

Design Contract Management Workshop

23rd September 2010

The Tram Management Meeting 15th August 2010 discussed the subject of Design management and concluded that there was a need to hold a workshop to assist with clarifying how the design process was working:-

“Design Contract Management – session to be held on the front end process. 0.5 day diagnostic session. To be facilitated by Colin Matlock”.

The workshop was held at Edinburgh Park on Thursday 23rd September 2010. In attendance were:-

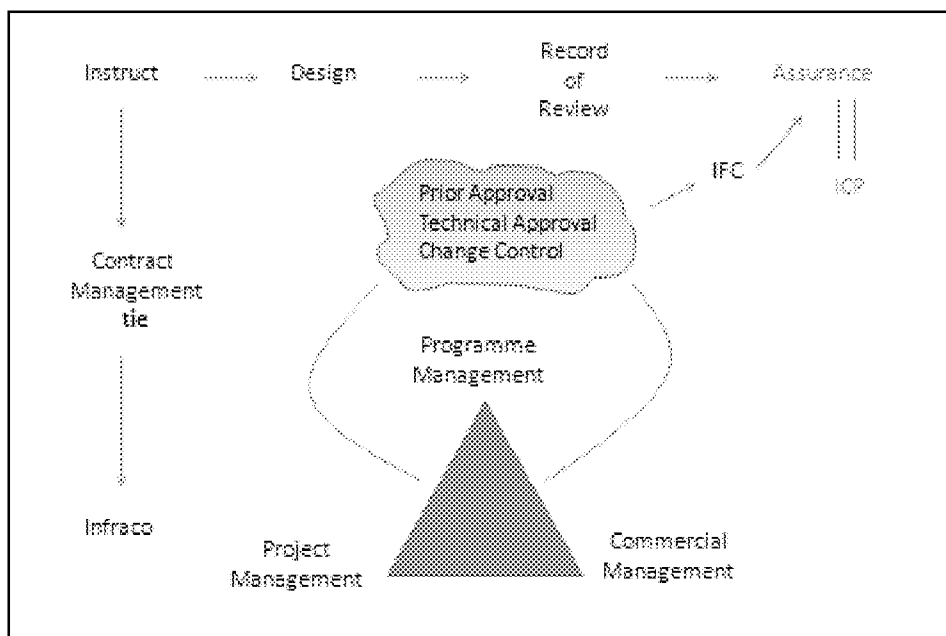
Gail Blythe
Malcolm Butchert
David Carnegie
Gavin Murray
Colin Neil
Clare Norman
Andrew Renwick
Damian Sharp
Colin Matlock – facilitator

