

Time, Delays, EOTs & LADs Risks

Duty to Achieve Timely Completion

Both Parties Have An Implied Duty to:
Co-operate-giving of Required Information

Employer – Design Info, Resolving Discrepancies

Contractor – Buildability Info, Samples, Program

Not to Hinder Performance

-Act of Prevention

Delays & EOT

Most Common Dispute

Most Complex Dispute

Most Uncertain Dispute

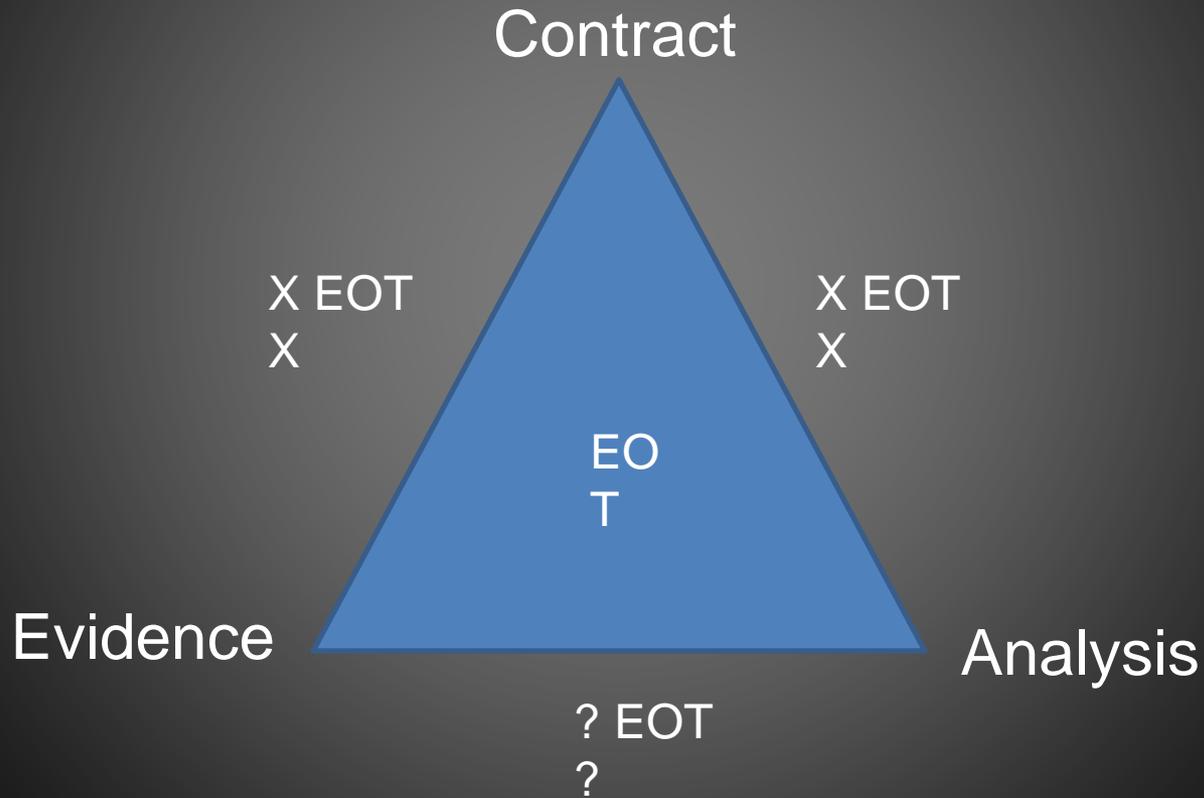
Construction & Time

“It has been said that the only major construction project to finish on time and to budget was a church where, presumably, divine intervention played a role”

Dr. Julian Critchlow



The Trinity



Time & Delays

- Determine Criticality of Disruption vis-a-vis Time
- Use Updated WP Impact Analysis (Prospective)
 - Accurate Look Ahead Schedules
- If Completion Date Impacted!
- Determine Whether Excusable?
- Excusable = EOT Reasons in Contract
- Non-Excusable Disruption
 - Determine whether Act of Prevention
 - Otherwise : Contractor Culpable Delay
 - Step Up the Mitigation Process

The Contractual Risks

- Excusable Delay
- Condition Precedent Notice & Claim
- Mitigation
- Prospective or Retrospective Analysis
- Time for Assessment of EOT
- Evidentiary Requirements

Excusable Delays

- List of Delay Causes = EOT
- Limited List on Neutral Delay Events ✓
- Limited List on Employer/Agents Culpable
Delay Events X

Why?

Time At Large

- Otherwise Unfair on Contractor
 - Dodd v Churton [1887] 1 QB 562
 - Sim Chio Huat v Wong Ted Fui [1983] 1 MLJ 151
 - Thamesia Designs SB v Kuching Hotels SB [1993] 3 MLJ 25
- No LAD & Reasonable Time to Complete
- What is the End Result?

Time at Large

- Reasonable Time = EOT Time
- EOT Time = Agreed by Parties
- EOT Time = Determined by Arbitrator/Court
- Further Delays = Compensable Actual Damages

Avoiding Such Time at Large

- Exhaustive List of Delay Causes???
- Catch-All Act of Prevention Clause
- PAM 98' & 2006'
- *any act of prevention or breach of contract by Employer*
- Interpretation in the hand of SO/ER
- Employer includes Agents/Consultants/3rd Parties within Employer's obligation

Time at Large Claims

- Common Law Damages Claim
 - All Reasonably Foreseeable Damages
 - Direct or Indirect
 - Hadley v Baxendale Principles
- Lodge Claims with Employer Directly
- Negotiate with Employer
- Otherwise Arbitrate

Notice Requirements

- Is it a Condition Precedent?
 - Must be clear
 - Standard Forms now use words “*shall be a condition precedent*”
 - Ambiguities = *Contra Proferentum*
- Is the Notice Period Clear?
 - Forthwith, Soon Thereafter, No. of Days
 - Time Runs From? = delay commence v knowledge
 - Objective Knowledge = reasonably apparent

Notice Requirements

- Notice Period Unworkable or Impossible
 - All delay events \neq delay the Completion Date
 - Time for Analysis of Criticality
 - Notice of Events Affecting Progress

Notice Requirements

- Required Accompaniments Effects Period
 - Particulars of Expected Effects
 - Estimate of EOT Required
 - For a reasonable estimate = Delay Event Cease

