KPMG

Edinburgh Trams – Draft Final Business Case

Presentation to Transport Scotland

04 December 2006

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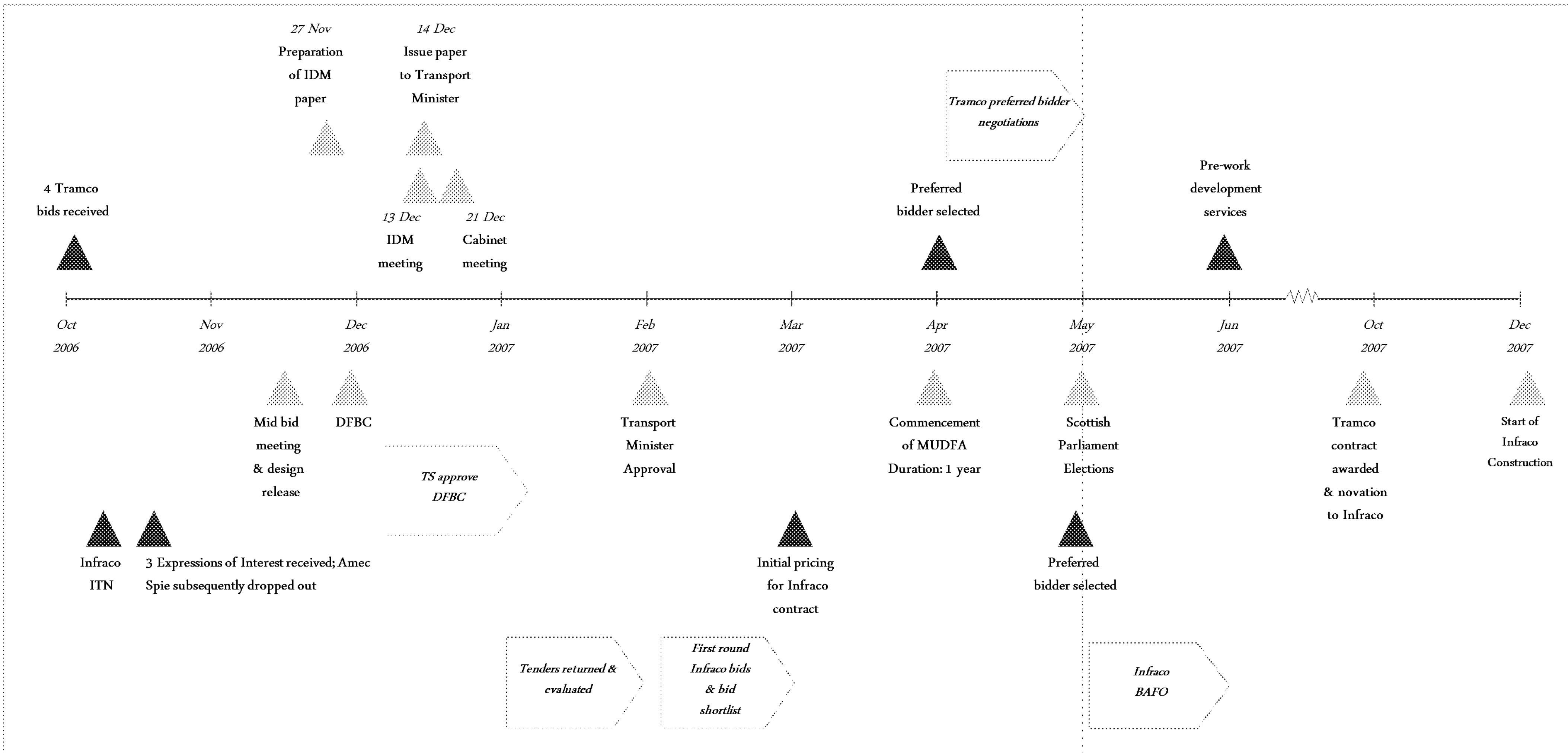
Timetable

Current timetable



Affordability (Section 9)

