



**Project Controls**  
E X P O

---

# **Project Controls Expo – 13 October 2015**

## **Emirates Stadium, London**

### **Scream If You Want To Go Faster**

**The contractual, legal, financial and  
practical aspects of acceleration**

**David Bordoli and Helen Bentley**



**Project Controls**  
E X P O

Copyright © 2015 All rights reserved

**driver** GLOBAL  
CONSTRUCTION  
CONSULTANCY

# Introduction



**Project Controls**  
EXPO

Copyright © 2015 All rights reserved

**driver** GLOBAL  
CONSTRUCTION  
CONSULTANCY

# About David

---

## ■ David Bordoli

Director - Forensic Delay Analyst

- Chartered Builder
- Over 35 years of construction industry experience
- Academically and professionally qualified
- Co-author of 'A Handbook for Construction Planning and Scheduling' (Wiley Blackwell, 2014)
- Experienced expert witness – first appointment in 1989. Currently involved in a major infrastructure arbitration in South Africa
- Wholly proficient in planning and delay software and applications



# About Helen

---

## ■ Helen Bentley

UK Consultancy Director

- Chartered Civil Engineer
- Academically and professionally qualified
- Common sense approach analysis
- Extensive contract administration experience
- Recent live project involvement
- Over 30 years of engineering and construction experience
- Advised on a wide number of contracts including NEC3, PPC2000, JCT, ICE, and bespoke forms of contract.



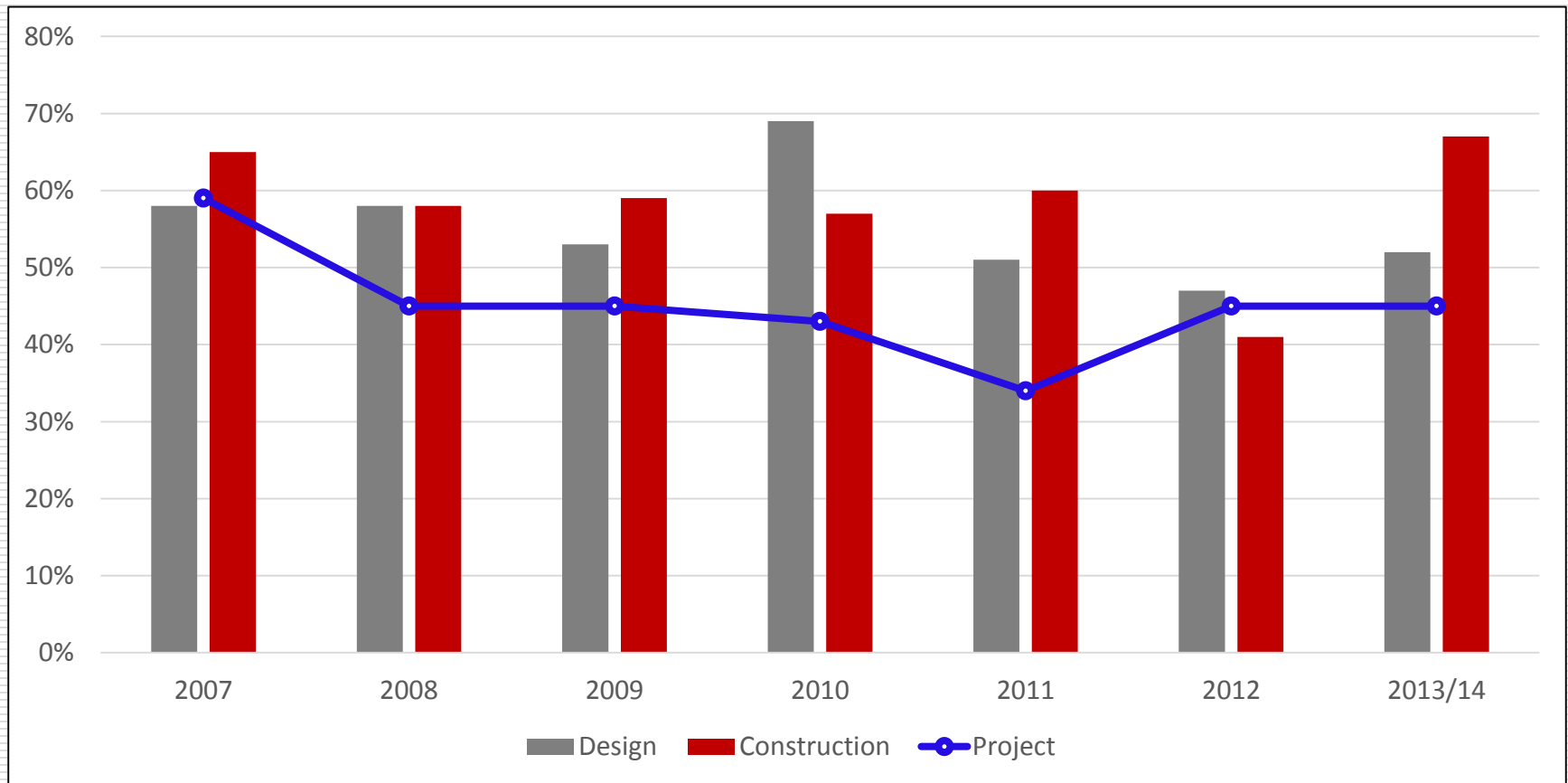
# About Driver

---

- **Driver Group provides support to the engineering and construction industries it serves, from start to finish**
- Global construction consultancy
- Established in 1978
- Stock exchange listed plc. – AIM (2005)
- Market leader in expert witness, planning, commercial, and disputes.
- Over 300 global staff
- Network of offices across Africa, Americas, Asia Pacific, Europe, and the Middle East
- Global reach with projects undertaken worldwide

# About the Topic

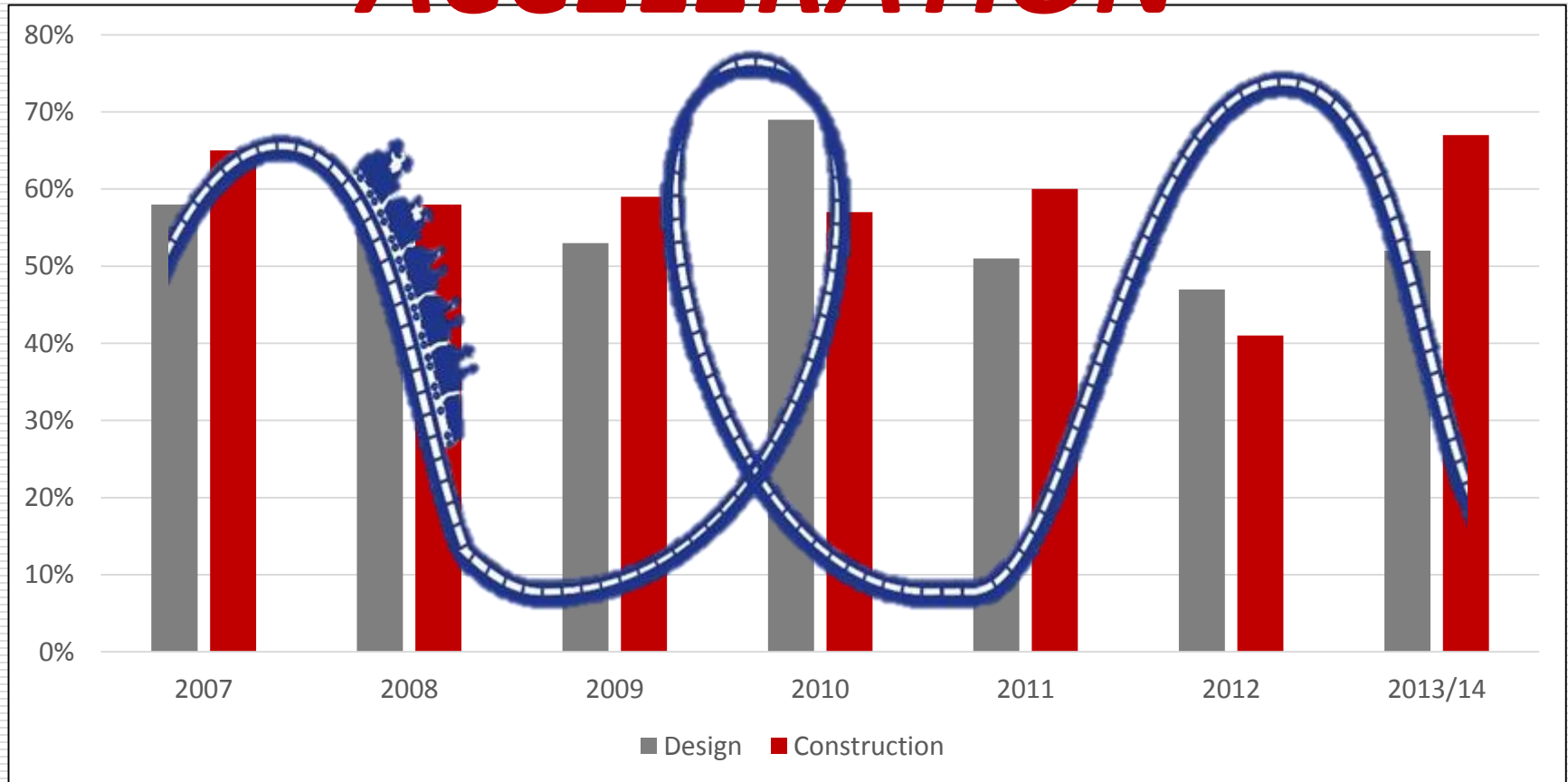
## ■ Most construction and engineering projects finish late



# About the Topic

■ Most construction and engineering projects finish late

# ACCELERATION



# About the topic

---

- How do we know where we are?
- How do we know where we are going?
- How do we change where we are going?
  
- Acceleration – Mitigation – Disruption
- Forms of Contract and what they say
- Case Law
  
- Project controls in action



# Acceleration – Disruption - Mitigation

---



# Acceleration

---

- Increasingly an issue, when project completion **MUST** be achieved on time.
- An opportunity and a risk to all parties to the contract....
- **Accelerate *vb.***
  1. to go, occur or cause to go or occur more quickly; to speed up
  2. to cause to happen sooner than expected
  3. to increase the velocity of...

# Acceleration

---

## ■ The need to accelerate

- Slow release of design information, design changes,
- Changed ground conditions,
- Poor construction or project management of the works,
- Changes or additional works instructed, but without any time extension,
- Employer's instructions to complete the whole or part of the works earlier than planned.

