



Paper to : City of Edinburgh Council
Subject : Contractual Risk Matrices
Date : 5th October 2007

1.0 Summary

1.1 This paper is to outline the project risk position and is accompanied by the Contractual Risk Matrices. The purpose is as follows:

- **Set out the Project Risk Position** – including those arising from contractual risk allocation.
- **Explain the principal risk allocation viz:**
 - assessed on a four weekly basis and updated accordingly together with follow up on mitigation.
 - show summary of allocations to principal contracts.
 - include contract risk allowance.

The paper need to be read in conjunction with the Contractual Risk Matrices and other appendicies.

1.2 The procurement strategy contained several features to minimize risk, viz:

- **Contract** – transfer design, construction and maintenance performance risks to the private sector.
- **Early appointment of the SDS Designer** – devised to minimize the risk premiums that bidders typically include within Design & Build Contracts and the incorporation of the novation arrangement to Infraco.
- **Early involvement of the operator** – similarly this has sought to mitigate risks on takeover and operation by getting first hand knowledge from the operator and recruit on the experiences from previous similar projects.
- **MUDFA** – by letting a separate utilities diversion contract, the inevitable difficulties that arise from the uncertainty of such works are carried out prior to the main infrastructure works being undertaken and thus limiting disruption to the Infraco project.
- **Tramco novation** – creates a single point of responsibility to overcome any programming alignment and technical interface issues such as system integration.

1.3 Principal examples of principal mitigations to mitigate risk include:

- Effective project management i.e. anticipating problems, regularly reviewing, following processes, making decisions in a timely manner and generally exercising sound judgement.
- Effective contract management i.e. following processes, responding within contract timescales, issuing timely notifications and generally complying with and applying contract provisions.
- Key contract levers include:
 - Liquidated Damages with represent a genuine pre-estimate of **tie**'s loss in the event of Infraco being in delay.
 - Infraco being responsible for approvals and consents.
 - Infraco to update the programme as required.
 - Milestone Payment arrangement.
 - General provisions with strong delivery incentivizations.
- The Owner Controlled Insurance Programme [OCIP] that is noted in further detail below.
- Managing risk provisions within Quantitative Risk Analysis [QRA].

1.4 Contract protections include:

- **Indemnity by Infraco** – up to 20% of the contract sum (circa £40 million). In the event of a breach or termination for Infraco Default then the Infraco indemnifies **tie** to up to 20% of the contract sum (typically this can only be 10%).
- **Joint and several liability** – both bidders are consortiums of either two or three companies. Under joint and several liability if one consortium member becomes insolvent then the other(s) still remain responsible.
- **Parent Company Guarantees** – from the ultimate parent companies (not just the UK parent if an overseas company).
- **Owner Controlled Insurance Programme** – see below

2.0 Owner Controlled Insurance Programme [OCIP]

- 2.1 The OCIP cover has been set at £200 million. The key driver for this was the requirement of BAA and Edinburgh Airport Limited to have this limit in respect of the airport activities. Furthermore Network Rail's standard requirement is £155 million in respect of interface activities. The insurance is obtained in primary, first excess layer, second excess layer and third excess layer. The higher excess layers are at a much lower percentage rate such that the additional cost of the higher level is not pro rata.

2.2 The table below summarizes the insurances during the construction phase together with the deductibles.

Insurance (Construction Phase)	Cover	Deductibles	
Contractor's "All Risks" (this covers damage to the contract works and materials)	£200 million	Generally	£20,000
		Acts of God	£40,000
		Design	250,000
Existing Structures	£200 million	As above	
Delay in start up	£200 million	60 days aggregate	
Terrorism	£200 million		

2.3 The logic of the OCIP was to procure insurance for the whole programme, including MUDFA, rather than individual contractor controlled insurance. Aside from the insurance broker's advice regarding generally lower rates, it has the advantage that tie can control matters to avoid gaps and duplications.

2.4 This structure offers good protection for tie / CEC and also contractors. The contractors are incentivized to avoid making claims against the OCIP as they pay the deductible where a loss is their responsibility. Where a loss is down to tie then it pays the deductible and a separate fund has been budgeted for which will cover the sort of number of claims generally encountered for such works.

3.0 Commentary on Contractual Risk Matrices

3.1 The Contractual Risk Matrices focus principally on the construction stage for Phase 1a and are based on the current drafting of the contracts. The various clauses within the Infraco contract are listed in the two Infraco risk matrices, one for each bidder. These have been assigned the code names of Roley and Scoop. These will be updated for the final position during the Preferred Bidder stage. The columns included in the Infraco risk matrices include:

- **Allocation** – risks are allocated as either Public Sector (i.e. CEC and / or tie), Private Sector (i.e. Infraco/Tramco) or Shared. In the case of shared risks these are not necessarily 50:50 and the proportions may change with thresholds or timing.
- **Impact** – this covers the probability of risks occurring, categorized as improbable (0%-5%), remote (6%-30%), possible (31%-70%), probable (71%-89%) or frequent (90%-100%) together with the impacts on the capital cost (capex) and construction programme. These impacts are categorized as insignificant (£0-£25K / 0-1 week), minor (£25-£100K / 1-2 weeks), moderate (£100-£500K / 2-4 weeks), major (£500K-£1M / 4-13 weeks), or catastrophic (over £1M / over 13 weeks). The probability and impacts categories reflect those from the Active Risk Manager [ARM] software that tie uses to maintain its risk register (see attached). This is then downloaded for the purposes of a Quantitative Risk Analysis [QRA] that tie also maintain (see attached). The colour coding also reflects the 'green / amber / red' table from ARM, with red being the most severe.
- **Mitigation** - the methods by which tie will mitigate the risks are shown.
- **Risk Allocation** – this column notes the financial provision currently within the QRA.

- 3.2 A further column provides **tie** comments to amplify various matters.
- 3.3 Additionally a simplified Tramco Contractual Risk Matrix shows the Preferred Candidate's position on the proposed risk allocation. The principal clauses are noted and it can be seen there has been a high proportion of acceptance of these. This will assist in the Facilitated Negotiations the **tie** will arrange and oversee to ensure that the novation of Tramco into Infraco achieves **tie**'s objectives.
- 3.4 It should be emphasized that many of the clauses in the contract do not represent risk in terms of uncertainty but are management decisions for **tie**, for example **tie** Changes, Phase 1b, Network Expansion and the like. These should be managed by applying a 'business case' approach.
- 3.5 Appendices are attached as follows:
- Appendix A - Roley Contractual Risk Matrix
 - Appendix B - Scoop Contractual Risk Matrix
 - Appendix C - Tramco Contractual Risk Matrix
 - Appendix D - Risk Register
 - Appendix E - QRA
 - Appendix F - Risk Assessment Criteria

As noted above, at this stage these related to Phase 1a only.