Costs

Issues

- **Tie** have allocated an Optimism Bias uplift of 12%for Route 1a (£58m/£464m according to most recent figures provided – Section 9.12 of DFBC) with no allowance for any extra Optimism Bias. KPMG expectations would be for a figure of circa 20%, in line with comparable schemes. 10% would cover the period until the Infraco contract was signed, and the other 10% the construction and commissioning period. 20% is closer to out-turn optimism bias levels experienced on previous trams projects (Mersey, London and other comparable English schemes)
- Phase 1a, at £520m, seems to be affordable within the current overall £545m funding envelope, with 6% headroom above the 12% optimism bias figure. Monte Carlo statistical analysis indicates that there is a greater than 90% chance that Phase 1a would be affordable within a funding envelope of £545m.
- Phase 1b costs are currently estimated to be c. £70m (optimism bias is only 8% - £5m/£65m), however, actual costs would be closer to £80m were an industry average contingency uplift of 20% to be applied. Full funding and contingency allocation for this route will probably have to come from another source, since it does not seem to be affordable within the current TS / **tie** budget
- Tram tenders have been received, however these may be of limited usefulness in predicting the final price.
- There are only two infraco bidders, and it is likely that the initial prices received (pre-election) will differ from the final prices submitted (post-election)
- Inflation and indexation methodologies need to be fully understood. Comments on affordability were made on the assumption of a £500m contribution from TS; were the final number to be lower, the affordability position for 1a would be more difficult.
- CEC 's contribution will not be sourced from council tax or general funds but from tram related development income and receipts. The revenue expectations from property development have not been revised since January 2006, and CEC need to be aware of the risks associated with these estimated revenues. TS must ensure that CEC are taking property-development risks, and will make good any cash deficit that arises due to development not occurring at the expected level
- There is no information available on the timings of contributions to be received from CEC.

Affordability (Section 9)

Costs (continued)

Affordability variables

[illegible]	KPMG Comment
The receipt and final negotiation of Infraco tender prices. Initial pricing information is due to be received in early 2007 but final prices will not be known until the contract has been negotiated in mid 2007. In the intervening period the progression of Detailed Design would serve to further mitigate the pricing of risks by Infraco bidders and to reflect further examination of value engineering opportunities	● Tender prices may rise during the negotiation period - the longer the process, the more likely this is ● The progression of the detailed design would not necessarily mitigate the pricing risk
The effectiveness of **tie** and others in mitigating the risks which have been quantified in the cost estimates at 11/%12% of base costs. Effective risk mitigation is embodied, inter alia, in the process for obtaining planning consents and Traffic Regulation Orders	● KPMG would have expected a risk contingency of 20%, in line with previous procurements
The final outcome of prevailing inflation and Transport Scotland's indexation proposals	● Lack of information about inflation assumptions
Examination and execution of opportunities to secure contributions from property developers over and above the levels of contribution which were assessed by CEC as necessary for the delivery of their existing £45m contribution	● Discussion with **tie** confirmed that any additional funding from CEC in excess of £45m would be most unlikely for Phase 1a. If additional funding is available, it would most likely be allocated to Phase 1b ● Additional funding from property developers may be available for Phase 1b
Further consideration of financing options such as an element of tram vehicle leasing	● TEL could lease trams through a finance or operating lease. These costs would have to be funded from operating income. **Tie** consider that TEL leasing shouldn't affect CEC's reported borrowing. If this route were to be pursued, it would need careful examination at the time
Examination of the cost savings which may be derived from truncating Phase 1a at Ocean Terminal rather than Newhaven, together with an appraisal of the loss of benefits and operational flexibility which would result from such a truncation.	● There is likely to be a c.£5m cost saving of finishing Phase 1a at Ocean Terminal rather than Newhaven (**tie** estimate)
Updated assessment of the pace and scope of development at the Granton Waterfront	● Assessment of any delays of the Granton development would need to be considered and it may be appropriate to delay the development to Phase 1b
Final determination by CEC and Transport Scotland of the level of funding which can be made available by each party for Phase 1 of the tram in the context of the economic and public transport benefits assessed in this Draft Final Business Case	● **TIE** confirmed at a clarification meeting that they may have to request more funding

Cancellation Costs

Cancellation costs (s9.48)

- Cancellation costs will comprise:
  - compensation payments to contractors
  - costs of disposing of any land acquired
  - redundancies at **tie**
  - other associated costs
- The exact level of cancellation costs is be calculated and supplied by **tie**. We understand that the agreement between CEC and TS is that the body cancelling the project will bear all cancellation costs. Cancellation costs in the region of £10m – £20m would not be significantly less than the current cash commitment of CEC to the scheme within their £45m total

Risk management

Realistic/underestimated risk

- Nature of the separate contracts means the public sector need to incorporate risk not taken on by the private sector. How capable are TS and CEC of assuming these risks, and tie of managing them?