[Keane & Caletka 2015]

# Acceleration

---

## ■ Acceleration

- *“The execution of the planned scope of work in a shorter time than anticipated or the execution of an increased scope of work within the originally planned duration.”*

[Society of Construction Law]

## ■ Directed Acceleration

- *“The buying back of a time extension due to the contractor under the terms of the contract in an effort to complete the work within the existing contract completion date.”*

[US Army Corps]

# Acceleration

---

## ■ Constructive Acceleration

- *“Acceleration following failure of the Employer to recognize that the Contractor has encountered Employer Delay for which it is entitled to an EOT and which failure required the Contractor to accelerate its progress in order to complete the works by the prevailing contract completion date. This situation may be brought about by the Employer’s denial of a valid request for an EOT or by the Employer’s late granting of an EOT. Not (currently) a recognized concept under English law.”*

[Society of Construction Law]

## ■ Constructive Acceleration

- *“An act or failure by the Employer which does not recognize the Contractor has an entitlement to EoT for an excusable delay, which required acceleration to complete in the existing contract timescale.”*

[US Army Corps]

# Acceleration

---

## ■ Acceleration Measures

- Increased resources
- Increased working hours
- Incentives
- Changed methods of working
- Rescheduling work

# Disruption

---

## ■ Disruption

- *“Disturbance, hindrance or interruption of a Contractor’s normal work progress, resulting in lower efficiency or lower productivity than would otherwise be achieved. Disruption does not necessarily result in a Delay to Progress or Delay to Completion.”*

[Society of Construction Law]

# Disruption

---

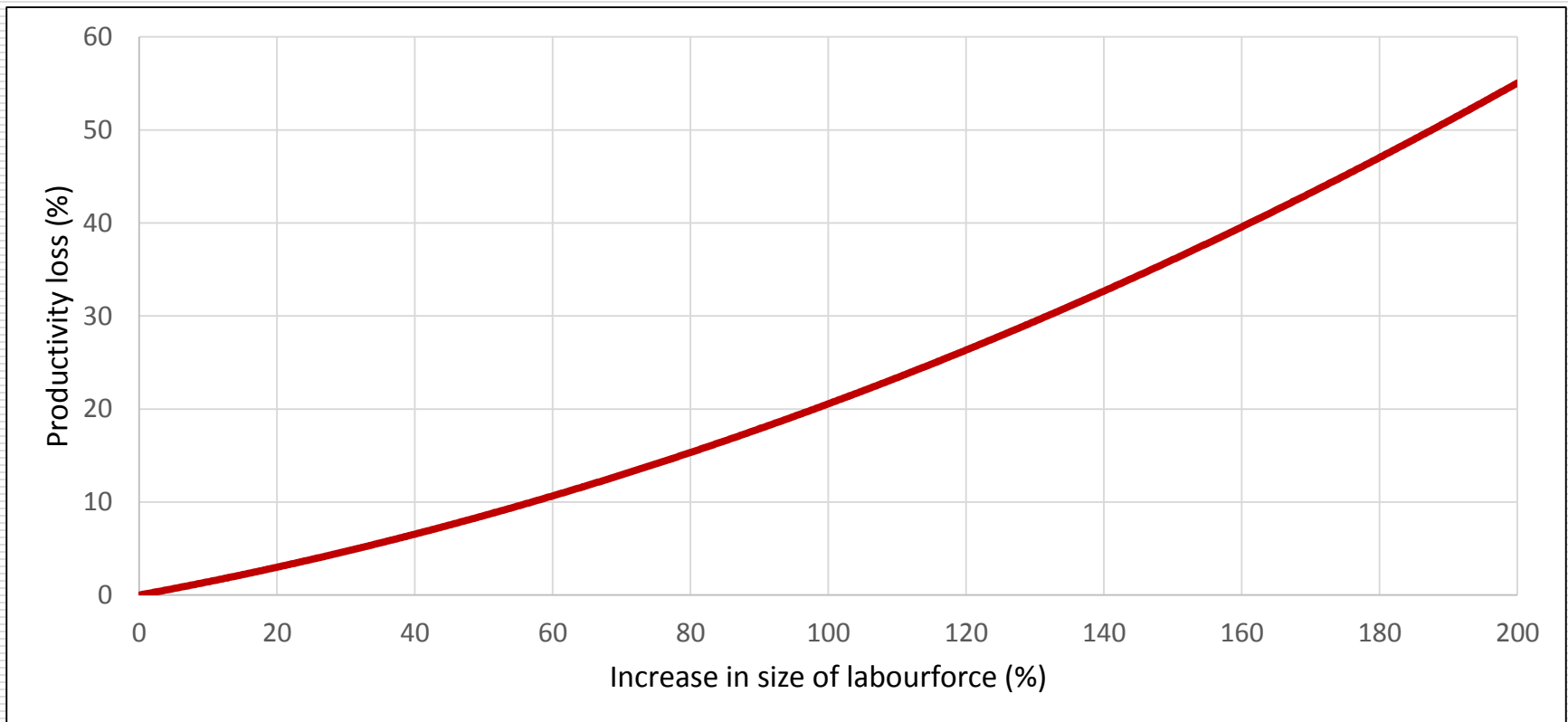
- **Causes of disruption**
  - Loss of job rhythm
    - Premature moves between activities
    - Out of sequence working
    - Repeated learning cycles
  - Work area congestion
    - Stacking of trades
    - Increased gang sizes
    - Increased length or number of shifts



# Disruption

---

## Productivity vs increase in size of labourforce



# Disruption

## Productivity vs working space



# Disruption

---

## ■ Acceleration Measures

- Increased resources
- Increased working hours
- Changed methods of working
- Rescheduling work

## ■ Causes of disruption

- Increased gang sizes
- Increased length or number of shifts
- Repeated learning cycles
- Premature moves between activities
- Out of sequence working

# Mitigation

---

## ■ Mitigation

- *“Mitigate means making less severe or less serious. In connection with Delay to Progress or Delay to Completion, it means minimising the impact of the Risk Event. In relation to disruption or inefficient working, it means minimising the disruption or inefficiency. Failure to mitigate is commonly pleaded as a defence to a claim.”*

[Society of Construction Law]

# Mitigation

---

## ■ Obligation to mitigate

- Change the planned sequence of working, but not
  - Reducing productivity (by accelerating)
  - Increase direct costs (additional plant and materials)
  - Take steps that require the expenditure of substantial sums
- Do what is commercially practicable
- Do what could reasonably be done in the circumstances

# Forms of Contract

---



# Forms of Contract

---

## ■ NEC3

### Clause 36.1

- The Project Manager may instruct the Contractor to submit a quotation for an acceleration to achieve Completion before the Completion Date. The Project Manager states changes to the Key Dates to be included in the quotation. A quotation for an acceleration comprises proposed changes to the Prices and a revised programme showing the earlier Completion Date and the changed Key Dates. The Contractor submits details of his assessment with each quotation.

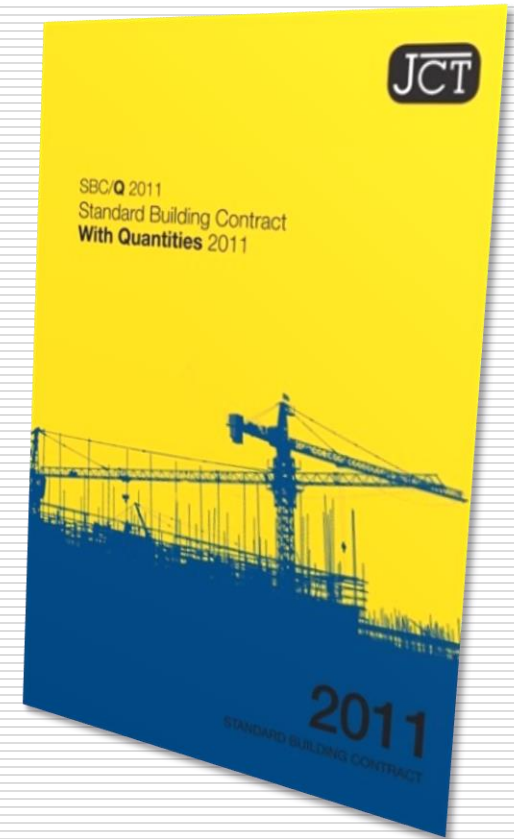


# Forms of Contract

---

## ■ JCT SBC 11

- Provides that:
- Employer can invite proposals
- Contractor identifies time that can be saved and quote, or...
- Says why it can't be done.
- Contract sum adjusted if quote OK, includes loss and expense and cost of quoting.
- Or revised proposals, BUT
- Any work at risk, until instructed



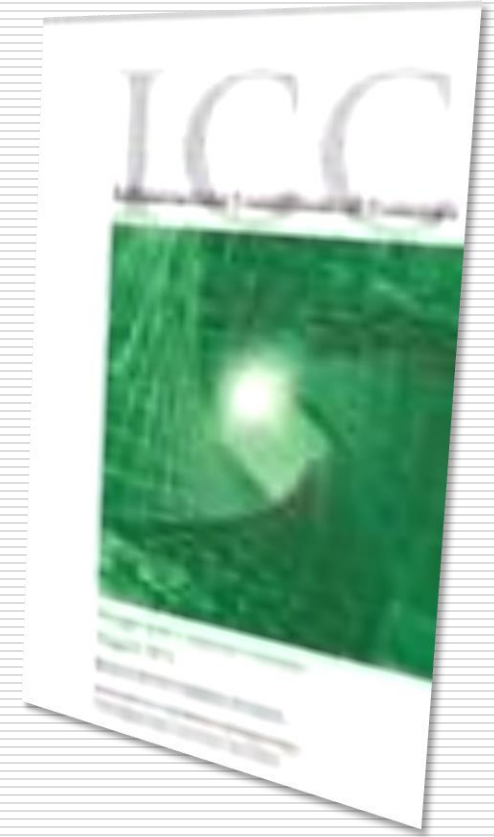


# Forms of Contract

---

## ■ ICC 2011

- Provides that:
- Requires all work to be completed within the contract / extended period.
- If Employer asks for work to be completed in a shorter time and Contractor agrees, then any special terms and conditions of payment shall be agreed before measures taken.



# Forms of Contract

- **FIDIC**
- **Provisions vary under different forms...but typically:**
- **Default by the Contractor within the Red Book:**
  - Engineer may instruct issue of revised programme and proposed methods;
  - Measures shall be adopted whether instructed or not;
  - Contractor's risk and liability for cost;
  - If Employer incurs extra cost, Contractor to pay.
- **If default by Employer:**
  - Cost of acceleration measures paid by Employer
  - Maybe instructed by variation...



# Acceleration Case Law

---

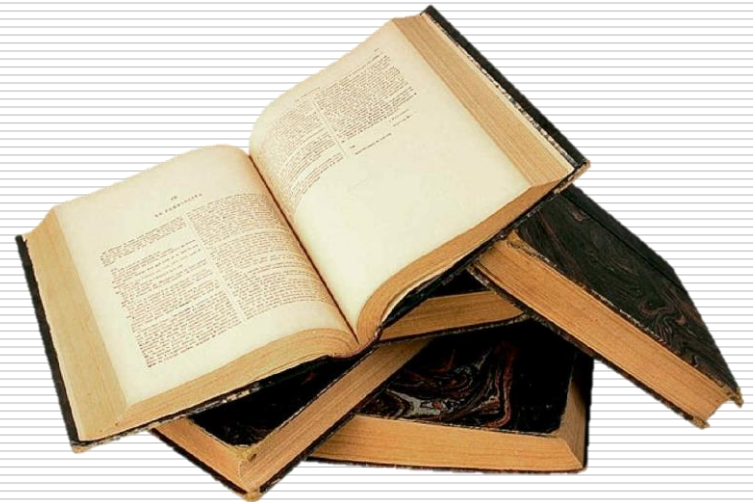


# Acceleration Case Law

---

## ■ Key Questions

- Does the Contractor have the right to accelerate?
  - Is the Contractor obligated to accelerate?
  - Can an instruction to accelerate be declined?
  - Is the Contractor entitled to payment for acceleration measures?
- 
- Important Cases to consider before accelerating the works...



# Acceleration Case Law

---

## ■ Contractor's Right To Acceleration

*Glenlion Construction Ltd v Guinness Trust (1987)*

- As a Contractor, you ARE entitled to complete a project before the contractual completion date (except in instances where the Contractor's method and programme are part of the contract documents).
- However, the Client is NOT contractually bound to:
  - Accept the built asset any earlier than in their contract,
  - Pay any money for acceleration costs or,
  - Co-operate with the Contractor to enable earlier completion, e.g. issuing drawings earlier than planned.

# Acceleration Case Law

---

## ■ Contractor's Duty of Acceleration

*British Westinghouse Electric & Manufacturing Co Ltd v Underground Electric Railways Co of London Ltd (1912)*

- Imposes a duty on the Contractor to take “all reasonable steps to mitigate the loss consequent on the breach”.
- However, the duty does necessitate that the Contractor “take any steps which a reasonable and prudent man would ordinarily take in the course of his business”.

# Acceleration Case Law

---

## ■ Contractor's Duty of Acceleration

- JCT SBC 11: The contractor must “*constantly use his best endeavours to prevent delay*”
- Regularly and diligently...
- Best Endeavours...
- Reasonable endeavours...