- Mitigation requirements impact notice period

Notice Requirements

- Should the Notice be Condition Precedent when:
 - Delay event known by the Parties/SO
 - Where Delay event caused by the Employer?
 - Where Act of Prevention
- Otherwise Unfair?
- Does lack of or delayed notice prejudice Employer?
 - Only if it prevent Employer from mitigation

Notice Requirements

- Delay Event within the knowledge of the SO
 - Why Condition Precedent to Contractor's application
 - SO's common law duty to give EOT?
 - London Borough of Merton v Stanley Hugh Leach Ltd [1985] 39 BLR 51

Notice Requirement

- Delay Caused by Employer/Act of Prevention
 - Gaymark Investments v Walter Construction Group [1999] NTSC 143
 - Keating on Building Contracts
 - Considered Wrong Legal View
 - The late Prof. Ian Duncan Wallace : Informed Drafting
 - Peninsula Balmain Pty Ltd v Abigroup Contractors Pty Ltd [2002] NSWCA 211

Rely on Failure of Condition Precedent Notice?

- Risk of Converting LAD to Penalty - Prevention
 - Can SO issue CNC?
 - Can SO honestly state works ought to be completed by the CNC date?
 - Can Employer benefit LAD when it caused the delay?
 - Will that not make the LAD a penalty?
 - Is this a genuine pre-estimate of loss when there is no loss? Cured by Informed Drafting?

Notice Requirement

X Gaymark

- lack of notice in an act of prevention causes time at large because SO prevented from granting EOT
- Contractor cannot benefit from own breach of no notice and get loss & expense

✓ Gaymark

- implication that relying on lack of notice will lead to LAD being unenforceable
- Employer cannot benefit where it has committed wrong
- *Multiplex Constructions (UK) Ltd v Honeywell Control Systems* [2007] EWCH 447 (refers to prejudice to Employer)

Notice Requirement

- Time at Large & No LAD – considered wrong
- Illogical if benefit Contractor with time at large or loss and expense?
- Logical if don't benefit Employer with LAD
- Clear contract term to create the unthinkable
“LAD despite being the cause of Delay”

LAD despite causing the Delay

Dodd v Churton

“I think that such a construction as is contended for ought not to be put on an ambiguous clause and that it would require very clear language to show that a man had undertaken a responsibility which very few men will undertake with their eyes open”

Prof. Doug Jones “Can Prevention be cured by Time Bars” [2009] 1CLR Pt157, argues that clear language is needed.

LAD despite causing the Delay

Example:

“and in the event the Contractor fails to fulfill the condition precedent notice requirements for his entitlement to EOT, the Contractor agrees to complete the works by the date specified (not extended) by acceleration at the Contractor’s own cost notwithstanding that the Contractor may have in that instance been delayed by acts of prevention by the Employer”

Avoiding the Pitfalls

- SO assess delay without prejudice to right to refuse due to lack of notice?
- Employer agrees EOT with no loss & expense?
- Employer Unilateral Right to grant EOT
- Australian Std Forms (PC-1, NPWC3, AS 4300)
- CNC based on contractual extensions and not SO's opinion?
- Employer waives LAD for the affected period?

EOT Claim

- If condition precedent to EOT, could attract the same arguments as condition precedent notice of delay.
- PAM 2006: A condition precedent (otherwise deemed Contractor assess that the Relevant Event is not critical) but Architect can agree on extended period

EOT Claim

- Requires constant updating and preparation of impacted schedule to make immediate claims + all particulars if condition precedent applies
- If Architect ask for further particulars, deemed extended time of condition precedent

Condition Precedents

- Can be waived by the SO/Architect
 - Express waiver by saying it did not matter
 - Implied waiver by considering EOT application and making an assessment
 - Implied waiver by asking further particulars for assessment
 - Implied waiver by inviting application for extension of time
- Review post CPC (PAM 2006: CI 23.10)
 - Not obliged but if undertakes to review

Mitigation Without Fault

- Contractual v Common Law Duty
- Reasonable steps = financially & resource feasible
- Actions in the normal course of business
- Causes cost saving to Contractor not expense
- Question of Fact, Not Law
- Burden discharged easily by assertions (evidence of ability generally lies with contractor)
- Evidential burden switches to other Party to Proof No Reasonable Mitigation

Mitigation

- Cost Incurred in Mitigation Recoverable
- Failure to Mitigate = Contractor's Culpable Delay?
 - RP Wallace Inc v The US
- Best Endeavors?
 - IBM v Rockware Glass Ltd [1980] FSR 335
 - Steps that are within the power and ability but limited to those that are in self-interest

Mitigation

- Standard Forms = Ineffective Mitigation Provisions
- Joint Effort Mitigation is Needed
 - NEC Contracts
 - Early Warning Procedure
 - Risk Reduction Meeting & Risk Register
 - Agreed Steps & Cost of Mitigation
 - Pending Determination of EOT, Cost Shared

Forced Mitigation

- When Recovery/Catch-Up Program is demanded?
 - Is it mitigation or constructive acceleration?
 - Is such a mitigation plan binding?
- Issue with Reservations & Protest
- If entitlement to EOT proven or granted later, it is not an admission of liability for delay or a required mitigation
- It can become the basis for a constructive acceleration claim.

Prospective v Retrospective Assessment of Delay

- Truly Prospective – Likely/Probable Delay
- Completion Date Prospective but Retrospective Delay Event
- Truly Retrospective – just before or after CPC
- Is it dictated by the Contract or left to Owner to decide when?

Prospective v Retrospective Assessment

- Truly Prospective – Likely/Probable Delay
 - How to really consider Mitigation effects?
 - Unless Recovery/Catch-Up Program Issued
 - Without prejudice recovery/catch-up programs and constructive acceleration
 - PAM 98' : upon receipt of notice & on likely delay

Prospective v Retrospective Assessment

- Completion Date Prospective but Retrospective Delay Event
 - PWD 203 Rev 2007 : as soon as able to estimate the length of delay
 - PAM 2006 : upon receipt of final application within 28 days after cause of delay ended
 - SIA : after delaying factor ceases and possible to decide length of EOT

Prospective v Retrospective Assessment

- Truly Retrospective – just before or after CNC/CPC
 - PAM 2006 : within 12 weeks after CPC review and assess regardless of lack of notice
- Arbitrator & Analysis – to follow requirement of Contract?

