaffrey 2003). Burr and Lane (2003) and Cummins (2003) argue that the protocol has many good parts, but emphasises that it is unworkable in many complex cases and requires further improvement. The particular focus of Cummins’ criticism is the method suggested for dealing with extensions of time (EoT). Cummins puts forward the view that the prospective analysis methods, suggested by the protocol, can be impressionistic and may be insufficient to prove which events caused the actual delay to completion and the amount of delay attributable to each event.

The protocol recommends that, "...applications for EoT should be made as close in time as possible to the delay event that gives rise to the application" (SCL 2002:5,11). Although Cummins suggests this is right, she points out that disputes frequently arise over the amount of EoT that is awarded during the course of a contract. Furthermore, disputes about the amount of time awarded may continue even if the parties follow the protocol's recommendations to update programmes regularly and maintain records. Cummins argues that the critical path method (CPM) used to forecast the EoT should not be relied on and may be challenged. Yet critical path analysis has become the accepted way of demonstrating delay.

There have been many changes in the way delay claims are prepared and processed. Pickavance (2001) notes that before computer based planning and tracking claims were often made without any proper logical analysis. Whilst critical paths were often mentioned there would be no evidence of how the critical logic was initially established or whether it changed. Although the use of computer aided project management techniques are now an accepted part of demonstrating delay, the way in which the tools are applied can seriously limit their usefulness as logical evidence (Winter & Johnson 2000; Pickavance 2001; Arrand 2002). Also, it is thought that the data used to create the programmes may be unreliable (Keoughan-Burrows, Pegg & Martin 2004). The validity of computer based planning evidence is now being challenged. The legal profession's appreciation of the limitations and weakness of planning methods has developed, and lawyers are less willing to accept the opposition's analysis as the only possible representation of the facts.

The use of delay analysis tools is not limited to proving causation after the delay, but is being used prospectively to demonstrate a delay that has yet to manifest. There is increasing pressure to solve disputes as soon as they emerge. If differences of opinion on a potential delay emerge, parties are encouraged to present their case and resolve their differences through adjudication prior to litigation. However, the limited time available to deal with the claim through adjudication may prevent full systematic analysis. This initial research aims to investigate the suitability of adjudication for resolving delay disputes during the construction process.

## **LEGAL REFORM**

The impact of legal reforms, coupled with changes to statute and case law during recent years has fundamentally altered the way construction disputes are dealt with (Farrow 2001). The overriding objective of the Civil Procedure Rules is to ensure that courts deal with cases justly, so that parties are on an equal footing, and the expense in dealing with a case is proportionate to the amount of money involved. While the SCL's protocol encourages the use of sophisticated delay analysis procedures, the CPR rules, which make excessive claims expense unrecoverable, may mean that detailed, complex and costly delay analysis methods have limited application (Bradley 2001).

Since the introduction of the Housing Grants, Construction and Regeneration Act 1996 (HGCRA), the use of adjudication has increased whilst litigation and arbitration have been reducing. The short swift treatment of disputes through adjudication allows limited time for parties to develop and present their case. Many have referred to the adjudication process as rough justice; however, the adjudicator's temporary decisions often remain unchallenged and even when challenged, more often than not, the decision is upheld (Simmonds 2003).

The complexity of delay and disruption claims may not be suited to adjudication if parties have insufficient time to develop and present their claims. Adjudicators need to uphold the law of natural justice, acting fairly, impartially and allowing each party the same opportunity to present and defend their case properly. Demonstrating delay, even with advanced planning tools can be difficult and time consuming. Furthermore, the reliability and validity of such techniques are often challenged (Farrow 2001; Redmond 2002; Hullett 2003). Thus, those receiving such evidence may be minded to employ forensic analysts to examine the validity of the data. However, the very short timescales associated with adjudication often necessitate board-brush assessments, made on limited evidence (Bradley 2001). The use of adjudication, as an intermediate process, to resolve delay disputes during the construction process has been questioned and requires further investigation.

## **REFERRING DELAYS TO ADJUDICATORS**

The Protocol advocates that a dispute over an application for EoT should be quickly referred to an adjudicator (SCL 2002). Dealing with disputes as they arise could reduce the chance of claims becoming complicated, costly and unmanageable. However, projecting the consequences of a relevant change event for the purposes of adjudication is heavily reliant on knowing the activities and events that will unfold, realistic estimates of their duration and the effective use of software for critical path scheduling. Whilst the responsibility for the delay event could be questioned, getting parties to agree to logic that demonstrates the delay effect at an early stage in a project is fraught with difficulties. Where such matters cannot be agreed they can be referred to the adjudicator for a ‘temporary’ decision.