# Acceleration Case Law

---

## ■ Implied Acceleration

- In a situation where the Contractor is entitled to EoT, but none has been given, he must either accelerate the work to avoid LAD's or complete late and claim the time back from the Employer.
- Accelerating without an official instruction (implied/constructive acceleration) is extremely risky.
- Case Law does however give us an indication into what will happen in such a scenario.



# Acceleration Case Law

---

## ■ Implied Acceleration

### ■ Five steps to a claim:

- Must be an excusable delay
- Must be timely notice of the delay and proper EoT request
- EoT request must be postponed or refused
- Employer must act by coercion, direction or a manner construed as ordering completion to original programme
- Contractor must accelerate and incur added cost.

[Bramble & Callahan]

# Acceleration Case Law

---

## ■ Implied Acceleration: Employer

*Motherwell Bridge Construction Limited v Micafil (2002)*

- If an Employer is responsible for a delay to a project, does not instruct the Contractor to accelerate, does not give the Contractor an Extension of Time and the Contractor, subsequently, accelerates in an effort to avoid LADs, the Contractor should be paid his acceleration costs.
- But the Contractor does not necessarily need to do this, he could also;
  - Request an Extension of Time or,
  - Adjudicate on an Extension of Time if refused one.

# Acceleration Case Law

---

## ■ Implied Acceleration: Contractor

*Ascon Contracting Limited v Alfred McAlpine Construction Isle of Man Limited (1999)*

- If a Contractor causes a delay to the works by his own actions he/she should not be awarded an Extension of Time.
- If the Contractor then proceeds to accelerate the works, to mitigate his own delays with or without an official instruction, he will not be able to claim any acceleration costs.

# Acceleration Case Law

---

## ■ Express Acceleration

*Norair Engineering v The United States (1981)*

- This US case established that even vague statements from the Employer, such as requesting the Contractor to take “*positive action to expedite the work by supplying all materials necessary to accelerate progress*”, constitute an Express Instruction to Accelerate.
- The Express Instruction then creates a right to payment of acceleration costs.

# Acceleration Case Law

---

## ■ Express Acceleration

*Lester Williams v Roffey Brothers & Nicholls (Contractors) Ltd (1989)*

- If an agreement to accelerate has been agreed and the Employer derives an obvious benefit from the acceleration, the Contractor will be paid his acceleration costs.
- The Employer cannot argue that he is paying you twice for doing the same job.

# Acceleration quotations under NEC3

---

## ■ PM Instructs a Quotation

### Clause 36.2

- The Contractor submits a quotation or gives his reasons for not doing so within the period for reply.

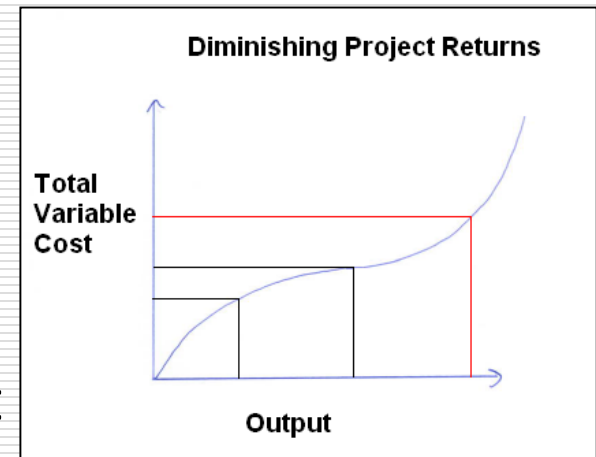
### Clause 36.3

- When the Project Manager accepts a quotation for an acceleration, he changes the Prices, the Completion Date and Key Dates accordingly and accepts the revised programme.

# Acceleration quotations

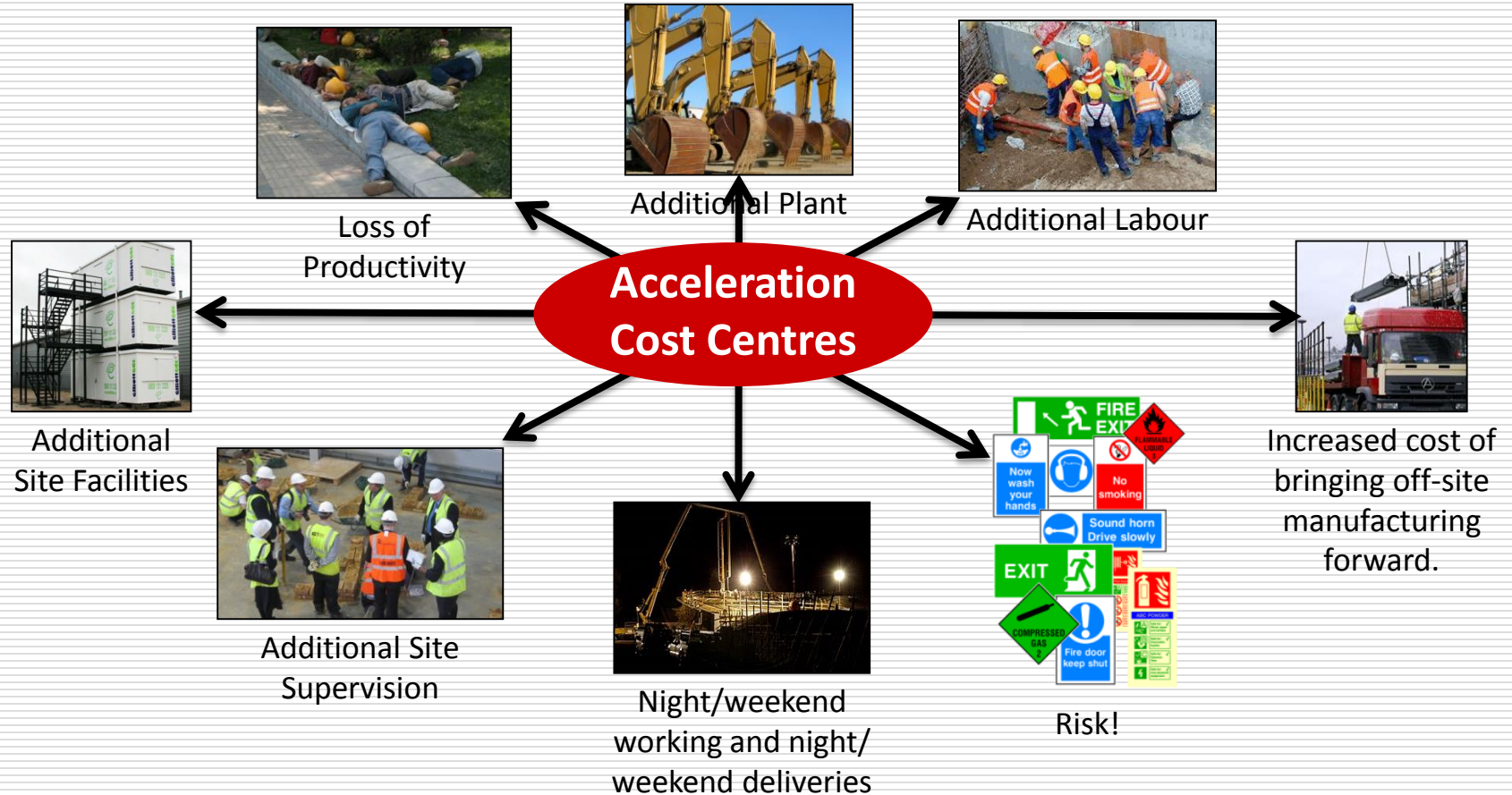
## ■ **WARNING!** Acceleration Costs Will be Different From Costs

- As more variable resources are piled onto the same site, they start to lose efficiency:
  - Plant starts to get in the way of other site operations and other items of plant.
  - Trade Operatives do not have enough time and space to carry out their work in a normal way.
- The site operation will begin to experience the law of diminishing returns i.e. the more resources put into a project, the less the increase output and the more increase in cost



# Acceleration quotations

## Basic Cost Centres of Acceleration





# Acceleration quotations

---

## ■ Making a Separate Agreement

- Often a separate agreement is proposed
- Must have provisions to extend time if further events occur. Link to contract?
- Or allocate any risks to the contractor
- What happens if completion is not achieved on time? All or Nothing?
- Must have proper consideration
- Instruction Validity – Can the Architect / CA instruct as a VO / Change acceleration where no specific provision exists?
- Warranties to the Employer guaranteeing success.
- Caveats to disclaim liability of failure.



**Project Controls**  
E X P O

---

# Project Controls Expo – 13 October 2015

## Emirates Stadium, London



**David Bordoli and Helen Bentley**



**Project Controls**  
E X P O

Copyright © 2015 All rights reserved

**driver** GLOBAL  
CONSTRUCTION  
CONSULTANCY



**Project Controls**  
E X P O

---

# **Project Controls Expo – 13 October 2015**

## **Emirates Stadium, London**

### **Scream If You Want To Go Faster**

**The contractual, legal, financial and  
practical aspects of acceleration**

**David Bordoli and Helen Bentley**



**Project Controls**  
E X P O

Copyright © 2015 All rights reserved

**driver** GLOBAL  
CONSTRUCTION  
CONSULTANCY

# Example Project

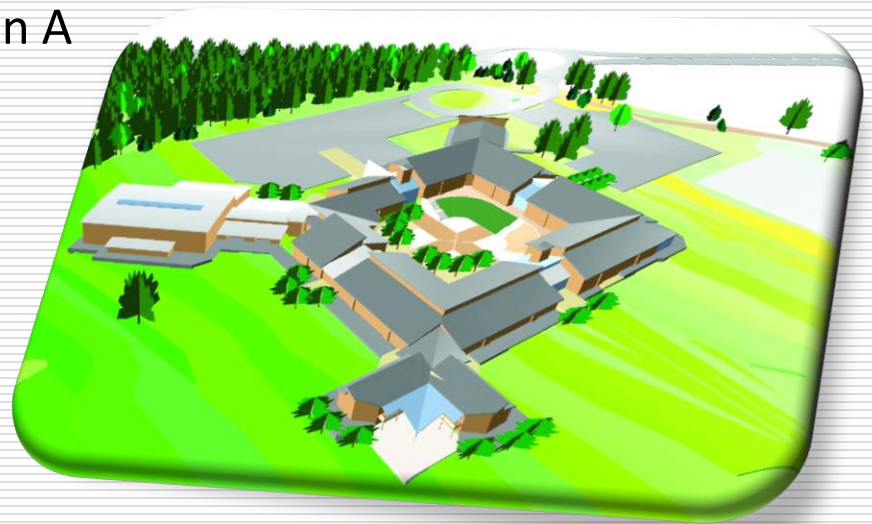
---



# Example Project

---

- **St. Driver's Academy School  
(for Gifted Future Surveyors)**
  - Project Details
    - Type of Contract: NEC Option A
    - Duration: 18 months
    - 28 July Completion
    - Total Cost: £10m
    - £25K p/wk LAD's
    - £100K bonus