What happens if there is a life-cycle maintenance / rolling stock issue?

- TEL bears all the risk in relation to long term maintenance of the tram (s.9.38)
- Is the risk realistic / underestimated? (The TEL business plan does not specifically provide for major replacement expenditure expected after 30 years although they mention a consideration of this when reviewing any operating surpluses (section 8.9.6)

Reviewing revenue/pricing

- Modelling for forecast revenue may have overestimated revenues (s8.47)
- Pricing interface with EARL – knock-on revenue effects to tie if EARL is delayed / cancelled
- TEL have said they will take revenue risk
  - can they afford this risk?

Cost over-run/delay to start of operations

- Interface Issue / Railway Inspectorate issue
  - CEC have stated that they have no further money beyond £45m, TS will have to fund from its reserved money

Non-project risks

- Electoral uncertainty
- Planning consent, applications, coordination and timing issues may delay the timetable

Transport Integration (Section 5)

Potential issues

- Design and effectiveness of interchanges
  - Construction of bus-tram interchanges at foot of Leith Walk, St Andrew Square, Crewe Toll (1B). (initial proposals for the first two sites here were tabled by TEL on 27 November, but designs are not finalised).
  - Bus/tram/rail interchange (e.g. Haymarket) also important, as is Park & Ride

- Adequacy of tram service and implications of accelerated growth (vehicle requirements)
  - Current presumption from forecasts and in TEL Business Plan is that 6/12 tph will need to become 8/16 tph from year 5 (2016). tie indicated that the initial procurement structure provides for additional vehicles to be able to be ordered at a later stage to meet growth requirements
- Principal bus service plans:
  - reduce services down Leith Walk which duplicate tram corridor (i.e. heading to St Andrew Square) but retain bridges alignment buses
  - but retain some Leith Walk buses to serve those who will be inconvenienced by the reduced number of stopping points served by the tram
  - reduced Airlink service between airport and centre
  - reduced services parallel to tram in the west (Saughton, Broomhouse - notably 22), but not withdrawn because sections of existing bus routes are not close enough to the tram for it to be an appropriate substitute

- Possibility and impact of competition – in the deregulated bus market

Patronage and Revenue

Potential Issues

- There is strong sensitivity to the scale and timing of anticipated developments in North and West Edinburgh, and to underlying economic growth – downsides of £3.5m and £7.8m respectively in 2011 and £24.7m and £44.6m respectively in 2031. There is clearly some potential ability to mitigate this by securing operating savings on buses but we have not seen detailed analysis of the extent to which this could be achieved.
- We identified some inconsistencies in bus and tram patronage levels in the TEL Business Plan. TEL undertook to correct these. For example:
  - bus patronage in 2010 projected at 115m. For 2011 without tram (assume 2% growth) would be 117.3m. With tram (1A&1B) it is stated in TEL Business Plan as 110m. But over 9m transfers from bus to tram (STAG, table 8.6) suggest bus use would reduce to a lower level
- Other TEL Business Plan issues:
  - potential operating deficits on Phase 1B of tram are to be underwritten by system stakeholders" – TEL Business plan presentation – slide 9
  - fraud/revenue protection rationale – we understand fraud revenue loss assumptions have been reduced to 3% on the basis of employing ticket checking staff on all trams but accepting that they will not be able to check all tickets at busy times
  - £8m of TEL income (nearly 7% in 2011) is stated as from "other sources" – advertising, etc, but the analysis does not account for this. We understand that the difference is accounted for by the tours business – TEL will consider, taking into account commercial considerations, how they might represent this
  - there is an assumption that TS continues to underwrite concessionary scheme to the effect that TEL gets 73.6% of adult single fare for each journey. TEL acknowledges that any amendment to the scheme would have a significant effect on its financial position. The scheme is subject to review by TS – TEL will make it clear in the Business Plan that the concessionary reimbursement is a key element of its revenues
  - we understand that the operating agreement with Transdev (DPOFA) will see revenue risk incentives removed? We are told this approach would be consistent with the financial assumptions in the Business Plan