Prospective v Retrospective

- When can mitigation effects be seen?
- When can actual delay be assessed? Just after delay event is over?
- Should Arbitrator's determine prospective when actual delay impact as-built can be analysed?
- Should there be immediate resolution process for delay disputes?
- Walter Lily case: cannot avoid retrospective view when dispute is being determined after completion of project

Time for Assessment of EOT

- If never assess at all = Time at Large
 - Top Speed Holding Sdn Bhd v Conlay Construction Sdn Bhd [2011] 1 MLJU 121
- If no Time stipulated = reasonable time
 - reasonable time based on the complexity & number of issues
- If stipulated (PAM 2006 = 6 weeks), shall assess
- Assess Late = Time at Large (as no more power to assess)

The Evidentiary Burden

All the Crowd would shout back

“Yes, yes, we believe you.”

But as the trapdoor snapped open,
the Crowd would yell

*“But you ain’t got no proof...
and given that the burden of proof is on you,
you can hang”*

Cause to Effect

“Proxima Causa”

“Causes are spoken as if they were as distinct from one another as beads in a row or links in a chain, but – if this metaphysical topic has to be referred to- it is not wholly so. The chain of causation is a handy expression, but the figure is inadequate. Causation is not a chain but a net. At each point influence, force, events precedent and simultaneous, meet, and the radiation from each point extends infinitely.”

*Lord Shaw of Dunfermline,
Leyland Shipping v Norwich Union Fire Insurance Society*

Proxima Causa

“The test is what an informed person in the building industry (not the man in the street) would take to be the cause”

Judge Bowsher QC

**P&O Developments Ltd v The Guy’s and St.
Thomas’s NHS Trust**

The Work Program

- Impacted Work Program
- A Scientific & Reasonable Method of Proof!
- Best Evidence Rule
- The Standard of Proof = Burden of Proof
- What is the Legal View? - Commentaries

John Barker Construction Ltd v London Portman Hotel Ltd

“the SO must:-

- 1. Apply the rules of the contract;*
- 2. Recognise the effects of constructive change*
- 3. Make a logical analysis, in a methodical way, of the effect of the developer’s time risk events on the contractor’s programme;*
- 4. Calculate, rather than make an impressionist assessment of, the time taken up by events”*

Mr. Recorder Toulson QC

CPN Impact

Critical Path Network Impact Assessment Accepted & Proven Method

- Henry Boot (Construction) UK Ltd v Malmaison Hotel (Manchester) Ltd
- Aoki Corp v Lippoland (Singapore) Pte Ltd
- Fischbach & Moore Int Corp.

Henry Boot (Construction) UK Ltd v Malmaison Hotel (Manchester) Ltd

“The Respondent was entitled to respond to the claim both by arguing that variations, late information and so on relied on by the Claimant did not cause any delay because they were not on the critical path....”

Aoki Corp v Lippoland (Singapore) Pte Ltd

“Without going into the full detailed methodology by which extension of time applications are evaluated, I wish to point out that the process of verifying and evaluating such applications require time. Further, in assessing the question of delay, one has to consider whether the alleged event relied on by the contractor falls on the critical path. Briefly, the critical path comprises the sequence of activities in a construction program in which a delay would have the effect of prolonging the overall completion period of the project”

Justice, Warren LH Khoo

CPN Impact

Not in all Cases

Has the Contract indirectly removed CPN

Best Evidence – Not challenged on CPN

- WB Construction Mountains Community Hospital [2005] WL
- Helena Assoc. LLC v EFCD Corp (New York)[2008] – used commonsense
- London Underground v Citylink [2007] (20 year replacement EPC project)
- Stop Speed Holdings v Conlay Construction

An Adequate As-Planned Work Program

- Is it Adequate to later substantiate an EOT Claim?
- What does Adequate mean?
- What standard of work program is required by the Contract?

An Adequate Work Program

- Henry Gantt's bar Charts w/o CPM?
- Software Program with CPM?
- Software Program with CPM & Float?
- Software Program with CPM & Float & Resource Allocation?
- How Detailed Should the Program be?

How Detailed?

- General Activities?
- Sub-activities & trades?
- Location Sequencing details?
- Co-ordination & Interface details?
- Information Lead Time details?
- 3rd party or SO approval details?
- Supply lead time details?
- Free-Issue lead time details?
- Temporary Works detailing?

How Detailed?

- Resource Sequencing details?
- Multi-level or multi-trade CPM?
- Logic Links
 - Physical Links (Start-Finish of Activity)
 - Resource Links (Start-Finish due to Resource)
 - Contractual Links (Start-Finish due to Approvals)
 - Strategic Links (Start-Finish with Floats)

Logic Checks & Approval

Manipulated As-Planned Program!

- As-Planned CPN Logic – Ensure it is logical?
- Hidden Floats
 - Sequential Works that can be carried out in Parallel
 - Unidentified Floats
 - Exaggerated late completions of activities
- Exaggerated early completion of activities

Logic Checks & Approval

- Omitted Free Issue delivery dates
 - danger of un-realized lead time
 - leaving it to implications
 - Star trek scheduling
- Unrealistically early Free Issue delivery dates
- Omitted Contractual Logic dates
 - Information
 - Approvals
 - Reviews

Approval of As-Planned Program

- Contractual Document – more weight
- Non-Contractual Document – still evidentiary tool but with less weight
- Approval only on logic!
- Approval but with mitigation obligation (re-scheduling non CPN works)!
- Cuts both ways - Contractor also bound by logic.

Approved As-Planned

- If program is contract document:
 - Impossible to follow : risk of Employer
Yorkshire Water Authority v Sir Alfred McAlpine & Sons 32 BLR 114
- Obligation to Mitigate (reschedule): reduces risk
- Contractor culpable actions can change program : then all risks switches

Ascon Contracting Ltd v Alfred McAlpine (Isle of Man) Ltd

“I do not accept [the contractor’s] attempts to disown the logic links in its own program”

John Hicks QC

Float

- Does it affect the assessment of EOT?
- Date of Completion Critical Path Activities cannot have float unless:-
 - Contractor planned early completion
- Contractor Planned Early Completion
 - If delayed to Contracted Date of Completion
 - No EOT, no loss & expense, Productivity Loss?

Float

- Free Float (Finish – Start Activity to Activity Float)
- Total Float (Activity to Date of Completion Float)
- Is there a distinction between critical floats and non-critical floats?