# Example Project

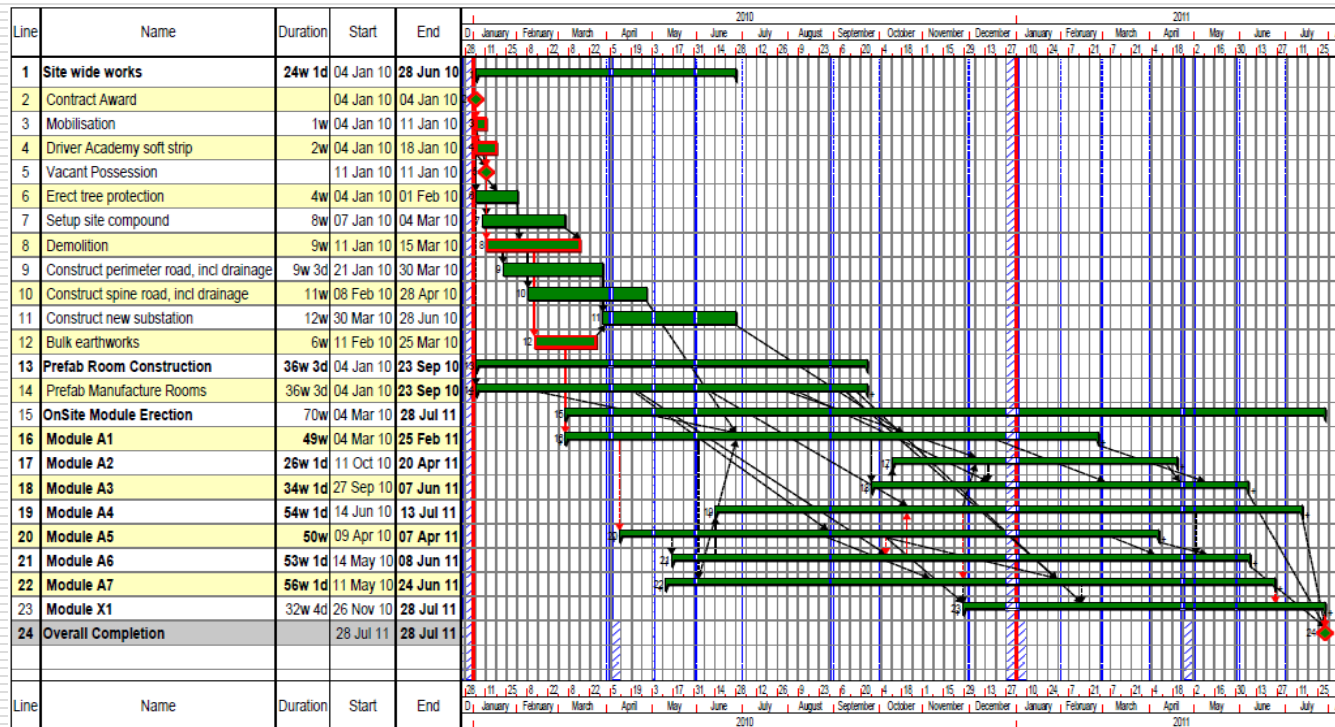
---

## ■ Critical Considerations

- Employer must have project complete by 28 July or funding lost for whole term, possibly year
- Project must be completed on schedule to secure a £100K bonus payment and
- Avoid onerous LADs of £25k / week
- Standard NEC provisions apply
- Employer has design responsibility – not 100% complete, but Architect assures it will be done...

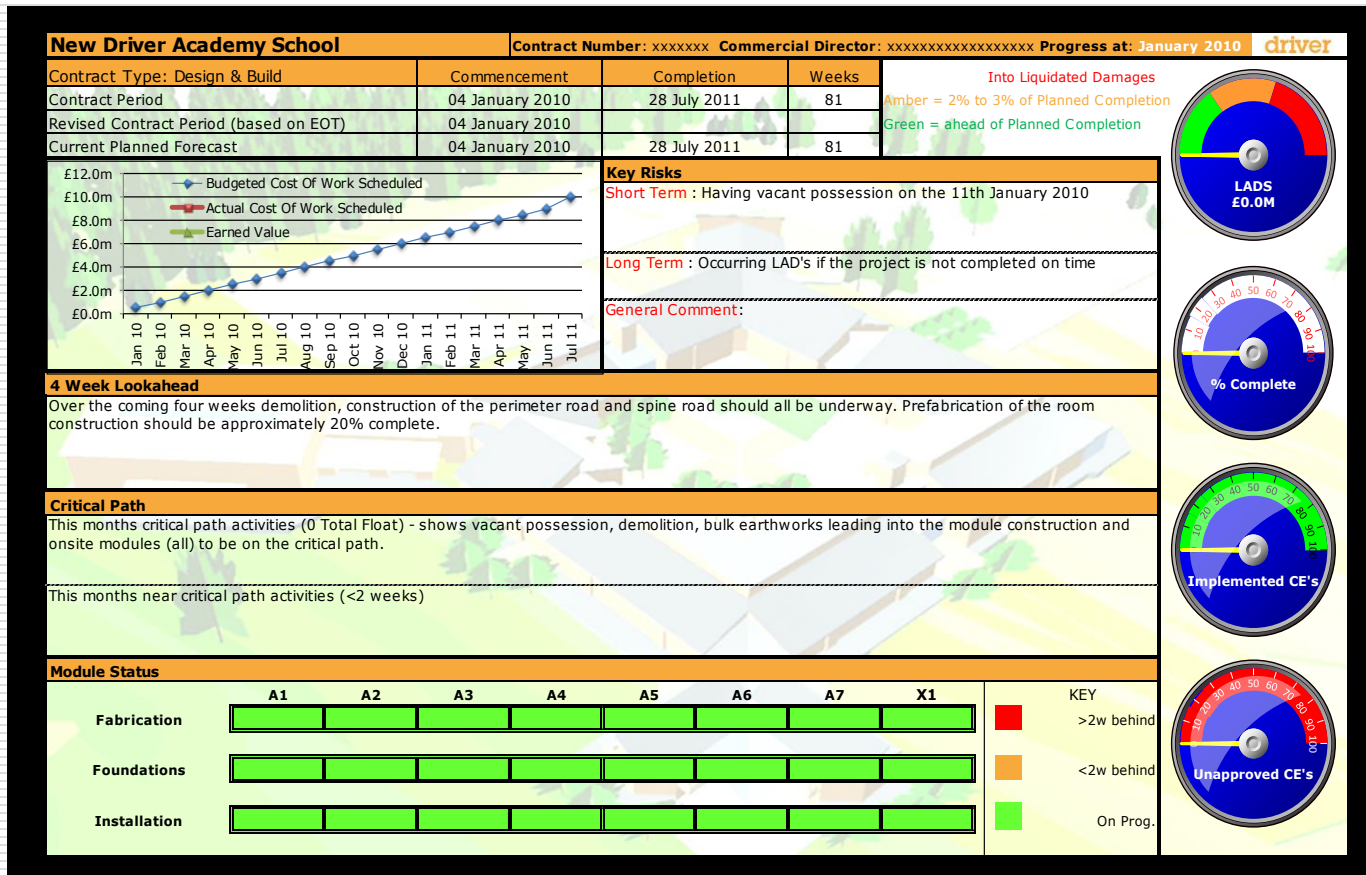
# Example Project

- At Contract Award the Contractor is on programme to and is predicted to complete by the completion date stipulated in the contract



# Example Project

## Project Monitoring Dashboard





# Example Project

---

- **Accurate Project Data Is Essential**
  - Project Monitoring Provides:
    - Early Warning of late delivery
  - Actual Progress / live predictions
  - Modelling of acceleration options
  - Sets out the possible / impossible
- **YOU MUST ALWAYS KNOW WHERE YOU ARE...**

# Example Project

---

## ■ Delay No 1

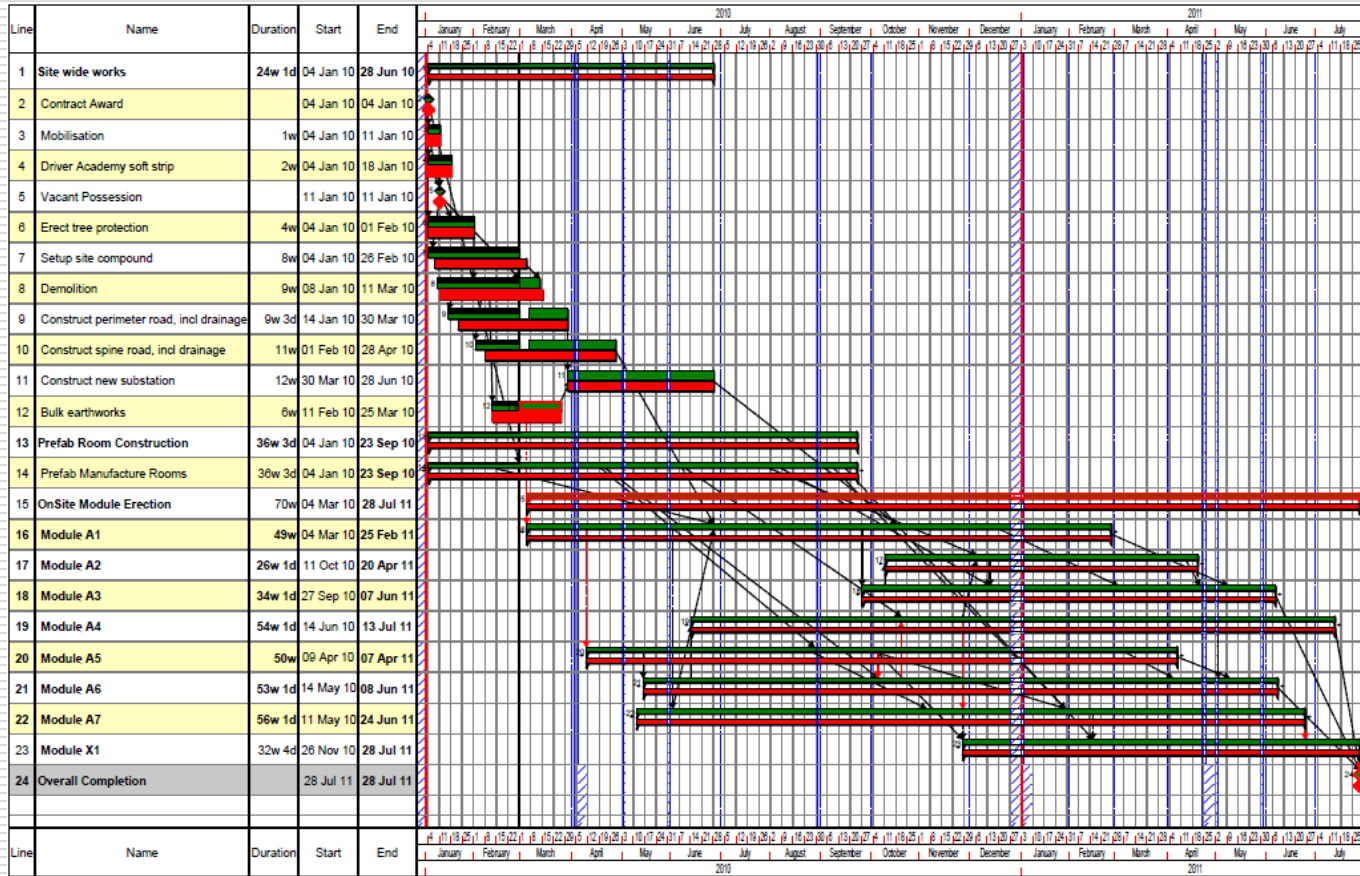
Inclement Weather / Flooding

- Generally, events such as extreme flooding are neutral events, in the sense that neither the Employer nor the Contractor is responsible for causing the event (excluding Insurance events)
- Under NEC this may be a compensation event, but not in this instance.