Cost-Benefit analysis

Key features

- The work was undertaken by the JRC and encapsulated in the STAG report
- The first iteration of BCR came out very poor; there was significant change on amendment
- The key factor was to incorporate the level of bus service that would have been required to carry the additional traffic post development (without tram) and then reduce it (with tram) and incorporate the resulting saving
- Other adjustments relate to the planning growth assumptions
- The resulting BCR was set at 1.61 (1A+1B) and 1.12 (1A)

Potential issues

- TS have only just received the independent Due Diligence report for review, although Scott Wilson have indicated that there are no “showstoppers” in there
- These figures assume EARL is built; without EARL the Benefit-Cost Ratio would be improved
- The definition of the “reference case” or “do minimum” scenario, which has assumed certain pro-bus measures in 2031 without the tram, notably the closure of Shandwick Place
- The results of an exercise regarding experience elsewhere (commissioned by tie)?
- The treatment of user charges had been an issue for TS’ Economist, but we understand this is now resolved to his satisfaction
- Apparent inconsistency of yield values in the calculation of revenues between the STAG and Revenue & Risk reports. The JRC have undertaken to provide a reconciliation
- In Vehicle Time (IVT) assumptions. JRC believe these are conservatively set. They are to provide a copy of the Stated Preference Report to TS
- TEE calculations – JRC are to provide the cost spreadsheets to TS, also a calculation of a TEE test for the Phase 1a network alone
- The DFBC assumes a level of development at Granton consistent with city projections. If development has not occurred at Granton according to these projections and by the time 1b is developed, then there will be lower patronage and a lower BCR than currently incorporated in the DFBC
- There remains a lingering sense that 1A takes the cost, 1B delivers the benefit, despite its low use, especially in the early days.

Procurement Process

Tramco

- Four bidders - Alstom, Bombardier, CAF, Siemens - bids received on 9th October
- The intention is not to complete the evaluation until the infraco evaluation is also underway; the results of the two processes will be announced together .
- How realistic is the timeline? - scheduled negotiations between preferred bidder to commence April '07, with pre-development work in June '07

Infraco

- ITN issued 8th October
- Three Expressions of Interest received - Amec/Spie; Bilfinger Berger/Siemens; and Bombardier/Laing/Grantrail
  - Amec/Spie subsequently withdrew from the process due to internal capacity constraints
  - With two bidders and a less competitive process, any price rise will result in a lose of value for money
  - If one bidder withdraws then tie may be locked into an uneconomic procurement, and it may then be beneficial to start the competition again
- Short timescale – Tenders to be returned and evaluated from January 07 with preferred bidder selected in May 07. The price submitted pre-decision may not necessarily be accurate as bidders may tell tie what they want to hear to remain in the competition and secure a better negotiating position
- Novation issues still to be resolved – the different level of liability cap between tramco and infraco needs to be resolved

Deliverability

- How realistic is the timetable? Is it achievable?
- Running the two process concurrently

Procurement (Section 7)

Payment mechanism

Infraco

- **tie** had previously proposed full payment during the construction period with a retention bond equal to 10% of the price. 5% of the retention bond would be released on opening, with the remaining 5% being released after a maintenance period.
- Milestones have now been incorporated as below -
  - 85% - during construction
  - 5% on successful testing and commissioning
  - 5% on successful trial-running
  - 5% on completion of 98% system reliability test
- **tie** are proposing to combining the retention bond with milestone payments.
- Were the bond to be cash-collateralised, the 10% bond would effectively mean that 75% of the price is paid via milestones during construction.
- At the end of successful trial-running, there would be 10% payment (2 of the 3 milestones) and half of the bond would be repaid.
- During operations, it is anticipated that the remainder of the bond would be repaid, and the systems reliability payment would be made. This would bring the payments made up to 100% of the total value.
- Such a combination of milestones and a retention bond might entail a significant financing cost.
- VfM under such a contract would normally be secured by paying a significant amount of the contract price at the end of construction, and into operations
- Were money to be saved by paying the Contractor earlier, it may be prudent to increase the risk contingency.

Tramco / Infraco Interface

- Payment milestones to be devised, with regards to how Infraco will be remunerated by tramco, so that Infraco payment mechanism will match tramco payment mechanism

Alternative Procurement Option

The current plan has a decision point in February:

- To commission the 'dig' stage of the MUDFA utilities work
- To commit Transport Scotland and CEC funding for the main infraco contract
- **Tie** propose that the decision to commit Phase 1b should be delayed

In February:

- There may be information on the cost of trams
- There will be some first round bidding information on the infraco costs
- MUDFA costs will be known, as will design and management costs
- There is an operating costs contract, but it can be reopened later

What is the alternative?