Float

- Critical Float
 - minimum planning time required
 - minimum procurement, fabrication & delivery time required
- Non-critical float
 - time safety factor
- Critical float should be identified differently
- Temporary Works Detailing with a critical path to the Permanent Works

Float

- Non-Critical Float can be considered when assessing likely delays (i.e. it can reduce truly prospective assessment)
- However, when assessing actual delays retrospectively, non-critical float that belongs to Contractor cannot be used to avoid or reduce the EOT
 - Aoki Corp v Lippoland (Singapore) Pte Ltd
 - The Royal Brompton Hospital NHS Trust v Frederick Alexander Hammond & Ors

Aoki Corp v Lippoland (Singapore) Pte Ltd

“Delay to activities falling outside the critical path may be absorbed by the “float time” allowed in the program so that the activity will not affect the completion date. There may be further complications where there are concurrent delays or multi-event delays attributable to different factors in which case the architect has to assess the critical cause of the delay and make due allowances, if any, when evaluating the length of extension to be granted.”

Justice, Warren LH Khoo [1995]

Aoki Corp v Lippoland (Singapore) Pte Ltd

“The suggestion in the last sentence of the passage quoted above to the effect that delaying factors outside the critical path program might be absorbed by the “float time” allowed in the critical path program might not be consistent with the basic position at law that the contractor is entitled to have the time initially allowed him by the contract to complete the works initially comprised in the contract, and any “float time” which he has within that over-all time is his for him to use to make up for any delays on his part in executing the works. It is arguable that the float time is in principle not available for accommodating variations and delays emanating from the employer or other delay events in respect of which the contractor is entitled to extension under the contract.”

Justice, Warren LH Khoo [2000]

The Royal Brompton Hospital NHS Trust v. Frederick Alexander Hammond and Others

“Under the JCT conditions, as used here, there can be no doubt that if an architect is required to form an opinion then, if there is then unused float for the benefit of the contractor (and not for another reason such as to deal with p.c. or provisional sums or items), then the architect is bound to take it into account since an extension is only to be granted if completion would otherwise be delayed beyond the then current completion date. This may seem hard to a contractor but the objects of an extension of time clause are to avoid the contractor being liable for liquidated damages where there has been delay for which it is not responsible, and still to establish a new completion date to which the contractor should work so that both the employer and the contractor know where they stand. The architect should in such circumstances inform the contractor that, if thereafter events occur for which an extension of time cannot be granted, and if, as a result, the contractor would be liable for liquidated damages then an appropriate extension, not exceeding the float, would be given.”

Judge Humphrey Lloyd

The Royal Brompton Hospital NHS Trust v. Frederick Alexander Hammond and Others

“What has to be established is the date when the information was actually needed, its absence on that date and the consequences of its absence in terms of time or money (probably both). The Court of Appeal rejected AA’s earlier case. Aldous LJ said:

“79. Mr Bartlett placed the blame upon Brompton for the way that the judge dealt with the timing claim independently from the quality claim. He went on to submit that the findings of fact were conclusive on the issue. I do not agree. I believe that Mr Edwards-Stuart is correct in his submission that clause 5.4 is a term which must be construed as imposing an obligation to provide the drawings when necessary in the sense that the drawings must be provided when actually necessary as opposed to when they were perceived to be necessary. No doubt in most cases the perceived need of a contractor will coincide with actual need, but this may not be such a case. ...”

Judge Humphrey Lloyd

Float & Ownership Belongs to Contractor

- EOT granted if float affected by delaying event?
- Only when the extent of the float used up results in the non-critical activity impacting the Completion Date because it caused a shift of the CP?
- But if it belongs to the Contractor, why show it in the as-planned work program?
- Silence on ownership but with float indicated in work program, should it not belong to Project by implication.

Float & Ownership Belongs to Project

- Either party may use the float period without liability for EOT
- First to use benefits
- Encourages the Contractor never to bother with early start
- Early start and delays occur : loss of productivity, efficiency & idling, not claimable?

Float & Ownership Belongs to Employer

- Contractor must progress by early start and early finish unless delayed by Employer culpable event
- Some Contracts gives right for Employer to instruct early start or otherwise, Contractor can use the float (Employer's option)
- If early start would have reduced effect of Employer culpable delay, it is to be taken into account

Properly Updated Baseline Work Program

- Work Programs & their contractual implications are not written in stone
- A work program is a living document on the progress and it must be updated to reflect the actual progress at any given time
- Actual Delays causing Actual Impacts is what the law is concerned with, not hypothetical based on the baseline work program (wishful as-planned at the commencement of the works)

Updating the As-Planned WP

- When Contractor wishes?
- When Delay Event is perceived by SO?
- When progress is found to be in variance?
- When Contractor claims or notifies of EOT?
- Any time wished and instructed by the SO?
- Periodical?
- Monitored Updating & Logic Re-checking?

Monitored & Re-checking?

- Avoid Manipulation!
- Misleading Updates due to automatic update
- Failure to reflect actual mitigation
- Failure to reflect accurately any variation impact (omission or addition)
- Allows accurate impact assessments at the appropriate time
- Pro-Contractor because claim is certain
- Pro- Employer because extent of liability is also certain

Actual Impact at the time when the Delay Occurs

- Failure to reliably update the baseline work program is not reflective of actual impact
- Purported updated as-planned work program that was misleading as to the actual situation at site cannot be relied on
- Actual progress can change the critical path
- Must reflect the actual progress and conditions existing immediately prior to the occurrence of the delay event

Actual Impact at the time when Delay occurs

- Must reflect whether contractor's actual progress is such that the supposed impacted as-planned works were at that time in fact ready to be carried out as-planned
 - Great Eastern Hotel Company Ltd v John Laing Construction Ltd
 - Royal Brompton hospital NHS Trust v Fredrick A Hammond [No.7] [2001] 76ConLR 148
 - Henry Boot Construction (UK) Ltd v Malmaison Hotel (Manchester) Ltd [1999]

The Need for A Properly Updated WP

- Kemron Environmental Services Corp
- WG Yates & Sons Construction Co
- The Gasman Corp
- Motherwell Bridge v Micafil
- Gasing Heights Sdn Bhd v Pilecon Building Construction Sdn Bhd [2000] 1 MLJ 621

Great Eastern Hotel Company Ltd v. John Laing Construction Ltd.