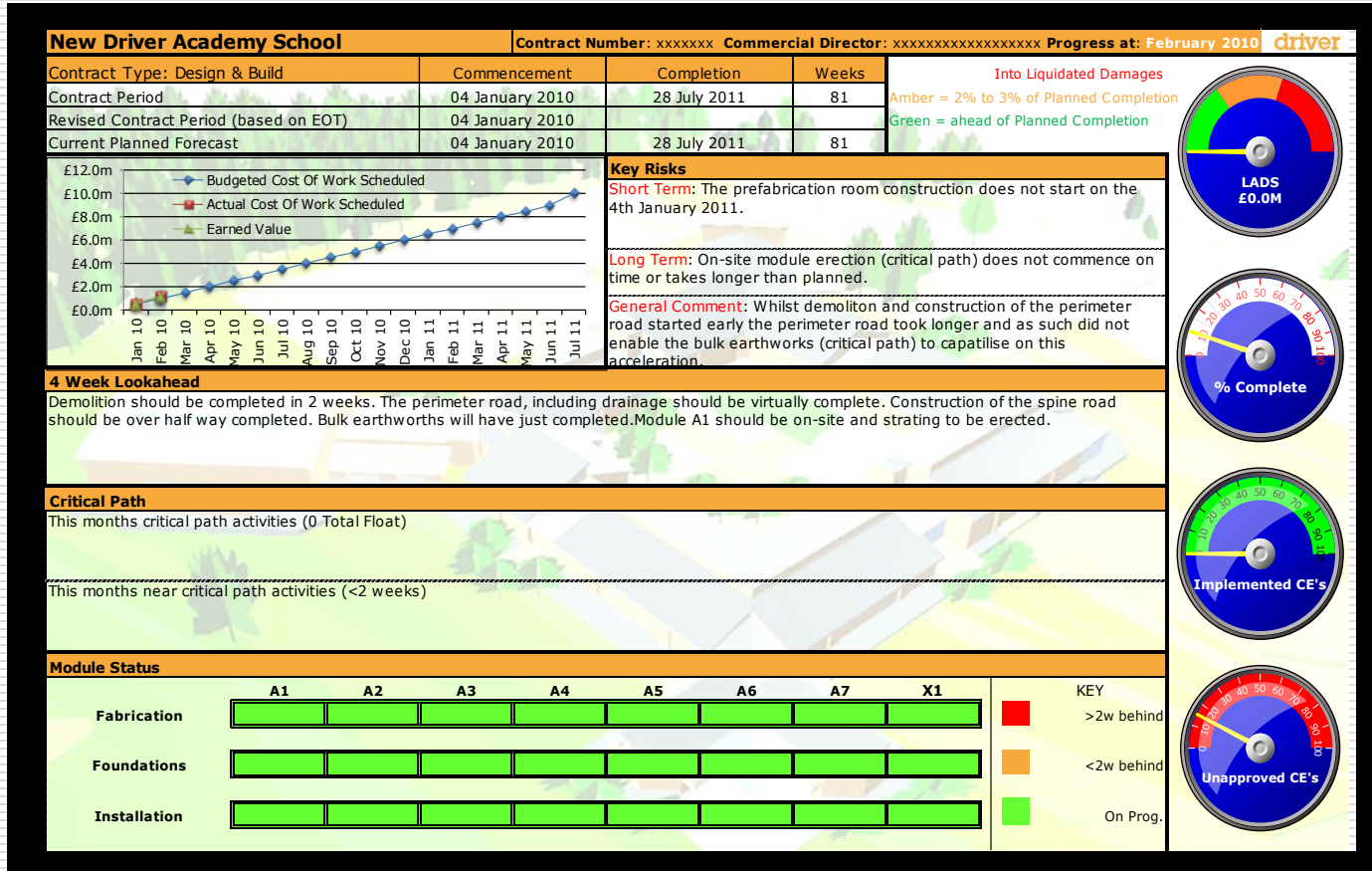
# Example Project

## Project Programme: End Month 2



# Example Project

## Project Dashboard: End Month 2



# Example Project

---

## ■ Delay No. 2

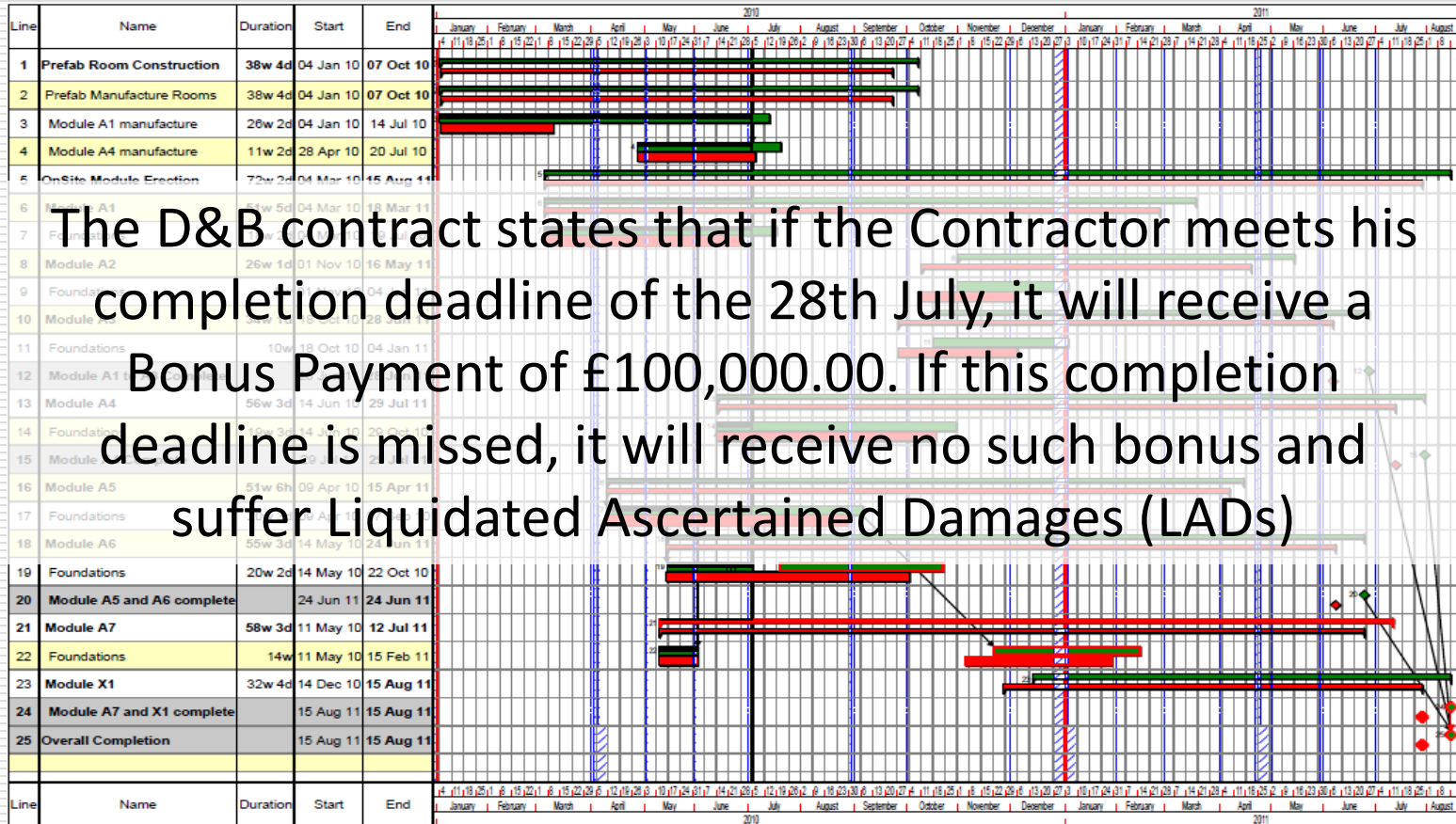
Contractor culpable:

- Damage to work during construction
- Poor progress / productivity
- Re-work & rectification
- Supply chain delays
- Design delays in D & B contracts



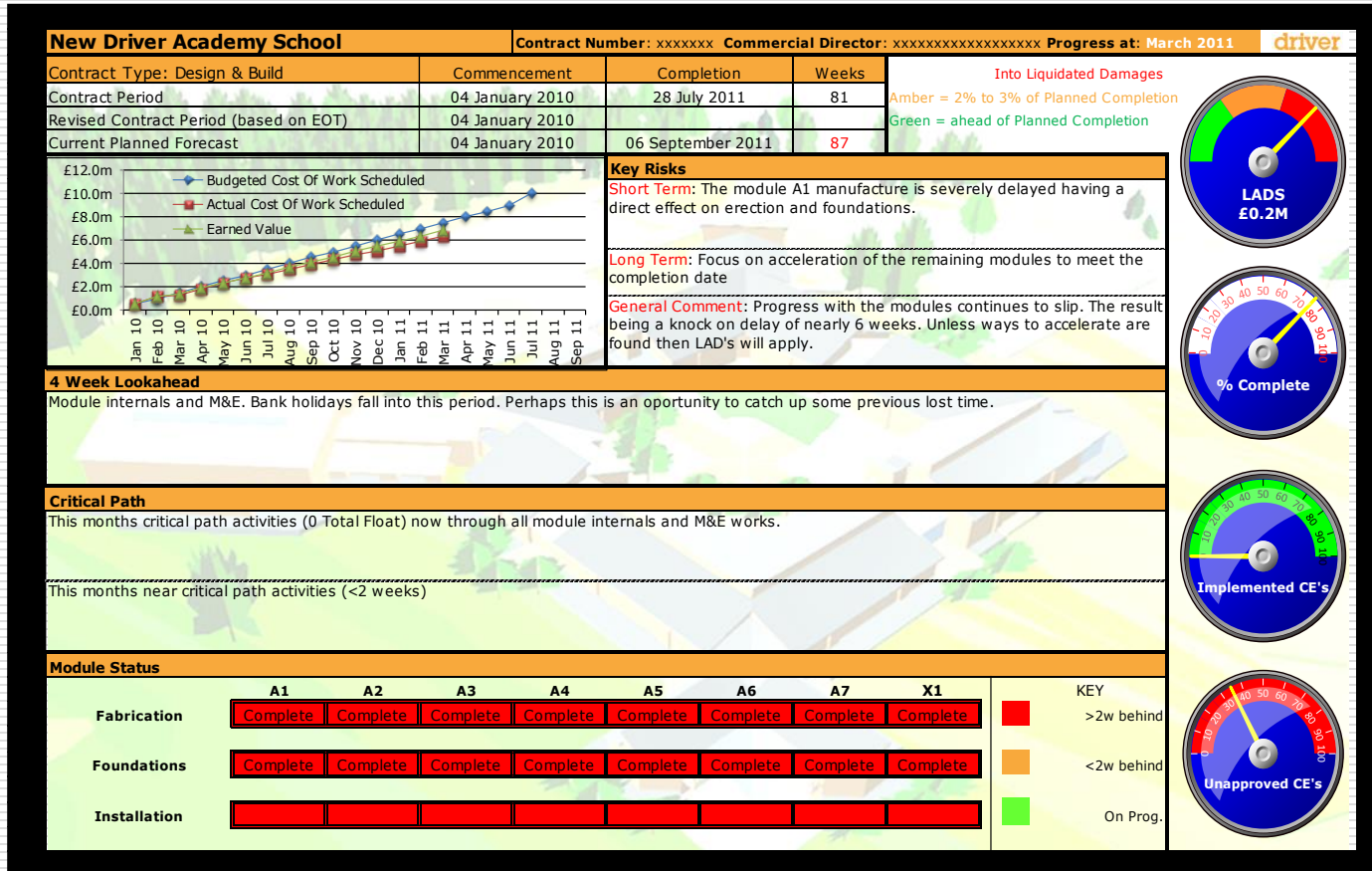
# Example Project

## Project Status: Falling Behind



# Example Project

## Project Dashboard: Falling Behind



# Example Project

---

## ■ Delay No 3

Client Design Variations...

- When an Employer impedes the progress of the contractor, it becomes responsible for the delay
- In this situation, the Employer has two options:
  - Give the Contractor EoT as a compensation event.
  - Arrange acceleration of the works by the Contractor, which the Employer should, subsequently, pay for.