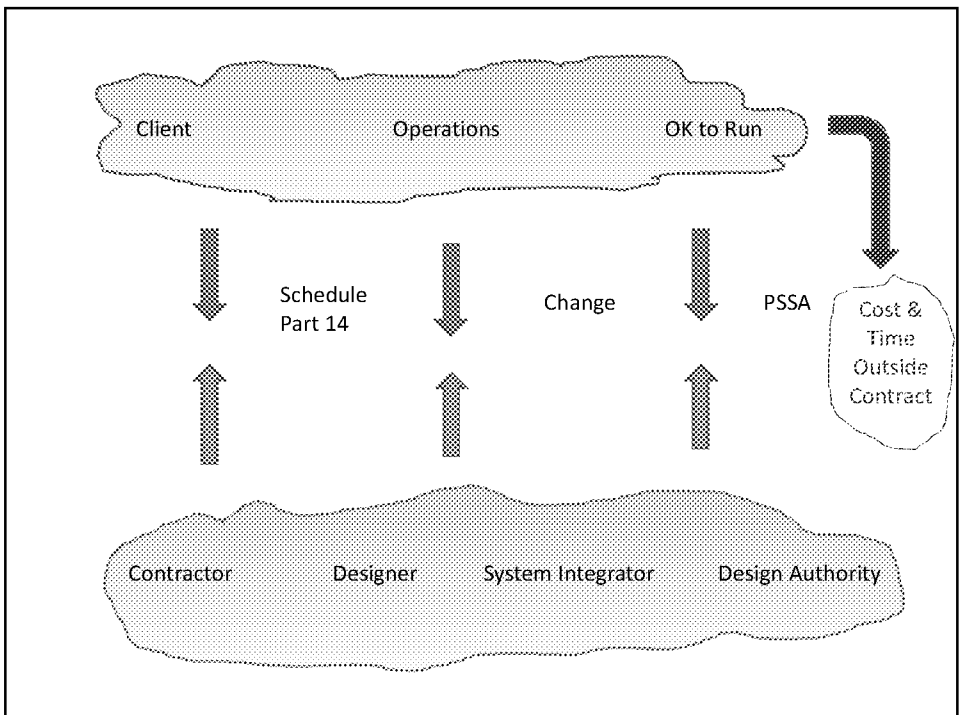
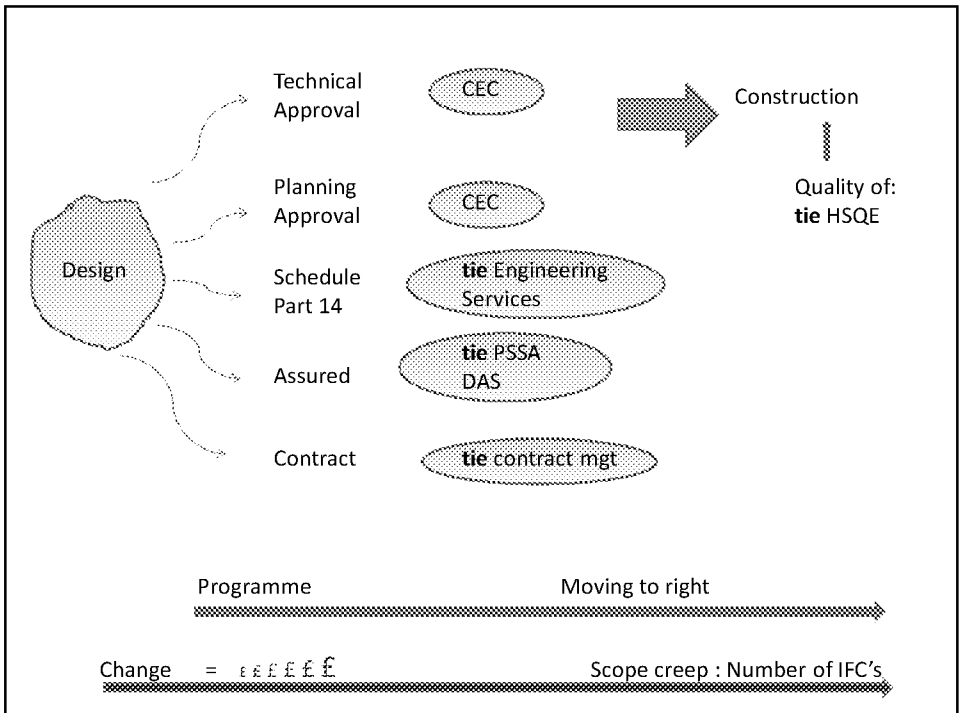
Apologies from Bob Cummins

Michael Patterson & Chris Bartyneck were invited but did not attend

The scene was set for the workshop with the provocative question “Who in tie knows what is approved for construction?”

Some basic models of the current sequence of activity and issues was tabled to generate discussion as below:-





The workshop used freestyle wall mapping to record the teams input and direction on the front end process being followed. This freestyle approach enabled the capture of issues as they arose during the discussions. These are noted below as emerging issues.

A key recurring theme during the workshop was the limited amount of time and cost control being exercised during the design process. There is little formal obligation for the Infraco to communicate to the Client the details surrounding a developing design or indeed the completed design. It would appear from the map that the Client remains unaware of the developed and approved design until the design is Issued for Construction (IFC) and on occasions it is possible for this formal process to be post works on site. Further, the Civils/Structures process bypasses the normal approvals process and provides the Client with even less opportunity of being informed.

It would appear from the map that the process may well have been designed on the basis that the design was far nearer completion at novation than it actually was. The Designer is still undertaking their own internal review processes without the Infraco having obligations to be involved and certainly without any involvement of the Client.

A later session of the workshop used a brainstorm to capture opportunities that may be available to seek remedy and improvements assuming that all options were still open to the team. These are captured below as Opportunities.

The workshop concluded with a capture of useful and key improvement messages for the Management team in a spirit of amnesty.

Emerging Issues during the mapping process

- IFC's issues but not CEC approved. i.e. Lighting at Edinburgh Park tramstop.
- Contract describes variation in design as:-
 - Changes by approved bodies
 - Changes in form and shape
- **Tie** change management process – managed by DM - INTC Process Levels of approval:-
 - Board Level
 - Change Panel - SB
 - Infraco Director - FMcM
 - Design Project Manager – BB/DM
- Control of programme and cost outside of contract
- Incomplete design caused ongoing design completion outside of Infraco processes. Ie SDS IDC.
- Informing of design Effectively
 - Approvals process overridden by design process
 - Not tying cost back to design
- Process is approvals driven rather than programme and cost driven
- Infraco not required to be conscious of time in the design process but not required to be informed
- Project Manager's likely to be informed on design at IFC stage
- Handed over control of design to Infraco but not risk
- Tie are not obliged to be informed of the developing design at any stage
- Tie are not required to be involved in any of the approvals process
- Tie will only be made aware of a design if there is a change that involves INTC
- Infraco have no obligation to inform tie of the design until a design is presented for design review.