“From November of 1997 [the management contractor] seriously unreported [sic] the delays on a monthly basis occurring to the project, against the master program. The most flagrant example according to the [the employer] occurred in December of 1998 when the recovery program... was presented. [The management contractor] reported a 20 weeks delay as against 34 assessed by he experts. During October of 1997 to February of 1998 inclusively a 5 month period, [the management contractor] reported monthly delays to the project of 8 weeks only. Alterations were made to the updated copies of the master program, which had the effect of showing that no further critical delays were occurring during that reporting period, when in fact because of [the works contractor’s] performance the delay to the temporary roof and the consequential effects were much greater.”

Great Eastern Hotel Company Ltd v. John Laing Construction Ltd

“...in my judgment there is no doubt that [the management contractor] did deliberately submit incorrect information on the delay and the causes of the delay. It translates to causal effect... I accept that had [the management contractor] accurately reported delays and faced up to them there would have been little difficulty reorganizing the contract before trade contracts commenced, so that they were properly coordinated in accordance with the actual progress of the project... I accept that is one of the key skills which a [management contractor] is supposed to bring to a project, and that their failure to properly report progress meant that they were unable to do this, and [the employer] and the professional team were not in a position to push [the management contractor] to do so. In consequence [the employer] was exposed to the inevitable claims for prolongation, delay and disruption as a direct consequence of [the management contractor’s] breaches.”

H.H.J. Wilcox

Royal Brompton Hospital NHS Trust v. Frederick A Hammond

“In order to make an assessment of whether a particular occurrence as affected the ultimate completion of the works, rather than just a particular operation it is desirable to consider what operations, at the time the event with which one is concerned happens, are critical to the forward progress of the works as a whole. On the evidence of [the experts] the establishment of the critical path of a particular construction project can itself be a difficult task if one does not know how the contractor planned the job. Not only that, but the critical path may well change during the course of the works, and almost certainly will do if the progress of the works is affected by some unforeseen event.”

Judge Humphrey Lloyd

Henry Boot Construction (UK) Ltd v. Malmaison Hotel (Manchester) Ltd

“[the employer] denies that the Works were delayed by the matters alleged by [the contractor], and asserts that [the contractor’s] analysis of delay is ‘misconceived and flawed’... In short, [the employer] says that the events relied on by [the contractor] did not in fact delay progress of the Works for various reasons. These include the fact that [the contractor’s] assessment of delay was based on a revised program which ignored the true state of the works at the date of the issue, the part of the work affected by the [employer’s time risk events] was not on the critical path, and the fact that ‘[the contractor’s] delay analysis does not take into account any culpable delay on its part or actual delay on its part or actual progress at the time of the events relied upon.”

Henry Boot Construction (UK) Ltd v. Malmaison Hotel (Manchester) Ltd

“I accept the submissions of [counsel for D]. It seems to me that it is a question of fact in any given case whether a [employer’s time risk event] has caused or is likely to cause delay to the works beyond the completion date in the sense described by Colman J. in the Balfour Beatty case.”

Dyson J.



Kemron Environmental Services Corp

“[the contractor] could not begin work until its... design was approved and it submitted its second design within a reasonable period of time after [the employer] improperly disapproved its first design. The only evidence which suggest that [the contractor] might not have been delayed is found in its revised project schedule. However, in as much as it is apparent that the schedules were not updated to reflect contemporaneous events and the record contains no relevant explanations, we find them to be inherently unreliable for purposes of determining the number of days [the contractor] was delayed.”

The Appeal Board, USA

W. G. Yates & Sons Construction Company

“Based on [the contractor’s] failure to segregate the steel work performed after 26 March 1993 into structural steel and miscellaneous steel work, [the contractor’s] failure to provide an updated work schedule for the period after 3 October 1992, and [the contractor’s] own (site diary) entries characterizing much of the work performed after 26 March 1993 as ‘misc steel work’ and structural steel for shops B and the contractor, pumphouse, and administrative offices we conclude that the erection of the structural steel, i.e. the truss erection and fill-in steel, was substantially completed on 26 March 1993 when the [contractor’s supervisor] left the site; and that the work after 26 March did not follow a single critical path but ran through a number of different activities including masonry, carpentry, skin, metal decking and roofing... [the contractor’s] contention that a study was performed from which it was determined it took 4 men 10-11 hours to change one splice plate segment is at best questionable... We conclude the alleged study is nothing more than generalized unsupported self serving opinion testimony which we have held does not reach the level of credible proof.”

The Appeals Board, USA

The Gasman Corporation

“...neither [the contractor] nor its expert ever modified the CPM schedule to reflect [the contractor’s] change in the logic regarding erection of steel. The schedule’s usefulness in evaluating the alleged slab ‘delay’, therefore, is limited... [The] CPM schedule must be current to evaluate project... whether a ‘change’ affects critical path must be determined on basis of conditions existing immediately prior to its occurrence... [The] CPM schedule must reflect actual performance to be reliable basis for evaluating delay.”

L&C Europa Contracting

“In no instance, has [the contractor] attempted to identify and track the allegedly delayed work in the daily reports and account for the delay period. Only the (pre-construction planned program) is in evidence. There are no updated (program) in the record that might demonstrate the relationship of the alleged delays to other work at the site, or the timing and impact of alleged delays on overall completion of the contract. The record does not permit segregation of any delays caused by [the contractor] and/or delays extending over unexplained gaps in [the contractor’s] on site performance.With respect to the nature of the proof offered by [the contractor] generally, [the contractor] for the most part relies on general, unspecific and conclusive testimony that was not credible.”

Motherwell Bridge v Micafil

“This tends to confirm the conclusions which I had in any event reached which is that Mr. Pye’s approach should be accepted both in relation to extension of time under the contract and..... The recent impacted delay analysis included in the Scott schedule meant that the final reception test concluded milestone was delayed from 13.11.1998 to 9.2.1999, a period of 13+ calendar weeks. The delay to the completion of the works was such that Mr. Pye’s evidence is that MBST were entitled to an extension of time of not less than 44 weeks.”

Judge John Toulmin CMG QC

Balfour Beatty Construction Ltd v The Mayor & Burgesses of Lambeth

“the foundation must be the original program (if capable of justification and substantiation to show its validity and reliability as a contractual starting point) and its success will similarly depend on the soundness of its revisions on the occurrences of every event, so as to be able to provide a satisfactory and convincing demonstration of cause and effect. A valid critical path (or paths) has to be established both initially and at every later material point since it (or they) will almost certainly change”

McAlpine Humberoak Ltd v McDermott International Inc

“the Judge dismiss the Defendant’s approach to the case as being a retrospective and dissectional reconstruction by expert evidence of events almost day by day, drawing by drawing, TQ by TQ and weld procedure by weld procedure, design to show that the spate of additional drawings which descended on McAlpine virtually from the start of the work really had little retarding or disruptive effect on its progress. In our view, the Defendant’s approach is just what the case required.”

