



Edinburgh Tram Project

Engineering, Assurance and Approvals

Briefing Note for Audit Scotland





Key functions

- Advice and support to the Edinburgh Tram Project on any engineering issue – particularly the Value Engineering works and bidder liaison.
- Management of the System Design Services contract with Parsons Brinkerhoff.
- Management of the Technical Support Services (TSS) contract with Scott Wilson.
- Management of the Design Assurance process.
- Management of the Approvals process.
- **Objective:** Ensure the appointed Infraco receives designs of high integrity and low risk giving the lowest price.





SDS design contract summary

- System Design Services contract with Parson Brinkerhoff
- Phases
 - Requirements Definition - complete
 - Preliminary Design – awaiting formal closure
 - Detailed Design - underway
- Tram network divided into 6 major sections and a depot – further divided into 13 subsections
- Scope of design services
 - Roads
 - Permanent Way
 - Signalling
 - Tramstops
 - Depot
 - Utility diversions
 - Structures





Design programme management

- **tie** manages programme i.e. Parsons Brinkerhoff have a sub-programme for design works.
- TSS (Scott Wilson) support the programme and review
- Design programme is dependent upon integration with various stakeholders e.g. CEC, TEL, Forth Ports, BAA, Network Rail
- Regular progress reporting with working progress update every 4 weeks.
- **tie** holds master programme which integrates all activity e.g. SDS, MUDFA, Procurement (Infracore + Tramco).





Assurance overview

- Assurance
 - Provision of evidence that a design is a good design
 - Integration of design elements with their interdependencies
 - Evidence of compliance with statutory and contractual requirements
 - Disclosure of any non-compliance and its basis.
 - Evidence of wider impacts
 - Evidence of design for maintenance and use as a workplace (CDM regulations)
- 19 Design Assured packages for delivery covering whole tram system. 1st package due July 2007, last due November 2007
- Each package contains c100 drawings, 25 documents and documentary evidence as above.
- Key contributor to creation of Infracore confidence and low price.





Approvals overview

- Approvals types:
 - Technical
 - Planning
 - Prior approvals (CEC acceptance of fit with the cityscape)
- Approvals Process. SDS → **tie** (TSS) → CEC → **tie** (or SDS for rework) then release for construction.
- More than one iteration for complex issues
- All approvals types must be complete before final release.
- Approvals depend upon integration of many stakeholders.





Current progress and challenges

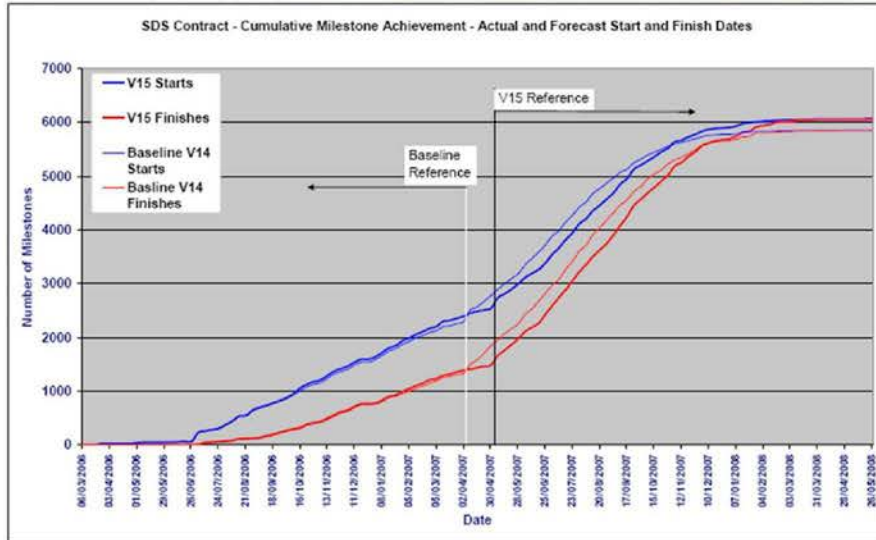
- Management and measurement processes
 - Critical issues (potential blockers) identified and managed on a weekly basis
 - Dashboard showing whole-project progress and forecasts
 - Critical Issues (blockers) understood, regularly updated and being tackled by all stakeholders
- Signalling immunisation – coordination between Network Rail and Transport Scotland
- Value Engineering support to ensure responsive design follow through
- Ensuring that the principal stakeholders are working together to avoid delays
- Ensuring that bidder technical needs are addressed to minimise price risk.





Current progress and challenges

- Some design slippage to date – typical period view shown below





Current progress and challenges

- Slippage due to three reasons
- (1) A logged critical issue, (2) a **tie** Change Notice having the effect of changing the scope, (3) slippage within the PB SDS contract performance.
- These issues are now well understood and the principal blockers (Critical Issues) being removed systematically.
- All stakeholders represented.
- Managed in detail on a weekly basis.
- Demonstrable progress in their removal