- Wait for the second stage of infraco bidding – when infraco and tramco costs will be more fixed (late summer 2007)
- Delay MUDFA dig until autumn 2007 – at some contract cost and some delay for the project
- Take the opportunity for any renegotiation of operating contract that can be done now
- Delay may have some commercial advantages, and reduces project risk, but will postpone the system opening
- A later central government decision mirrors the DfT approach in England more closely
- The alternative is unlikely to be attractive to TS

Other issues

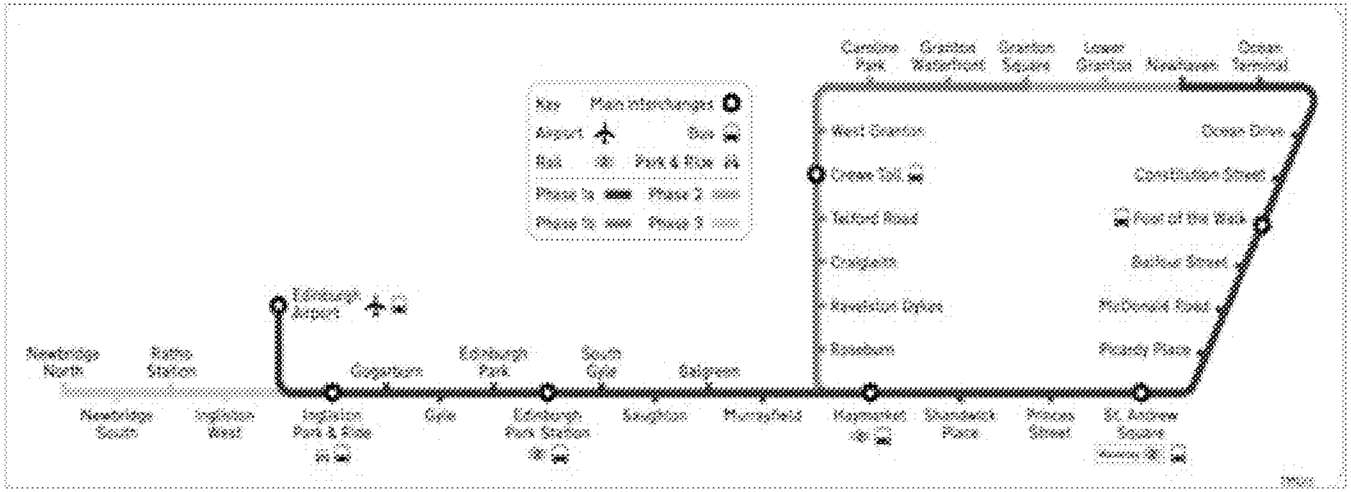
- Highly unusual procurement method
  - two ITNs issued before the Final Business Case completed
- Not a PPP but coming closer to it
- What is the decision process?
- Funding Shortfall to be addressed - FBC to be decided and Phase 1a and 1b approval is scheduled for February 07; Funding to be finalised in May 07 – associated affordability risks with this time lag

Appendices

- Appendices
  - Network & phases
  - Timetable for phase 1a & 1b
  - Phase 1 Construction
  - Estimated Cost breakdown
  - Estimated profile of capital expenditure