Llyod L.J.

Progress Reports

- Daily & Monthly Reports?
- But are the Contents Adequate?
- Are the Veracity of the Reports intact?
- Probative Value? 
- Minutes of Site Meetings?
- Correspondence?

Contents of the Progress Report

Apart from the Normal Information:-

- Affect of the Weather on the Work Condition?
- Works Performed – Cross Referred to WP?
- The Measure of the Works Done?
- Time Spent by Resources & Down/Idle Time?
- Reason for Down/Idle Time?
- Resource Transfers & Reasons?
- Mitigation Steps?

Contents of the Progress Report

- Materials Received?
- Variation, Rectification, Inspection, Re-opening Works Identified?
- Works affected by RFI (Information & Inspection) Identified?
- Delays & Disruptions Identified & Reasons
- Resources affected by Delays & Disruptions Identified?
- Accidents & Site Visits?
- Corroboration = Progress Photographs or Videos

Veracity of the Reports

- Approved/Agreed? – COW/ PM/Consultants?
- Contemporaneity? – daily & prepared daily?
- Neutrality? – Favourable & Adverse
- Formal & Consistent – Format & Process?
- First Hand Recorder – Not hearsay? Weight?
- Security? Multiple Copies?
- Distributed & Unchallenged?
- Consistency with other Documents? External & Internal

Veracity of the Reports

- Legible Handwriting?
- Information within contradictory?
- Photographs not labeled?
- Photograph location not identified?
- Date & time of photograph not identified?
- Sub-contracted Works : no records?

Method of Impact Analysis

Forensic Scheduling

- Impacted As-planned Method (modeled)
- As-Planned v As-Built Method (observational)
- Snapshot Time Impact Method or Time Audit (observational)
- Collapsed As-Built Method (modeled)
- Time Impact through Windows or Slicing Method (modeled)

Q. of Details & Sophistication

Impacted As-Planned

- Treats the As-Planned Non-Updated Program as written in stone
- Critical Path never changes
- Can be based upon updated as-planned programs although it could reveal delays by Contractor
- Ignores the actual happenings in the site except for the delay events claimed
- Assumption that Contractor has been perfect with zero problems and exactly on schedule but for the claimed event
- Even so, why not updated? If not obliged? Some factual evidence of Contract inefficiency will destroy the method
- Concurrent delays ignored

As Planned v As-Built

- Comparison of As-Planned & As-Built with some identification of what caused the delay
- Ignores critical path changes
- Superficial method
- Fails to consider knock-on effects
- Concurrent delays are ignored
- Ignores re-sequencing or accelerations

As Planned v As Built

- Sunshine Construction & Engineering Inc v US
64 Fed Cl.346 [2005]
 - Used actual updated reflective as-planned schedules
- SAE/American, GBSCA No.12710, 98-2BCA
 - Used accurate look-ahead programs
- City Inn v Shepherd Construction [2007]
 - Rejected collapsed as-built
 - Accurate as-planned schedules existed
 - All contractors delays identified : concurrent

Collapsed As-Built

- Rebuilds Program using actual as-built
- Re-creates the critical path : the actual as-built
 - but does it on the reverse: from completion to commencement
 - Remove alleged delays to show return to as-planned
 - Ignores mitigation or re-scheduling or concurrent delays
- Donohue Construction Comp, ASBCA No.47310, 98-2 BCA

Time Impact Method

- Danger if it ignores some actual facts
- Need to be aware of actual progress when relevant delaying event actual impact being considered
- Prior delays could have been recovered
- Prior delays could have actually had lesser impact than projected on program
- Total Retrospective: Modified Time Impact (Discounts on Mitigated Earlier As-Built Completions)

McAlpine Humberoak Ltd v McDermott International Inc

“the Judge dismiss the Defendant’s approach to the case as being a retrospective and dissectional reconstruction by expert evidence of events almost day by day, drawing by drawing, TQ by TQ and weld procedure by weld procedure, design to show that the spate of additional drawings which descended on McAlpine virtually from the start of the work really had little retarding or disruptive effect on its progress. In our view, the Defendant’s approach is just what the case required.”

Llyod L.J.

Time Impact Analysis

If no inaccuracies : best method

- Bell BCI Co v US, 81 Fed Cl 677
- Mirant Asia-Pacific Construction (HK) Ltd v Ove Arup Partners Int. Ltd. [2007] EWHC 918
 - Weekly or Monthly windows on updated programs
 - Watershed or Snapshot : Less Reliable
- AEI Pacific Inc, ASBCA No.53806, 08-01 BCA
 - choose some events & not others : unreliable

Skanska Construction UK Ltd (formerly
Kvaerner Construction Ltd) v Egger (Barony)
Ltd

“It is evident that the reliability of Mr Pickavance's sophisticated impact analysis is only as good as the data put in. The court cannot have confidence as to the completeness and quality of the input into this complex and rushed computer project.

Judge David Wilcox

•

Leighton Contractors (Asia) Ltd v Stelux Holdings Ltd

“If Leighton was still working on the substructure when it requested tender information from Stelux, the information could not then have been necessary. Due to Leighton’s own substantial delay, there was ample time for the information to be provided much later, even after the original program date. On the facts found by the Arbitrator, the tender information can neither have been “necessary” when requested by Leighton nor out of “due time” when provided by Stelux.”

Hon. Reyes J

Leighton Contractors (Asia) Ltd v Stelux Holdings Ltd

“In the actual circumstances of the case, looking prospectively from the time of Stelux’ initial failure to provide information, Stelux’s failure could not have be causative of delay. The late information could not cause actual delay, having regard to the state of the works at the time when the information ought to have been furnished originally”

Hon. Reyes J

Leighton Contractors (Asia) Ltd v Stelux Holdings Ltd

“The Arbitrator found against Leighton on actual delay. She further held that, given Leighton’s pleaded case and the facts as found by her, she did not have to concern herself with “likely delay” under cl.23. In those circumstances, it is not surprising that the Arbitrator found time slice methodology of little help. Stressing prospective delay regardless of actual delay, time slice methodology would have been of limited relevance.....”

