

**OUTLINE OF
INVESTIGATION & AUDIT
DESIGN DELIVERY FOR THE ETN**

1. Background

- 1.1** It was a condition precedent to the Infraco Contract that the Infraco entered into a novation agreement with tie and the SDS Provider which inter alia obligated the Infraco to procure that the SDS Provider carry out and complete the SDS Agreement by discharging all required management activities, as well as providing Infraco Design. Moreover, the Infraco are prevented from amending the SDS Agreement without tie's approval.
- 1.2** The Infraco carried out a Due Diligence of the SDS design in February 2008 and SDS provided a report on Infraco's Proposals for Civils Works on 27 March 2008.
- 1.3** The relevance of these reports is recognised in Clause 3.4.1 of the Schedule Part 4 to the Infraco Contract, which provides:

The Design prepared by the SDS Provider will not (other than amendments arising from the normal development and completion of designs) in terms of design principle, shape, form and/or specification be amended from the drawings forming the Base Date Design Information (except in respect of Value Engineering identified in Appendices C or D to this Schedule Part 4).

- 1.4** The relevant contract provisions can be summarised as:
- the scope of the Infraco Works includes all aspects of design (excluding utilities design);
 - the Infraco is obliged to achieve complete system integration under the Infraco Contract;
 - in order for the Infraco to obtain a Permit to Commence Works, the Infraco must identify the necessary third party approvals and controls (including in relation to safety and Roads Authority);
 - the Review Procedure (Schedule Part 14) envisages an integrated design and the delivery of Design Assurance Statements for each design package;
 - the Employer's Requirements are very clear that system integration (spanning all elements of the Infraco Works, including design) is a fundamental part of the Infraco Contract;
 - delivery of an integrated and assured design forms part of the necessary requirements in order to submit the Case for Safety under ROGS;

- under the SDS Agreement (and SDS Novation Agreement), the SDS Provider is required to perform its design obligations in order to feed in to the Infraco's responsibilities in relation to design integration; and
- Any Design Deliverable has to be capable of forming part of A Design Assurance Statement. The SDS Provider's obligations to deliver a compliant design are achieved on delivery of Issued for Construction Drawings which are defined as:

those Deliverables necessary for Infraco to commence construction of the relevant part of the Infraco Works and as shown on the Design Delivery Programme which have been fully approved by all Approval Bodies and in accordance with the Review Procedure.

1.5 Those Deliverables referred to can be summarised as:

- drawings and specifications;
- a written statement of the design philosophy, explaining why it is a good, best value, design and certifying that all;
- Consents, including but not limited to Design Consents, obtained from Approval Bodies and Third Parties; and
- Confirmation that:
 - i. appropriate CEC informatives have been concluded;
 - ii. interdisciplinary checks have been carried out; and
 - iii. elements of design are integrated.

1.6 The following cardinal questions need to be asked and answered objectively:

1.6.1 Duties of Care

- Are the duties of care created by the two contracts unusual or onerous in any way?
- Do they create clear obligations to produce and manage the production of the Design?

1.6.2 Design Programme

- Given range of the obligations and commitments contained in the SDS Agreement and the Infraco Contract, what would be the main reasons for a completed integrated and assured design not being available (a) at May 2008 following a design commission let in October 2005 (b) by September 2010?

- How should the SDS Provider's design production speed be measured?

1.6.3 Design Production Management

- On a major project design novation, would an experienced 'design and build' contractor have a defined approach to managing the designer and would this entail specific resource?
- What methodology for managing design production would be Good Industry Practice for a project with clear engineering discipline interfaces?
- Would it be normal for the contractor to conclude a separate agreement (outside the novated design mandate) with the designer to control and remunerate design production?

1.6.4 Design Review

- Does Schedule Part 14 reflect a process which is fit for purpose, if applied diligently? If not, what is it lacking?
- If the answer to the above is 'yes', why would this process fail?

1.6.5 Design Revision

- Is the requirement for multiple revisions to a design concept normal practice as drawings move towards the Issued for Construction stage?
- What factors, other than client change or third party approvals, would drive this approach by an experienced designer?

1.6.6 Delay in design production

- What would the typical causes of delay in reaching IFC stage be?
- How should experienced contractors and designers (a) prevent such delay (b) mitigate its effect?
- Are the delays in design productions reasonable in this project?

1.6.7 Design Assurance

- What skills and experience would be required to manage design assurance on this type of project?
- Is there evidence of this type of personnel deployed by BSC?

1.6.8 On street design solution

- Is the design put forward by BSC best value?

1.6.9 Design Workshops

- What happened at the Design Workshops?
- Did this remove misalignment of design with Infraco Proposals and ERs or did they in fact become Infraco Proposals at tie's expense?

1.6.10 Design Status

- Did the state of completion of the ETN design as at 21 November 2007 and 14 May 2008 reflect the state of a design which met the duty of care owed by SDS Provider?
- What liabilities exist for the production of design pre novation?

draft FOISA exempt