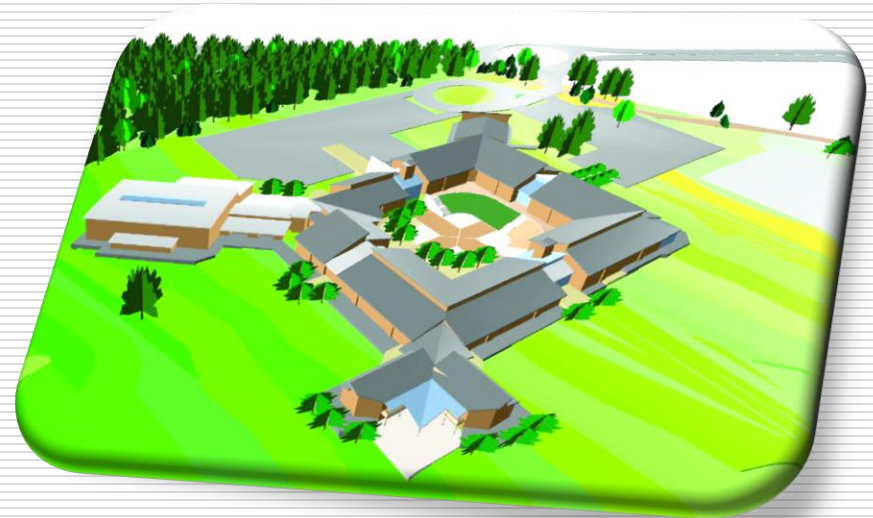
# Example Project

---

## ■ Current Status

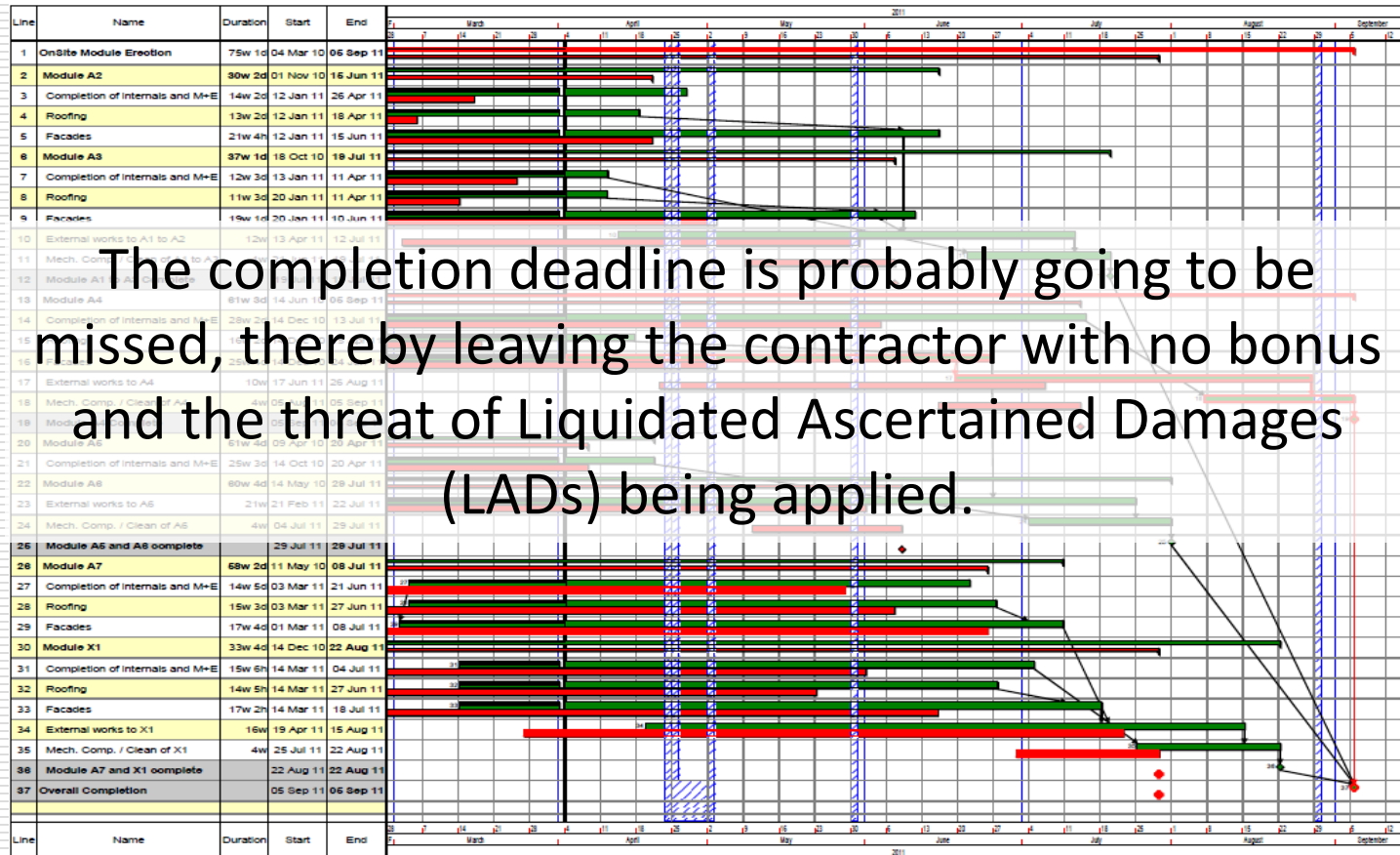
Currently at St. Driver's Academy School

- It is now clear that the project will overrun unless decisive action is taken.
- The Employer is asking what we are doing about the problem...