Hon. Reyes J

Leighton Contractors (Asia) Ltd v Stelux Holdings Ltd

“The analysis pressed by Mr. Menyhart (Leighton’s expert) focused on the prospect of delay resulting from an event at a given time, regardless of whether in retrospect the event had actually caused delay. The Arbitrator rejected Mr. Menyhart’s analysis entirely. In contrast, the Arbitrator found the evidence of Mr. Foan (Stelux’s expert) more helpful. He also used “time slice” methodology. But his approach was different in focus. The Arbitrator observed that Mr. Foan “does not consider off-site delays until they affect “on-site” activities and then only to the extent that they do....”

Hon. Reyes J

Water Lilly v Giles Patrick Mackay [2012] EWHC 1773

- The debate on prospective or retrospective delay analysis is sterile because both approaches should produce same result if done properly
- Court or arbitrator has advantage of reviewing EOT retrospectively knowing what actually happened and cannot ignore it because it is actual despite whatever the expert may say.
- Court or arbitrator must make decision based on evidence both from the expert and actual.

Water Lilly v Giles Patrick Mackay [2012] EWHC 1773

- Snagging is an inevitable feature of complex projects and time taken for snagging is not delay caused by the contractor unless it is excessive

Expert Analysis

Daubert Test

Daubert v Merrell Dow Pharmaceuticals Inc,
509 US 579 [1983]

- Can be tested against facts objectively
- Not purely subjective conclusions
- Analysis method: subject to peer review & publication
- Known potential rate of error in method
- Existence of standards & controls
- Generally accepted in scientific community

“International Recommended Practice no.29 R-03, Forensic Schedule Analysis, TCM Framework [2007]”

- It is not an exact science
- Accuracy = quality of data + accuracy of assumptions + accuracy of subjective judgments
- Schedules : tool but not necessarily accurate on causation or responsibility

Arbitrator

Cannot Ignore Actual

- Harrison Western Corp & Franki-Denys Inc (JV)
ENGBCAA No.5556
 - Contractual required method : prospective snapshot was not accepted
 - Actual mitigated effects/other later delays were considered
- Clark Construction Group Inc, GAOCAB
No.2003-1
 - US Board of Contract Appeals performed their own windows analysis

Concurrent Delays

“Can’t separate the wheat from the chaff”

- True Concurrent Delay
 - Contractor culpable and Employer culpable events commence at the same time to the same critical item of work and has the same delaying effect
- Concurrent Delaying Effect
 - Distinct Delays to distinct items of works which can be sequential but both result in the same critical overall delayed period

Concurrent Delays

- Sequential Delays but resulting in some shared delay period
 - Prospective Time Slice Delay Assessment, chances of concurrent delays slim in terms of dominance
 - But at the time of the shared delay period, both equally material
 - If not concurrent then one party can benefit even when at culpable fault (LAD or Loss & Expense)

Concurrent Delays

- “But For” test does not apply
 - SMK Cabinet Hili Modern Electrico Pty Ltd [1984] VR 391
- “Dominant” test does not apply
 - H. Fairweather & Co Ltd v London Borough on Wandsworth 36 BLR 106
- “Equal Causative Potency” test applies
 - Steria Ltd v Sigma Wireless Communications Ltd [2008] BLR 79
- Question of Fact – What is Fair & Reasonable

Equal Causative Potency

Adyard Abu Dhabi v SD Marine Services [2011] BLR 384

- A period of project overrun which is caused by 2 or more effective causes of delay which are of approximately equal causative potency
- Each taken on its own would be regarded as the cause of the whole delay but they must be of equal causative potency ie. effective cause
- (what is meant in programming sense is based on the 1st in time delay event, are they truly of same causative potency)

Equal Causative Potency

- The 1st in time consideration accepted by Judge Richard Seymour QC
- Royal Brompton Hospital NHS Trust v Hammond (No.7) [2001] 76 Con LR 148
 - Real concurrency as compared to theoretical concurrency

(disagreed in City Inn Ltd v Shepard Construction Ltd [2008] BLR 269 & [2010] BLR 473)

Prevention v Causative Potency

Adyard Abu Dhabi v SD Marine Services [2011] BLR 384

- Need for actual delay caused by act of prevention

Jerram Falkus Construction Ltd v Fenice Investments Inc (No.4) [2011] BLR 644

- Prevention principle does not apply if the 1st in time delay is contractor's culpability which is more causative
- Distinguished SMK Cabinets as not being truly concurrent delay situation

SMK Cabinets v Hili Modern Electrics Pty Ltd [1984] VR 391

- Prevention principle applies

Hudson's para 6-060

- Prevention principle applies even if concurrent or 2nd in time because employer should not be entitled to LAD

Monetary Claims

- But For Test Applies to Causative Effect to Damages – Keating para 9-070; De Beers Case

But:

Heskell v Continental Express Ltd [1950] 1 ALL ER 1033

Great Eastern Hotel Company Ltd v John Laing Construction Ltd [2005]

- Not applicable to separate contract breakers where both effective cause of damage (can sue either one) – policy reason as otherwise no remedy to innocent party

Water Lilly v Giles Patrick Mackay [2012] EWHC 1773

- City Inn Ltd v Shepard Construction Ltd [2010] BLR 473 suggestion of “apportionment” is inapplicable for concurrent delays
- EOT clauses do not envisage apportionment.
- Time Impact analysis on employer culpable delay period occurring during an earlier contractor delay culpable period does not relieve the employer if it is after original completion date. Net EOT would apply.

Water Lilly v Giles Patrick Mackay [2012] EWHC 1773

- Claims Consultants documents are not legal advise privilege even if the claims consultants use legally qualified personnel.
- Preferably appointed under services rendered by a lawyer – then legal privilege attaches.

EOT Refused?