Appendix 1

Network and phases

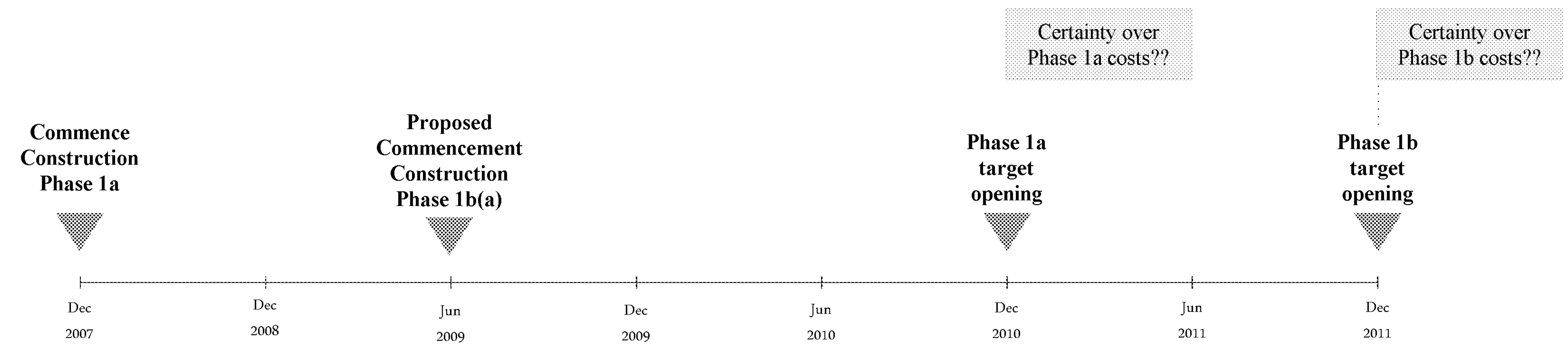


DRAFT FOR DISCUSSION

Appendix 2

Timetable for Phases 1a and 1b

Timetable Phase 1a and Phase 1b (see Appendix for Phase 1 Construction)



- Decision of Phase 1b taken before the full detailed cost of 1a are known
- See slide 22 for detailed timetable

Note: (a) *Phase 1b to be constructed without certainty of funding?*

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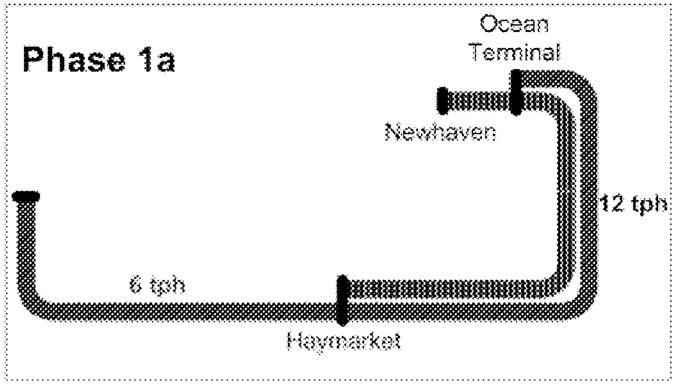
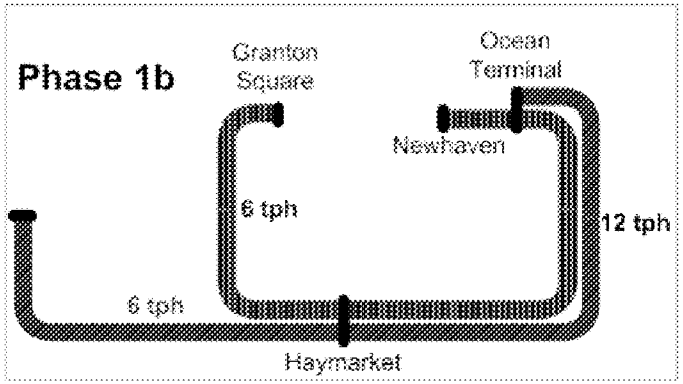
Appendix 3