- Tie led design review is currently not happening
- Structures design and approval process bypasses complex process and goes straight to SDS IFC without any tie comment.
- Mechanism for control of design programme and cost is not obvious
- Infraco is not obliged to communicate design to tie
- Tie not involved in CEC planning and technical approval process
- Cost control of design since novation is not obvious
- Links back to business case not evident in design process
- Design process assumed that design was substantially complete at novation
- SDS processes still taking place without ownership of Infraco. I.e. SDS IFC
- Infraco changing the rules of engagement by altering and adding caveats to the contract, particularly in reference to scope change associated with design development
- tie may not be using clause 10 to its full advantage

Opportunities - brainstorm

- Publish Nicholls audit report
- Create the ability to monitor the design programme in real time
- Redress balance of risk with programme and cost of design
- Review of obligations on SDS/BSC on design and construction
- Pursue current BSC obligations to greater extent
- Ditto current tie obligations
- tie to use Schedule Part 14 process more vigorously. In particular the 'Civils'.
- Resource the Sch 14 process
- tie to review designs now and ask difficult questions of itself and Infraco
- Change the design management process to reiterate and develop design to improve costs to programme
- Reinforce contract requirements and make contract work (by audit)
- Do not import risk by doing Infraco job
- Monitor on regular basis Infraco failure to deliver all of their deliverables – particularly design
- Dedicated team to develop argument and go for Infraco failures on obligations
- Dedicated to for lessons learnt for next contract
- Establish open and clear communication process about an emerging design
- Joint Client and Infraco communication to stakeholders
- Implement a tried and tested document control medium that will visualise reviews, approvals and changes. I.e. BIW, 4 Projects, Build on Line
- Reinforce the Design Authority role within the Infraco with clear role and responsibility (*Design Baron*)

Message to tie management team

- Clarify tie project managers roles
- Clarify by delegation process of roles and responsibilities of project managers
- Don't do Infraco job for them
- Undertake a Project Managers RACI against tie obligations
- Clear strategy required for when we allow works to commence

- Clear strategy required for when we prevent Infraco working through non compliance. Ie when works are not in accordance with approvals
- Involve tie in approvals process
- Take a more robust approach with approvals authorities
- Clarify Board governance process

Summary

It is evident that the design as novated to Infraco is no longer under **tie** control. **tie** believes it is unable to influence the outcome of the design in terms of product, programme and cost. The approvals process with CEC does not involve **tie** albeit that both **tie** and CEC are representing the Edinburgh Council. It would be reasonable to conclude that both bodies would be working to achieve the same objective in terms of product, programme and cost but is not obvious in the process as mapped and the results on the ground.

tie have moved the responsibility for managing the design contract into the Infraco design and construct contract. Whilst this puts the responsibility of managing the contract on the Infraco it does not remove the ability of **tie** to direct the outcome of the process through their contract with Infraco. If Infraco are not communicating and engaging with **tie** as they might expect they should instruct Infraco to change the process and use the contract remedies available to them should Infraco default. Variations may have a commercial impact as any other instruction and variation to contract. They should not be the reason alone not to make necessary changes to improve process.

This robust arrangement may require a different approach to Design Contract Management moving beyond a monitoring of cost and programme role to one that gives direction and authority. This could cause **tie** to create a Design Authority "Baron" to act as the design authority within **tie** and give leadership and direction to the **tie** design contract management team. The purpose of the role would be to instruct and direct the stakeholders* within the design process to engage, communicate and resolve issues including if necessary giving direction on issues that may affect professional indemnity of the designers. A process of "peer review" could be used to effectively deliver the process. This role would not and must not interfere with or undermine the Schedule Part 14 role in terms of independent assurance and verification.

*Stakeholders to the design would include but not be limited to the designer, the system integrator, the planning authority, the client project manager, the client assurance engineer.

Should the contractual arrangements regarding design and construction change in the future it would be important to ensure that the status of the design was fully understood and the boundaries of indemnity and risk established. Any future role of **tie** in directly managing design and technical queries arising out of a previously established and finalised design should be managed and dealt with by the **tie** Design Authority. That authority would also manage imported risk and indemnities associated with any further adjustments to the design by others.

Functionally this could operate as shown below:-