- Mitigate Delay Effect under Protest
 - Instructed to Catch-Up/Recover Delay
 - Constructive Instruction by Threat of LAD
- All Cost Incurred in Mitigating Delay
 - Reasonably Incurred
 - Regardless of total success or partial success
 - Constructive Acceleration Claim
- Constructive Acceleration
 - Discounted by Non-Compensable Excusable Delays
 - US Law : Non-Compensable provision fails if no EOT

SCL Protocol

- Excusable delay with catch-all prevention clause
- Avoid strict condition precedent notice requirements
- Application & Assessment close to time of delay event
- Prospective determination which are retrospective delay event
- Determination based on Time Impact Analysis

SCL Protocol

- Agree on Analysis Method
- Agree on Expert to perform analysis
- Immediate reference to dispute resolution when EOT not agreed
- Non-Critical Floats to belong to Project
- Contract to stipulate ownership of float
- Sequential delay events with a concurrent effect period should be treated as concurrent delay = x dominant delay

What are Global Claims

- No nexus between specific causes to specific effects to specific loss.
- Total costs claim
 - one lump sum claim for all causes to effects
 - actual costs minus planned costs
- Rolled up claims
 - many causes to one effect
 - many causes to many effects

Why Global Claims

- How the Courts were won at pleading stage
 - construction claims are highly complicated
 - many overlapping causes causing overlapping effects
 - impracticable or impossible to accurately apportion damage to particular causes/effects
 - impracticable or impossible to link causes to effects

Why Global Claims

- perhaps influenced by the belief that at the hearing
- experts will crystallize the nexus
- evidence of the facts will support the nexus

At Hearing Stage

- Courts insist on evidence of nexus
- Warned that if one cause fails or one effect fails – all fails (causes, effects & sums)
- Many causes to one effect, one cause proven is sufficient for the total costs claimed

Weakening of the Standards of Proof for Cause to Effect

- John Doyle Construction Ltd. v Laing Management (Lord MacFadyen)
- Accepts the need for proof of nexus
- Accepts the logic of the warnings
- However provides subjective rescue options
 - common sense approach providing any cause still standing is dominant; or
 - subjective assessment of apportionment providing cause still standing is material although not dominant.

Weakening of the Standards of Proof for Cause to Effect

- London Underground Ltd v Citylink
Telecommunications Ltd [2007] EWHC 1749
(applied rescue options to rolled up causes to effect)

Criticism of John Doyle

- There ought not be rescue options
- Dominance is in any event the test to prove causation or nexus – if dominance existed no need for rescue
- Material is also a term used to establish the effective causation
- Judge seems confused as to dominance -v- material

Criticism of John Doyle

- Ignores adversarial system of parties proving the apportionment
- Ignores natural justice – no opportunity to the respondent to address the subjective apportionment exercise of the Courts
- Never considered the availability of technology and scientific tools of proving cause to effect

General Criticism of Global Claims

- Computer aided tools allow practicability and in fact, ability to prove nexus
- Forest technique of pleading
- Evidential burden switches to respondent to analyze claimant's causes to effects
- Proliferation of time and costs
- Allows bogus claims and 'hopeful' claims
- *'throwing enough mud in the hope that some will stick'*

Walter Lily Case

- Global claims permissible
- If one or more events causing the loss and expense is fault of contractor, undermine entire claim
- If possible to assess effect of contractor's fault and extract it, the rest of global claim can succeed
- Global claim can still succeed even if best analysis is not used or prevented from use due to Contractor's inadequate records

- Is the Pandora's box on how to prove cause to effect for EOT and loss and expense re-opened through the disguise of a global claim?

- “Penalty” for finishing late
- True rationale:
Employer would have had to incur costs for prolongation – compensation
- Intended to represent an estimate of the Employer’s actual costs for the prolongation
- Burden on Contractor to avoid LAD – Time at Large or EOT entitlement or others?

LAD & Time At large

- In UK – it must be a “genuine pre-estimate” of the loss.
- Otherwise it is a “penalty”
- – Not enforceable
- – intention shouldn’t be to punish or to deter

-
- In Malaysia : S75 Contracts Act
 - "When a contract has been broken, if a sum is named in the contract as the amount to be paid in case of such breach, or if the contract contains any other stipulation by way of penalty, the party complaining of the breach is entitled, whether or not actual damage or loss is proved to have been caused thereby, to receive from the party who has broken the contract reasonable compensation not exceeding the amount so named or as the case may be, the penalty stipulated for."

LAD & Time At large

Selvakumar a/I Murugiah v Thiagarajah a/I Retnasamy [1995] 1 MLJ 817 [The Federal Court] -

- this section applies to any provision for LAD in a contract.
- regardless of the LAD figure in the contract, Section 75 said that the party complaining of the breach (in this case the Employer complaining of delay beyond the completion date) is entitled to receive reasonable compensation not exceeding the LAD or the LAD figure itself.
- an Employer does not get to receive the LAD figure automatically but instead an Employer could be entitled to only receive reasonable compensation which can be lower but not exceeding or higher than the LAD figure. This applies to situations where actual damages for the delay can be proven because there is a method or measure to establish such damages.
- the Employer can in some situations receive the LAD figure itself if it is difficult to assess actual damages because there is no known method or measure to establish such damages.

Entitlement to LAD

- PAM'98 clause 22.2 – “LAD is deemed to be the actual loss Employer will suffer”
- PAM 2006 clause 22.2 – “LAD is a genuine pre-estimate of the loss or damage Employer will suffer”
- “Without the need to prove the loss”

This has led to the High Court accepting that parties have contracted out of S.75

Time At large - LADs

- Time at Large prevents LAD
 - No Fixed Time for Completion, to be determined by Arbitrator
 - CNC is invalid
 - LAD is based on fixed time for completion
- Burden on Employer to show Time & Damages
- Whatever time is determined as reasonable time will be inclusive of all time entitled by Contractor for EOT
- Residual Delay Period for which Contractor is liable: Employer can only claim Actual Damages

LAD Ineffective

- No figure stated
- No figures for sectional completion
- No apportionment provision for partial possession
- Cert for Partial Possession not issued
- No CPC

❖ Certificate of Non-Completion

- Pre-requisite/condition precedent to charging LAD
- No CNC – No LAD
- Invalid CNC – No LAD

LAD & Time At Large

- What's an invalid CNC?
- A superceded CNC
- CNC issued, then Architect changes his mind and grants an EOT.
- If extended date not met, must issue a fresh CNC
- A. Bell v CBF [1989] 46 BLR 102

-
- An unfair CNC does not prevent LAD
 - Architect/SO refuses EOT
 - Badly reasoned or no reason given
 - Arbitrator later finds EOT ought to have been given

❖ A flawed CNC

- Basis of granting or withholding EOT is flawed
- Then CNC is also flawed
- Tropicon v Lojan [1989] 3 MLJ 216

- An Unconsidered CNC
- Architect/SO fails to exercise his opinion
- John Barker v London Portman (1996) 83 BLR 31

Disruption

- Non-critical disruptive effects
- Not delay the Date of Completion
- Yet causes Contractor to increase resources
- Affects productivity & efficiency
- Space constraints or working constraints
- Eats up float but increases period of deployment of resources



The End

Thank You

Q & A