Phase 1 Construction

Phase 1 Construction – trams to run from 04 30 to 00 00





Appendix 4

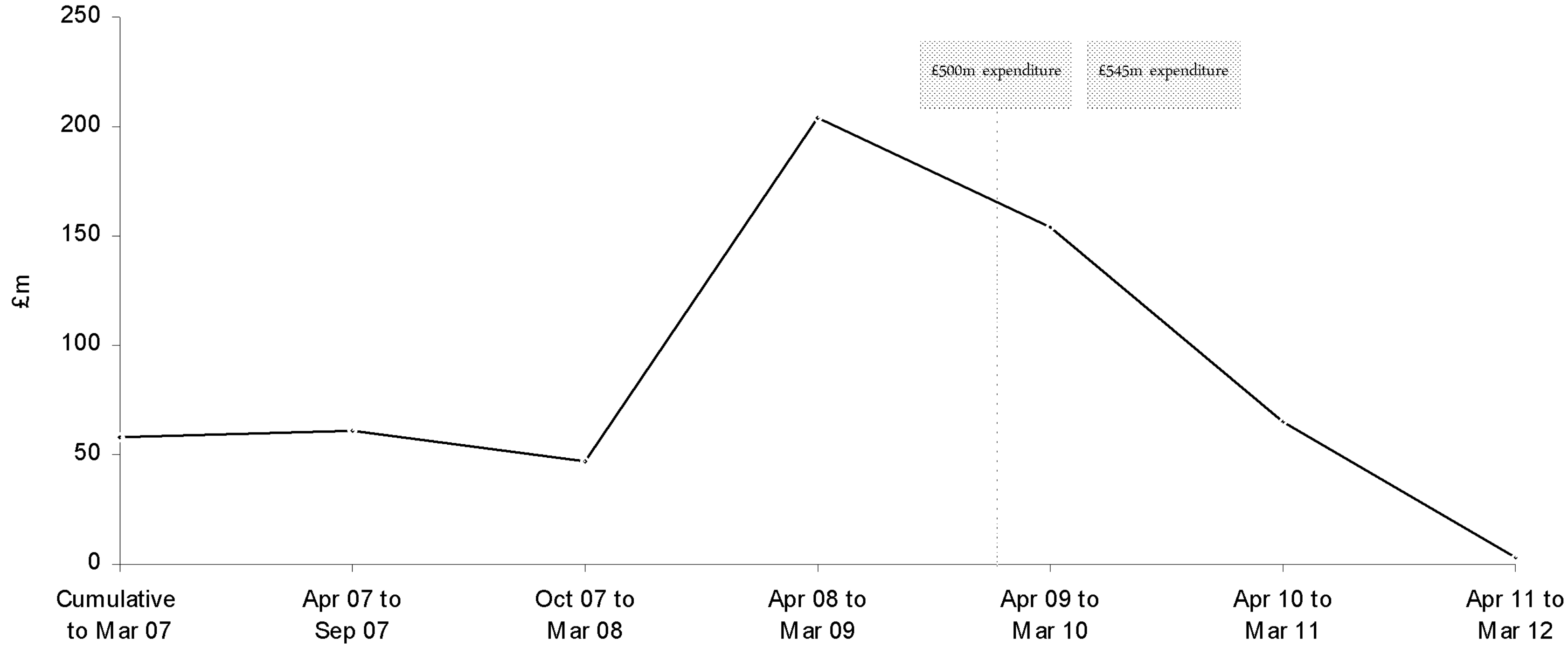
Estimated Cost - breakdown

	Phase 1a		Phase 1b		Total	
	£m	%(Total)	£m	%(Total)	£m	%(Total Incl Risk)
Utilities	62	100%	0	0%	62	10%
Tram Vehicles	55	87%	8	13%	64	11%
Infrastructure	207	81%	49	19%	256	43%
Other third party works	9	94%	1	6%	10	2%
Land & Property	24	85%	4	15%	28	5%
Design	26	100%	0	0%	26	4%
Project management etc						
tie Project management	49	97%	2	3%	51	9%
DPOFA resources	8	87%	1	13%	9	1%
TEL management	4	100%	0	0%	4	1%
Legal resources	8	98%	0	3%	8	1%
Comms and marketing	3	100%	0	0%	3	1%
Other	10	97%	0	3%	10	2%
Total exclusive of Risk	**464**	**88%**	**65**	**12%**	**529**	**89%**
Risk						
Utilities	13				13	
Tram Vehicles	3				3	
Infrastructure	28				28	
Other third party works	4				4	
Land & Property	9				9	
Design	2				2	
Phase 1b			5		5	
Total Risk	**58**	**92%**	**5**	**8%**	**63**	
Optimism Bias		13%		8%		
Total inclusive of Risk	**522**	**88%**	**70**	**12%**	**593**	

Appendix 5

Estimated profile of capital expenditure

Estimated capital expenditure (s9.35)



Notes:

(a) Prepared on the basis of the estimated value of work done during the period concerned and does not reflect the final negotiation of milestone schedules upon which payment to Tramco and Infraco will be based

(b) Inclusive of 12% risk allowance included in the updated cost estimates and reflects an assessment of when that risk allowance would be expended, if it were required, with reference to the nature and incidence of the underlying quantified project risks

(c) Tie's contractors will require comfort as to the availability of funding (and tie's ability to meet its obligations as they fall due) for all committed work at the point of signing the contracts, most notable at the point utility diversions commence under MUDFA in April 07 and the point of signing the Infraco and Tramco contracts, currently planned for early Oct 07

(d) The cumulative expenditure at any point in time does not include the payments which would be required to extinguish outstanding contractual obligations in the unlikely event that the project was cancelled