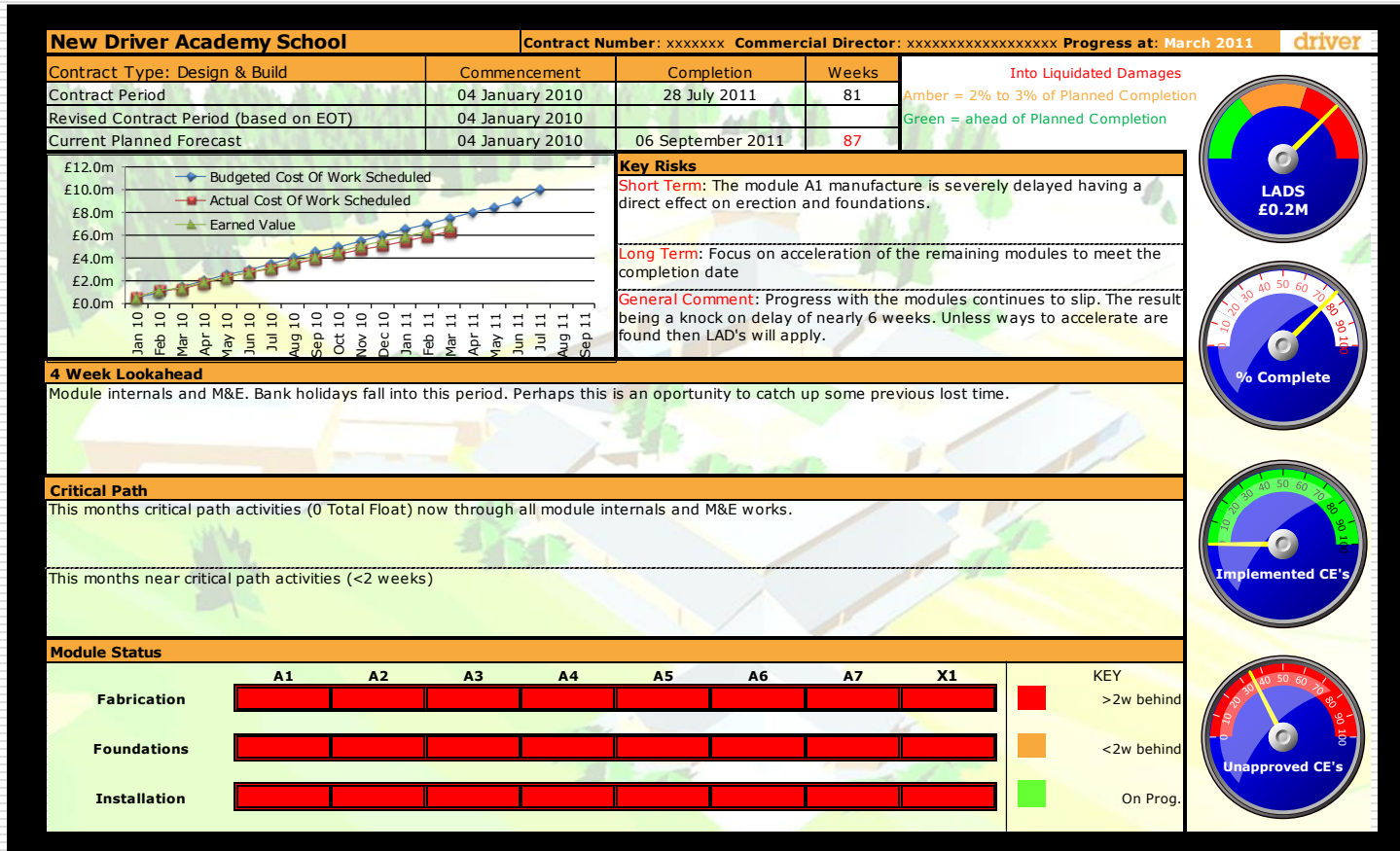
# Example Project

## Project Status: Falling Behind



# Example Project

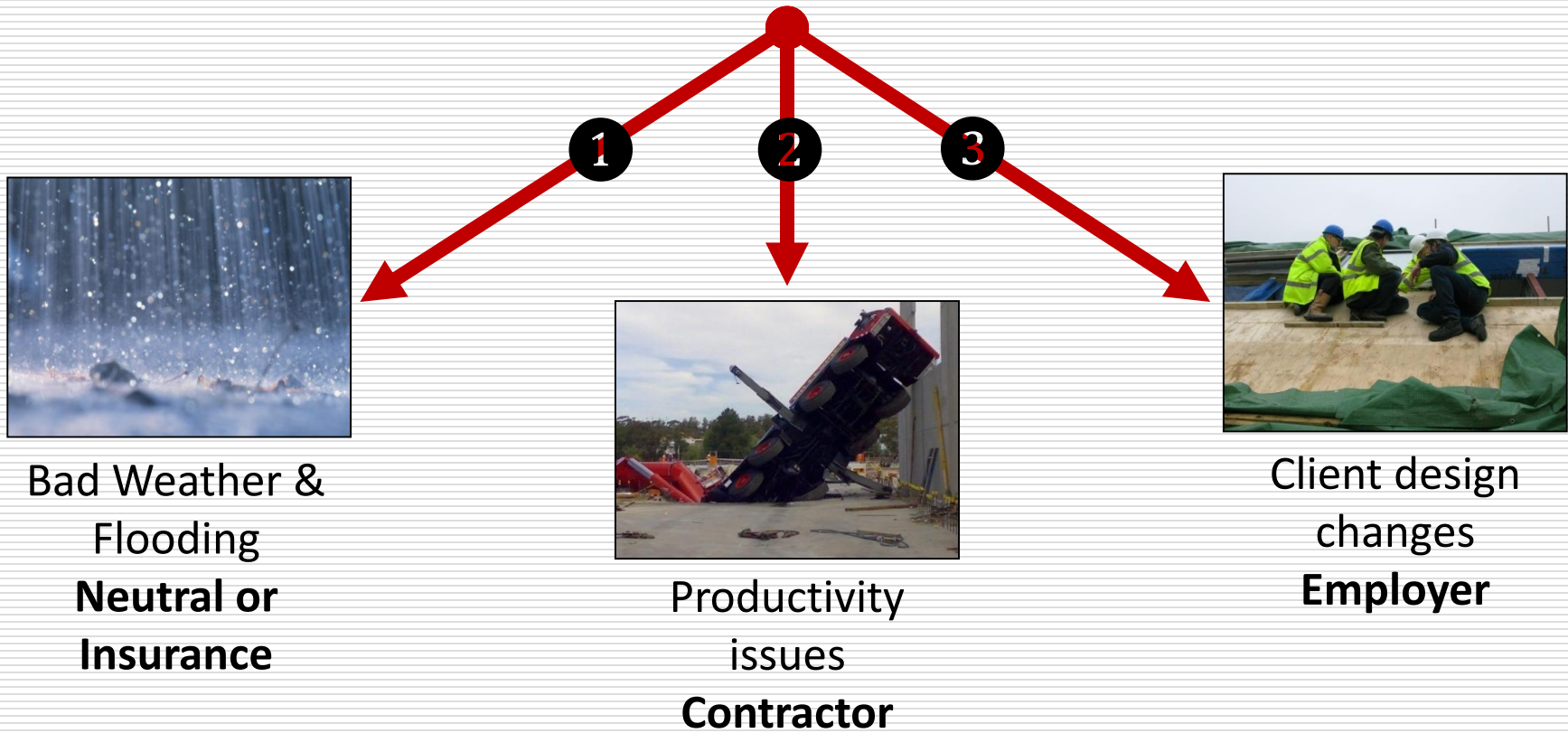
## Project Dashboard: Falling Behind



# Example Project

## ■ Delays

Three Different Events Have Caused Delay



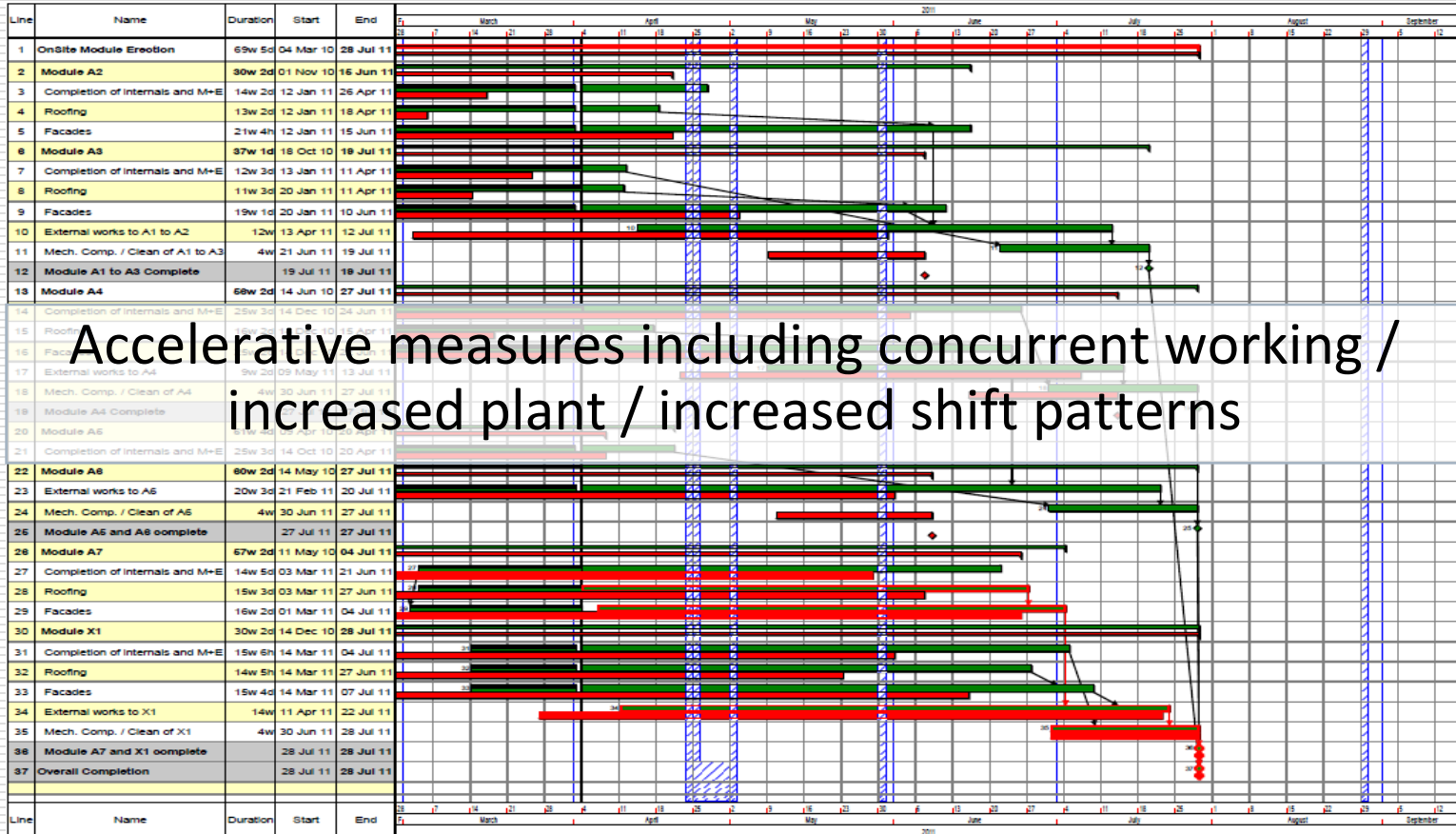
# Example Project

---

- **The Quotation is submitted:**
  - What if the quotation is rejected?
  - The instruction is delayed?
  - Re-submitted?
  - No PM's assessment
  - Should we start measures in anticipation?
- **Finally the instruction is received...**