Cummins (2003) notes that referring such a dispute to adjudication during the contract may not always be the most helpful course of action. Her main argument is that if in the event of referring a dispute to adjudication it turns out that the adjudicator’s decision was wrong, the parties might have taken a different course of action had they not been bound by the decision. Pickavance (2001) also makes an important point that time spent can never be recovered. If an EoT is wrongly awarded, although damages may be recovered through litigation, the lost time can never be recouped.

Where a disagreement between the contractor and the contract administrator (CA) over the liability and effect of an event occurs, the Protocol proposes that that the CA’s decision should prevail until decided by the contract’s dispute resolution procedure. Cummings proposes that, even though a contractor believes that they are entitled to an EoT, the contractor may commit additional resources to satisfy their obligation to meet the completion date. If, in the circumstances, the contractor’s attempts to mitigate the delay are reasonable and proportionate, the employer is notified of the additional costs that are likely to arise, and the contractor can show after the event that they were entitled to an EoT, there is no reason why the additional costs should not be claimed as disruption flowing from the employer’s risk event (Cummins 2003).

Cummins argues that it is prudent to submit required notices to the contract administrator. However, if EoT or loss and expense for disruption are not agreed, then, at the end of the contract, once the full extent of the delay is known, an analysis of the planned against the actual events will provide, what Cummings considers, the most accurate evidence. While there will be more evidence after the delay has occurred, than dealing with it before the delay, the group that put together the protocol

clearly believe that there is an advantage in dealing with potential delay events prospectively, and, if necessary, through adjudication (SCL 2002).

Authorities on delay and disruption identify problems associated with the accuracy of contractors' forecasts and the reliability of forensic delay analysis (Carnell 2000; Farrow 2001; Pickavance 2001). Proving delays can be complicated and may not be suited to the short, intermediate, twenty-eight day, adjudication process. Where a dispute is referred to adjudication the evidence presented must be sufficiently reliable to make a judgement. If the evidence is unreliable the adjudicator may make a limited award based on the information presented; find that there is no case to answer or find against the claimant and award that the claimant pays the costs. Prospective evidence, for the purpose of EoT claims, may not be suited to adjudication.

## **RESEARCH METHODS**

Delay claims are so complex that very few individuals have a comprehensive understanding of the associated issues. During a pilot study, simple one-to-one question and answer research methods, administered via questionnaire and interview proved somewhat limited. A more fully developed and informed response was gained when the issues were discussed in focus groups.

Focus groups are normally small in structure with selected participants, and are used to explore specific topics and individual views and experiences. They are an effective method for listening to respondents and allowing them to use their own words to unravel the problem, identify possible implications and describe what they think (Kruger 1994; 2000). The method used was based on accepted practice developed from procedures laid down by Kruger (1994) and Crinson (2001). Due to the richness of qualitative data gathered from focus groups, the extent of the research is normally limited to a relatively small research sample. In order to analyse the data properly this initial study will be limited to the transcribed data from two focus groups. Six professionals took part in the first focus group and four in the second. The groups were made up of construction and planning experts, who formed part of a construction advisory board. Kruger's (1994) questioning method was adopted to ensure that participants dealt with the key issues. The interaction was recorded, transcribed and the participants' contributions coded. Data were analysed using Crinson's (2001) five stage analysis.

## **RESULTS AND DISCUSSION**

At the heart of this study lies the question of whether prospective evidence is sufficiently reliable and valid for an adjudicator to make an EoT decision. The focus groups enthusiastically explored the topic in considerable depth. The subjectivity of base data and planning methods provided the focus for much discussion. Participants questioned both long-term forecasts and recollections of historical events. Group members held strong beliefs on the risks inherent in planning and the practicality of tools that manage risk and measure levels of confidence. Key to the whole discussion was the problems inherent in predicting events and modelling complex projects. Whilst recognising the limitations of delay analysis methods, the participants provided an interesting perspective on the validity and reliability of prospective data, its use in managing the project and the role of adjudication in the process.

### **Is Prospective data too subjective for adjudication**

The most common criticism of planning, raised by the focus groups, was that it is a subjective process. Circumstances anticipated are often very different from those encountered and the longer the prediction the more inaccurate the plan becomes (Picavance 2001; McCaffrey 2003). Members of the first focus group were aware of the problems associated with early forecasts and expressed concern that such information was treated as factual. The second focus group acknowledged that plans were not factual, but the general consensus was that if critical path software was applied properly the predictions were useful.

