4 Findings and Recommendations

The key issues which were found during the review of the T&T Business Case Cost Plan dated 03 July 2013, and in some cases amended by the 12 July 2013 revision, are as follows:

4.1 Enabling Works

4.1.1 Utilities and Services

2012 – Key observation note:

Overall, from our analysis of the Strategic Cost Plan, we have some concerns regarding the adequacy of the utility protection, diversion and relocation allowances. The negotiations with the providers could become protracted and result in extended construction durations and delayed timeframes during the enabling phase. Extension of time will have a cost impact however this should be considered in the contingency assessment. It is unlikely that the work will be carried out in a timely coordinated way by the utility providers for the benefit of the Light Rail project, thus leaving a high risk of project cost (and time) increases.

a) The current Direct Cost of this work is estimated at $75,000,000, compared to $44,041,000 in the 2012 cost plan.

b) **Third Party Discussions** - Further to our comment in the July 2012 report, we note that while the current schedule of utility diversions has identified many more services, it is understood that discussions with the third party utility providers is only at the early stage of engagement and only limited progress has occurred to date to ascertain the full impact of these services.

c) Consultation with the Utilities stakeholders via a Third Party specialist on the likely impacts of the Light Rail works has been commissioned by TNSW to understand the scope, likely costs and risks faced in adjusting the utilities in the proposed corridor as well as develop interface agreements. We acknowledge that the objectives for the Third Party interface agreement will provide a benefit to the project through:

   a. A process to take the utilities strategy forward;
   b. A greater understanding of the extent of potential utilities diversions;
   c. Identification of critical services to be undertaken by an early works phase;
   d. Identification of services of a less critical nature that would be allocated to the PPP proponent to negotiate with each provider in the context of that proponents design;

d) It is noted that the Delivery Strategy provides for the early diversion of critical services prior to the main PPP works, which will be necessary to mitigate risk and potentially identify services that may not require diversion. The intent to commit early investigations in the field through trenching should further assist in confirming the services considered critical for early treatment.

e) **Increased number of potential diversions** - Evans & Peck reviewed the Utilities Assessment Schedule as provided in the Definition Design Report and identified how this was applied further by T&T to develop their Business Case Cost Plan. There is potential for data from the Dial for Dig analysis that has been documented on the drawings to not reflect the actual requirements of the utilities provider. It was apparent that the number of services

4.1.2 Traffic Management

> ***2012 – Key observation note:***
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> ***From our analysis of the Strategic Cost Plan, we feel that the allowance for traffic management is neither appropriately nor proportionally applied to account for the complexities associated with George Street difficult areas and the relative space and ease of construction in some other areas. Overall, the allowance may be adequate, however traffic management is one key area that regularly overruns the allowance due to a change in work plans, extended construction durations, multiple work faces etc. The revised constructability report will provide a fresh basis for the cost plan.***

a) The current Direct Cost of this work is estimated at $20,000,000, compared to $18,160,000 in the 2012 cost plan.

b) As per the limitations listed in Section 1.2 above, Evans & Peck has not been provided with the cost plan detail for traffic management and has therefore been unable to verify the adequacy of the $20M provision for this item. It is clear that a significant allowance should be made within the cost plan to cater for the various staging requirements envisaged and multiple working areas. The allowance in the Business Case Cost Plan has increased from the Strategic Cost Plan from 2012 ($18.2M), however it has not been possible to comment on the adequacy of this allowance other than a benchmark approach.

c) The traffic management allowance will need to include, but not be limited to, traffic management crews, vehicles, mobile and fixed signage, barriers, temporary roads and diversions, temporary closures, intersection management and temporary lighting in some cases. The RMS requirements for preparation and approval of traffic management plans are also significant and are assumed to be included in the Indirect Costs.

d) We understand that traffic management allowances have been consolidated into one cost centre and have not been allocated across the key activities, for example utility diversions and enabling works, track works and general road adjustments. We would like to evidence what scope the traffic management allowance includes for and the assumptions underlying the calculations.

e) **Benchmark Comparison** - The estimated value of traffic management for a broadly similar project in a less complex environment is significantly greater than the monetary allowance in this project. From this comparison and the points raised above, Evans & Peck is of the opinion that the allowance of $20,000,000 for Direct Costs is inadequate. It is recommended that the traffic management be reassessed upon the outcome of the utilities investigations that are currently being undertaken as well as incorporating the parameters around the proposed George Street closure.

4.2 Stops

> ***2012 – Key observation note:***
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> ***This section of the cost plan is considered to be minor and relatively low risk in monetary terms and therefore, has a minimal impact on the cost plan.***

a) The combined cost is now estimated at $46,020,000 compared to $13,400,000 in the 2012 cost plan.