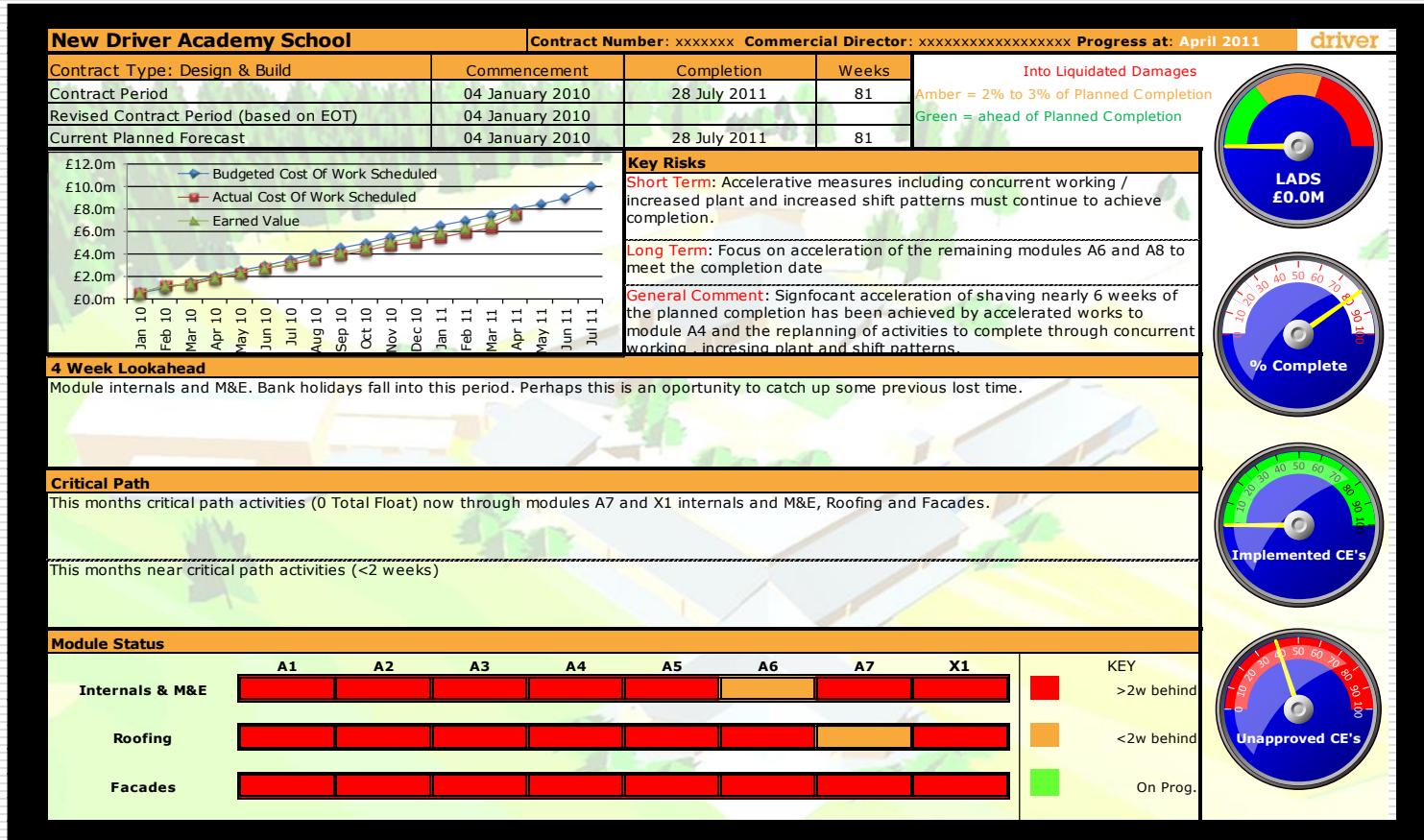
# Example Project

## Contractor Begins Acceleration



# Example Project

## Contractor Begins Acceleration

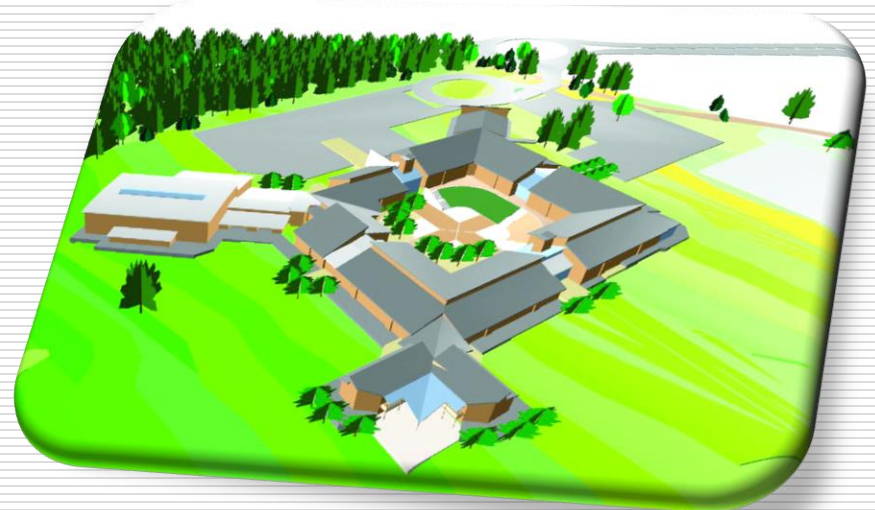


# Example Project

---

## ■ Current Status

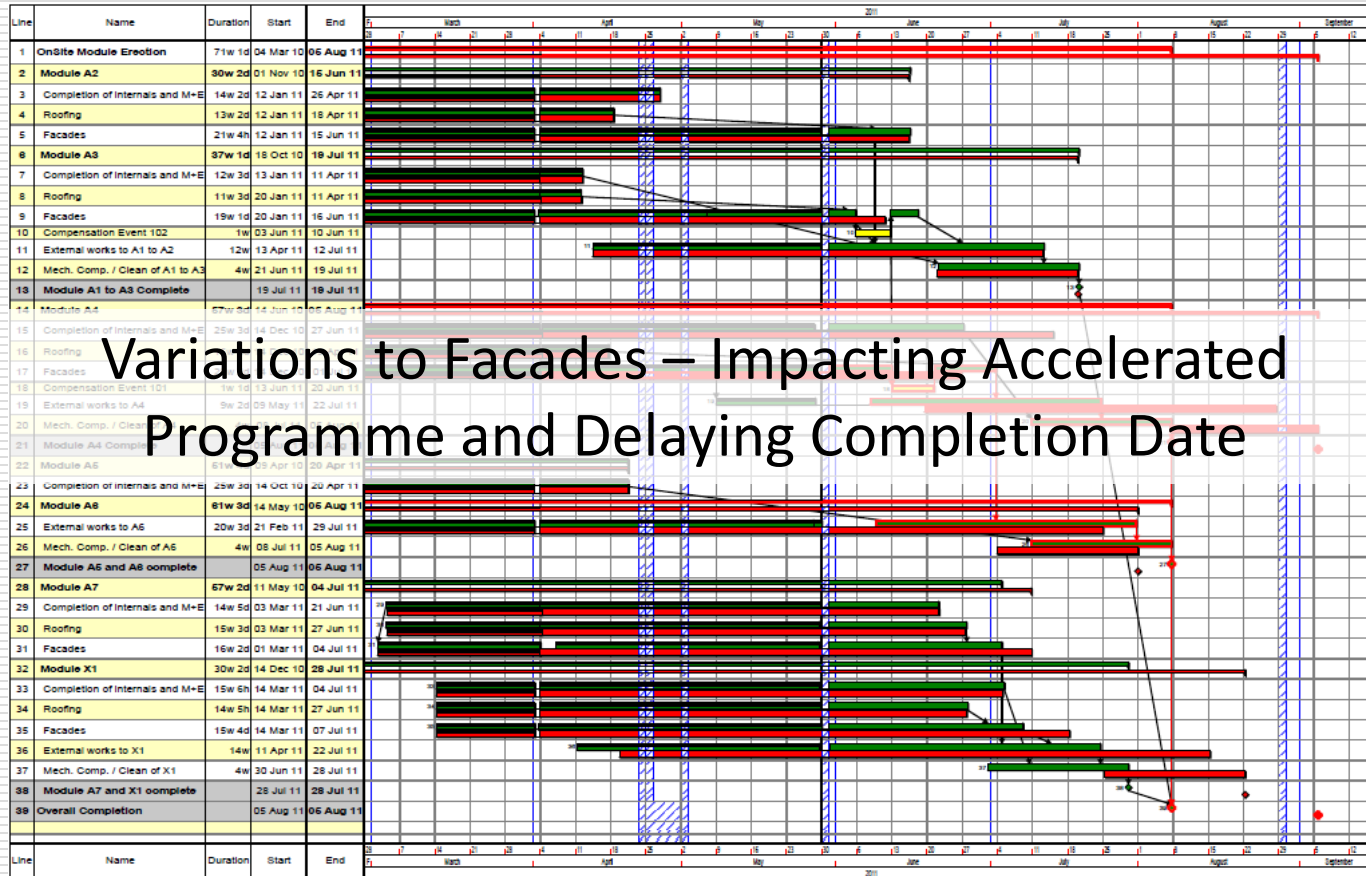
- The Contractor's acceleration programme is now in full swing. However, costs are now far higher than the Contractor first estimated.
- Can these costs be recovered?
- Withdrawal of quotes?
- Or stuck with it?





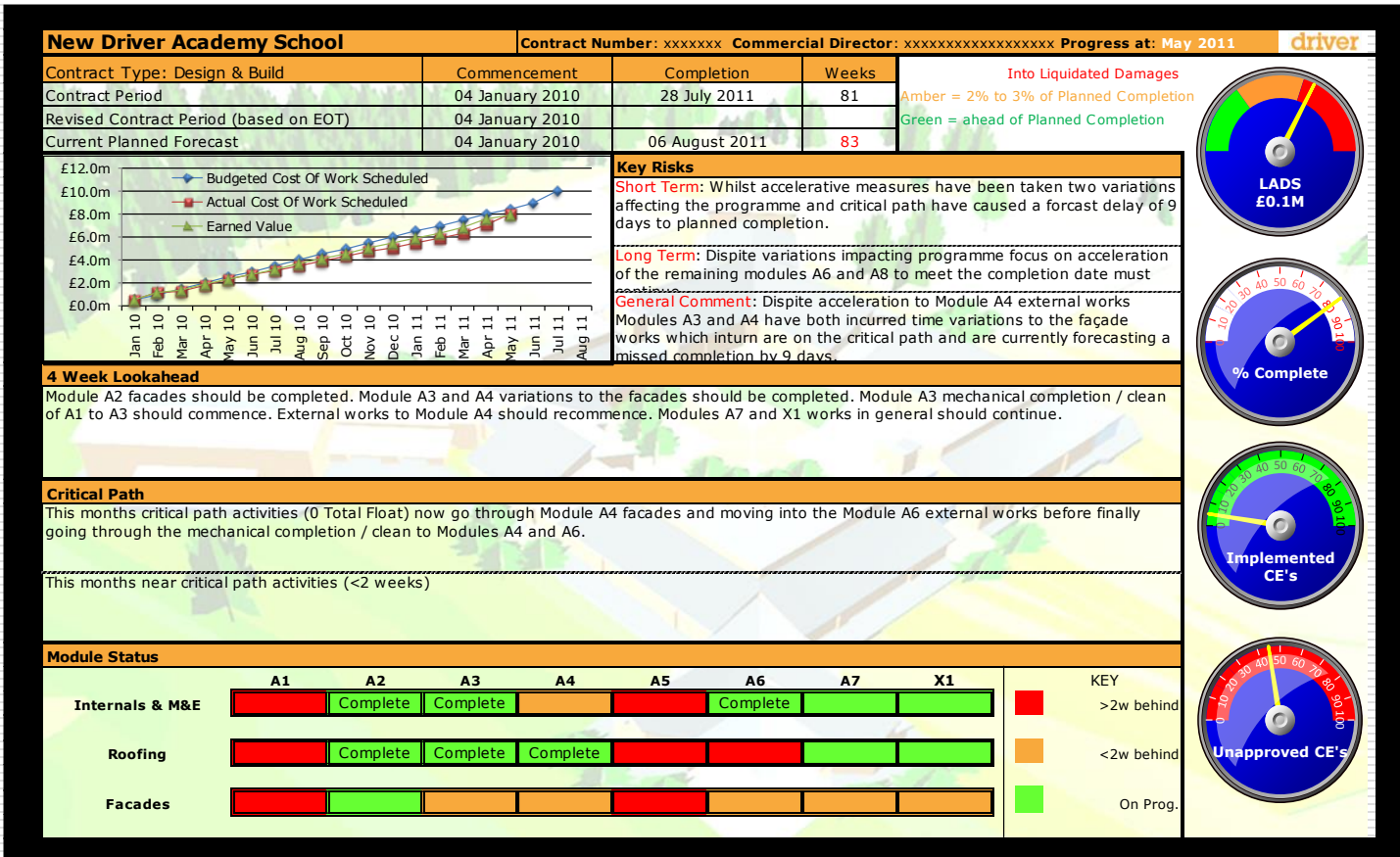
# Example Project

## ■ Mid Acceleration: More Variations



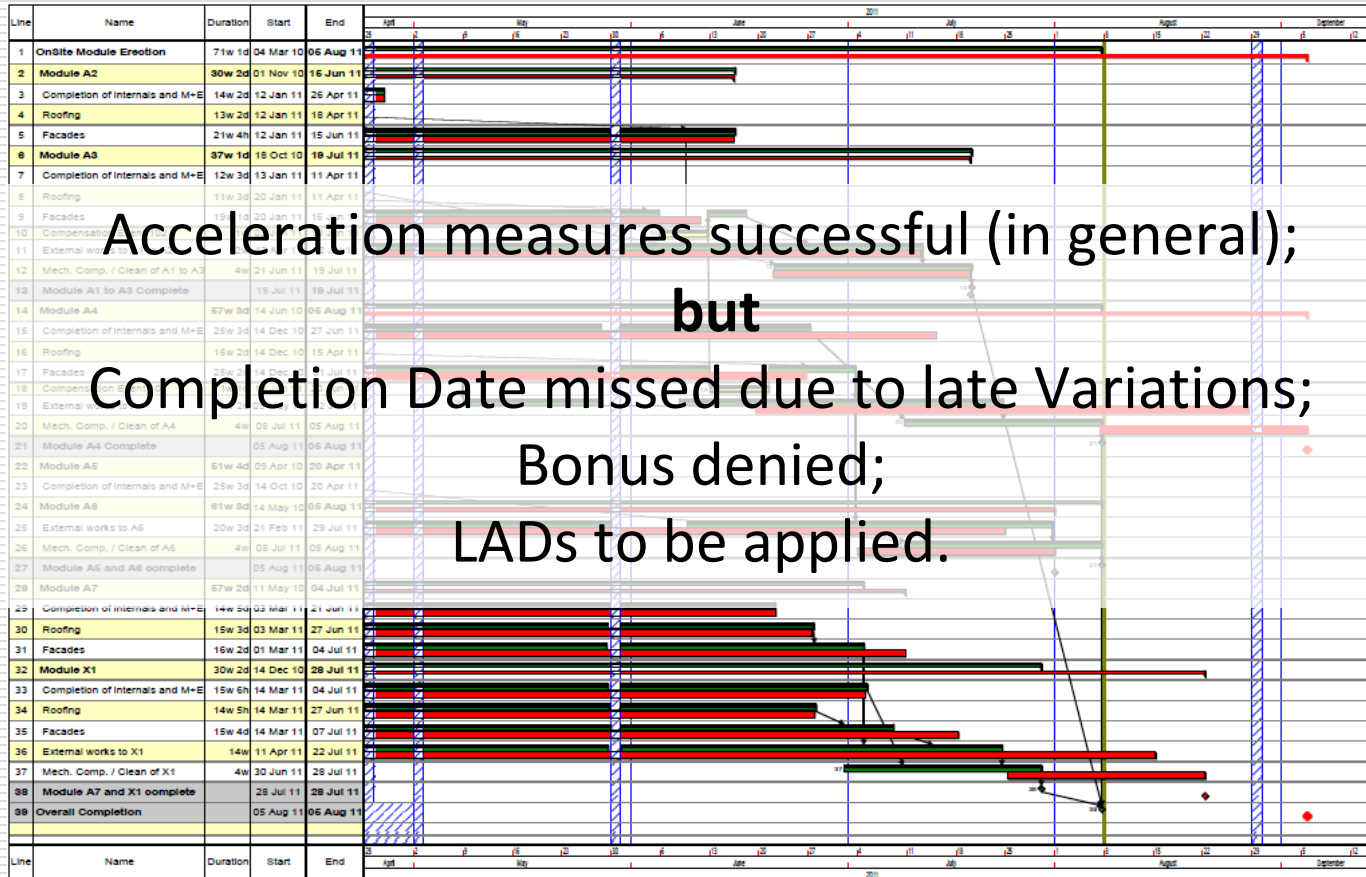
# Example Project

## Mid Acceleration: More Variations



# Example Project

## ■ End of July: Deadline Missed



Acceleration measures successful (in general);

but

Completion Date missed due to late Variations;

Bonus denied;  
LADs to be applied.

# Example Project

---

## ■ Position at Completion

- Contractor finishes 5 weeks late
- What does he get paid?
  - No completion bonus
  - LAD's for the over run
  - Acceleration costs in full



# Acceleration

---

## ■ Conclusions

- Knowledge of current status of works and progress predicted is critical
- Accurate Project Monitoring is needed
- Contractor has no 'right of acceleration'
- Contractor has obligations to progress, which may include acceleration
- Reasonable / Best endeavors

# Acceleration

---

## ■ Conclusions

- Most standard forms now have provision.
- Provisions for EOT need to still apply
- Express Acceleration - Contractor cost recovery is likely when instructed and agreed in clear terms
- Constructive Acceleration – extremely difficult to succeed on – Possible only in very rare circumstances

# Any Questions?

---





**Project Controls**  
E X P O

---

# Project Controls Expo – 13 October 2015

## Emirates Stadium, London



**David Bordoli and Helen Bentley**



**Project Controls**  
E X P O

Copyright © 2015 All rights reserved

**driver** GLOBAL  
CONSTRUCTION  
CONSULTANCY



---

go FASTER SCREAM if you want to