Where it becomes difficult to forecast accurately, the second group also thought that a level of risk analysis might be useful, particularly for complex phases of the project. Risk methods that make allowances for worse case scenarios increase the level of confidence in meeting milestones and completion dates. However, even with the benefit of sophisticated technology, the analyses are not exact sciences (McCaffrey 2003). Occasionally, the Protocol recognises that programmes accepted by the CA are not factual.

“Acceptance by the CA merely constitutes an acknowledgement by the CA that the accepted programme represents a contractually compliant, realistic and achievable depiction of the contractor’s intended sequence and timing of the construction of the works. Acceptance does not turn the contractor’s programme into a contract document or mandate that the works should be constructed exactly as set out...” (SCL 2002:37)

Both focus groups agreed that the programme was not a contract document and rather than being a fixed prediction of events it was argued that plans needed to be flexible. However, the second group felt that the programme formed part of the contractual requirements and, once exchanged, it formed the best indication of future events at that time. The group emphasised the importance of the plan as a management tool, and noted that the responsibility for checking and accepting programmes should be shared. Participants were unanimous in the view that, for the plan to work, regular updates should be produced and the contract administrator should check and validate them. However, all members of the group were dubious about whether the intended programme of works was ever really checked properly before being accepted.

### **Validity of forecasts**

The problem of producing a programme on limited design information was addressed by the Protocol. The Protocol states that the initial programme is only to depict the first three months of work in detail (SCL 2002:36). McCaffrey (2003) supports the view that detailed planning, at this level, is possible. However, four weeks after the award of the contract, the Protocol states that the programme is to address the full scope of the works. The language and thrust of the Protocol encourages a mindset that contemplates rights to EoT from the very beginning of the project. However, the general consensus from the first focus group was that the activities and logic are always open to challenge, especially when forecasting over long periods.

The unpredictable nature of some events will obviously distort predictions; however, there is an argument that even the basic task data is unreliable and should not be used in forecasts. It was suggested that there is little information available to estimate task durations. The second focus group noted that it was possible to get estimated duration information from what was described as the ‘classic Spons’ price books’. However, the usefulness of such information was questioned. Furthermore, it was suggested that

experienced contractors would not use it and clients would not want their contractors to be relying on standard data when they have paid for their management expertise.

The group also discounted the importance of raw duration data from previous projects. It was emphasised that future decisions should be based on management and performance information, e.g. resource output matched with the type and complexity of the task. The group advocated for resource driven programmes and logical networks supported with management documents such as method statements when planning or analysing delays. Farrow (2001) states that intended programme of works should not just be based on a sole plan, but should be supported with detailed method statements, which should include resource information. Supporting information helps to demonstrate that the plan was feasible (Farrow 2001).

If Contractors are not maintaining accurate information on the progress and changes, regardless of who is responsible for change, the critical path method and any subsequent analysis is flawed (Hulett 2003). The members in the focus groups were cynical about progress reports and noted that the industry had a poor record of accurately recording progress. Indeed, it was suggested that false progress reports were the norm rather than the exception. Both groups were critical of progress reports; however, the second group considered that if sufficient information was provided during planning and progress reporting, the validity of such information could be checked and assessed.

Nash (2002) suggests that the UK may follow in the footsteps of the more developed US delay and disruption law. In the US, failing to maintain contemporaneous project records may mean that there is insufficient evidence for a delay claim (American case of Bechtel National Inc. 1990). The UK SCL (2002:35) protocol states, "...many EoT disputes would be avoided if the parties properly monitored and recorded progress". Contemporaneous records should include daily and weekly reports, correspondence, minutes or progress meetings, job site diaries, procurement reports and cost records, requests for information log, drawing log and variations log, which should be produced contemporaneously, at the same period as the events occur.

If contemporaneous data proves to be truthful, valid and reliable then it not only provides a useful tool indicating what actually happened, but can also be used to check the accuracy of planning data during unaffected working periods; where work should be conducted as-schedule. Such evidence will be useful for contract administrators and adjudicators when determining the contractor's ability to forecast and plan. Arbitrators and judges may also use this information to determine whether intermediate decisions made by the CA, regarding claims for EoT, were valid and realistic.

### **Unreliable forecasts and historical data: Should adjudicators make decisions?**

The protocol encourages parties to settle EoT disputes prospectively, but many believe that retrospective analysis is a more reliable and valid way of dealing with disputes (Cummins 2003; McCaffrey 2003). However, retrospective analyses are not free from subjectivity. Where planned programmes provide insufficient detail, more detailed sub-nets are often produced. The sub-nets provide more developed analysis of the way the works would have been performed compared against what actually happened. However, developing the as-planned programme in greater detail usually results in the other party claiming 'foul-play' (Farrow 2001). Farrow, notes that hindsight is a wonderful gift of the delay analyst and one can always develop a sound argument to justify the sequence in which a particular element of unplanned work would have been

carried out. Consequently, the more hindsight that is applied the greater the opportunity for challenge on the grounds of bias or unreliability (Farrow 2001). In the US case of *Blinderman Construction Company v. United States* (1997), the Contractor's claim to recover time and money failed because the programme up-dates had been created after the fact to support the claim.

A dominant member of the first focus group argued that EoT claims should be settled retrospectively, because it was too difficult to predict future events reliably and the contracts allowed for retrospective assessment. However, all members of the second group advocated for early recognition of potential problems and prospective analysis of the potential effects so that such events could be addressed by both parties and managed. One member suggested that The Engineering and Construction Contract with its 'early warning notices' and use of resourced networks had proved successful in managing and resolving matters. Members of the second group who delved deep into the weaknesses of planning methods presented a firm view that potential delay disputes should be resolved as early as possible increasing the capability of the parties to manage the project. Such views are commensurate with Lal's (2002) thoughts on financial risk management.

### **Should EoT disputes go to adjudications?**

Having discussed the validity, subjectivity and reliability of prospective data both groups summed up their feelings on whether EoT disputes should go to adjudication. Group one was split, some members believed that there should be no appeal on adjudication and decisions should be binding, others were unsure about the admissibility of such evidence and questioned whether such disputes would ever be brought before an adjudicator. One member held a firm view that such matters were too subjective to be brought before an adjudicator; although the argument presented was not just levelled at adjudication but to any intermediate dispute resolution process.

Members of the second group held a strong view that the best time to settle such matters was as close to the event as possible. They believed that dealing with the issue when it occurred meant that the factual nature of events were fresh in the minds of those involved. A criticism levelled at retrospective analysis was that memories of distant events were poor and hindsight introduced factors that were not options at the time. The second group considered the validity of prospective delay evidence in some detail and discussed whether it would be sufficient for the adjudicator to make a decision. Even though the group acknowledged the weaknesses of current planning practices they felt that the CPM and contemporaneous data were the best tools currently available to plan and track events. They also considered that decisions should be made as early as possible. Dealing with issues early helped because information was fresh in the minds of those involved. Because of such circumstances it was felt that adjudication, part way through a process, would be able to assess the validity of the data better than arbitration or litigation at the end of the contract. The focus group also thought that there were good and bad planning practices and if poor planning data had been accepted by the parties, then the adjudicator would be forced to make a decision based on that data. It was felt that the adjudicator could make a decision on the validity of the argument presented and make an award proportional to the strength of the evidence.

## CONCLUSION

Much of the information gathered supports the view that planning and delay analysis are subjective processes. Although some authorities are critical of delay data, there was a consensus amongst experts and industrialists that, if applied correctly, logical links are valid and forecasts reliable. It was also felt that the adjudicator is in the best position to assess the validity and reliability of the evidence presented, much better than an arbitrator or judge, who would be appointed long after the delaying event. While opinions differed, the more persuasive argument was that prospective evidence is sufficiently valid and reliable for the adjudicator to make a decision on EoT. On the balance of the data gathered, the evidence re-affirms the advice given by the protocol: adjudication is an appropriate means of assessing EoT disputes. When a delay notice is served, but the CA fails to make that decision, or the decision is in dispute, then the matter may be referred to adjudication.

It was noted that the client selected the contractor for their management capabilities, and that the management tools and processes would reflect the level of skill and expertise employed. The CA had an important role to play in ensuring that the required service was being provided. It was considered essential that the CA played a proactive role in assessing and validating the management information produced throughout the project. The practice of manipulating project logic so that it shows the most advantageous case rather than a realistic interpretation of events was raised in the literature and research groups. Clearly, such acts would diminish the validity of critical path logic. A persuasive argument was put forward for exchanges of programmes in digital form and the use of formal acceptance procedures. Discourse showed that participants in the focus groups believed that CAs' did not rigorously assess plans before accepting them. Where planning data is to be used to manage the project and resolve disputes, then it should be checked and if necessary changed to present a more realistic interpretation of events. If plans were checked and formal acceptance practices employed then the baseline will have been validated. Where work is unaffected, progress can be monitored to check the contractor's ability to work to their plan; thus, helping to determine whether plans are realistic. Failure to regularly check progress plans will increase the associated risks. It was felt that adjudicators would pay little regard to a CA who attempts to challenge the feasibility of a 'prospective' plan if they had failed to question the plan or address the problem when the programme was first presented.

## REFERENCES

- Arrand, M. (2002) Time and money claims: The Society of Construction Law protocol, *In-House Lawyer*, 99 (April) 42-44
- Bradley, S. (2001) Are global claims more acceptable? *Construction Law*, 12 (5), 6-7
- Burr, A. and Lane, N. (2003) The SCL Delay and Disruption Protocol: Hunting Snarks. *Construction Law Journal*, 19. (3), 135-143
- Carnell, N.J. (2000) *Causation and Delay: in construction disputes*. Oxford. Blackwell Science.
- Crinson, I. (2001) A realist approach to the analysis of focus group data. St Georges Medical School. *In: Nielson, P. (Ed.), 5<sup>th</sup> Annual IACR Conference*, 17-19 August 2001, Roskilde University, Denmark. The International Association for Critical Realism, 15 – 34.

- Cummins, C. (2003) SCL Delay and Disruption Protocol: A curate's egg. *Law Now: On-line information serv.* [www.law-now.com](http://www.law-now.com). Released 12.03.03 accessed 20.10.03
- Farrow, T. (2001) Delay Analysis – Methodology and Mythology. A paper based on a talk given to a meeting of the *Society of Construction Law* in Manchester on 6<sup>th</sup> November 2001. [www.scl.org.uk](http://www.scl.org.uk). Released 2002, accessed 15.7.04.
- Hulett, D. T. (2003) Schedule risk analysis simplified: Critical path method scheduling – Some important reservations, [www.projectrisk.com](http://www.projectrisk.com). Accessed 19.11.03
- Keoughan Burrow, T., Pegg, I. and Marting Joe (2004) Predicting Building Construction Duration. *COBRA2004 Responding to change*. COBRA Annual Conference September 7<sup>th</sup> – 8<sup>th</sup>, Leeds Metropolitan University, The RICS Foundation. Proceedings (with CD-ROM)
- Krueger, R. A. (1994) *Focus Groups*. 2<sup>nd</sup> Ed. London: Sage
- Krueger, R. A. and Casey, M. A. (2000) *Focus Group: A Practical Guide For Applied Research*. 3ed. London: Sage
- Lal, H. (2002) Extension of time: The conflict between the 'Prevention Principle' and notice requirements as a condition precedent, *Society of Construction Law*, presented in London on 9<sup>th</sup> April 2002. [www.scl.org.uk](http://www.scl.org.uk). Released 2002, accessed 15.7.04.
- McCaffrey, G. (2003) Practical Planning and the SCL Delay and Disruption Protocol. The Devil is in the Detail. Transcript of presentation to the *Adjudication Society*. 27<sup>th</sup> Feb. 2003, [www.adjudication.org/papers.php](http://www.adjudication.org/papers.php). accessed 14/6/04
- Nash, S. C. (2002) Delay and disruption: Legal considerations: A paper based on a talk given to a meeting of the Society of Construction Law in Manchester on 16<sup>th</sup> April 2002. *Society of Construction Law*. [www.scl.org.uk](http://www.scl.org.uk). Released August 2002, accessed 15.7.04.
- Pickavance, K. (2001) Principles and policies in delay analysis, A paper presented to the Society of Construction Law at a meeting in London on 6<sup>th</sup> February 2001, *Society of Construction Law*, [www.scl.org.uk](http://www.scl.org.uk). Released April 2001, accessed 13.8.04.
- Pickavance, K. (2004) Putting the SCL delay and disruption protocol into practice – is it what the industry wants? A paper presented to the Society of Construction Law at a meeting in London on 8<sup>th</sup> June, *Society of Construction Law*, [www.scl.org.uk](http://www.scl.org.uk). Released September 2004, accessed 23.6.05
- Redmond, J. (2002) Concurrent delays and float, *Property Law Journal*, April, pp 5-7
- SCL (2002) *The Society of Construction Law Delay and Disruption Protocol*. SCL. [www.scl.org.uk](http://www.scl.org.uk). Released October 2002, accessed 16.6.04.
- Simmonds, D. (2003) *Statutory Adjudication: A practical guide*. Oxford, Blackwell Publishing
- Winter, J. and Johnson, P. (2000) Resolving complex delay claims. A Report on the Meeting of the Society of Construction Law on 6<sup>th</sup> June at the National Liberal Club, Whitehall Place, London. SCL. [www.scl.org.uk](http://www.scl.org.uk). Accessed 16.6.04.