Midland Metro – City Centre Extension & Fleet Replacement

Introduction

October 2009

Introduction

The Business Case

The Business Case for the Midland Metro City Centre Extension and Fleet Replacement scheme has been developed in accordance with the Department for Transport's guidance for Local Authorities seeking Government funding for major transport schemes. Ongoing engagement with the Department has also taken place during the preparation of the Business Case in order to ensure this submission is as robust as possible.

The Business Case comprises a suite of documents that address the five cases required as part of a Major Scheme Business Case submission. These are presented in three parts:

- Part A – Strategic Case
- Part B – Value for Money Case
- Part C – Delivery, Commercial and Financial Cases

Each part is accompanied by supporting appendices.

The Strategic Case sets out the policy framework and transport challenges that provide the context for the development of the scheme for which funding is sought.

The Value for Money Case presents the case for the scheme through the demonstration of the likely impacts, both beneficial and non-beneficial, and sets them against the forecast costs for the scheme.

The Delivery, Commercial and Financial Cases present the robust arrangements that are in place to deliver the scheme to time, cost and quality and demonstrates a sound procurement strategy.

Major Scheme Business Case checklist

As specified in the guidance the Major Scheme Business Case checklist has been completed and is presented below.

Scheme Description

Item	Section/Page
A detailed physical description of the scheme, and the other appraised option(s), including maps, scale diagrams and a written commentary.	Section A 5.14 to 5.39, Appendix A-2

Strategic Case – Section A

Item	Section/Page
The objectives of the scheme	5.1 to 5.3
A description of the process by which the scheme came to be identified as the preferred option for meeting those objectives	Appendix A-3
How the objectives of the scheme align with wider local objectives, particularly those of the relevant Local Transport Plan.	Chapter 7

Item	Section/Page
How the objectives of the scheme align with sub-regional and regional objectives, (except for schemes of predominantly local significance)	Chapter 7
Written endorsement from regional bodies	Appendix A-1

Value for Money – Section B

Cost Benefit Analysis

Item	Section/Page
A clear explanation of the underlying assumptions used in the Cost Benefit Analysis.	4.4 to 4.32
Information on local factors used. For example the derivation of growth factors, M factors in COBA and annualisation factors in TUBA (to include full details of any calculations).	Appendix B-2
A diagram of the network (if COBA used).	N/A
Information on the number of junctions modelled (if COBA used), for both the do-minimum and the do-something.	N/A
Details of assumptions about operating costs and commercial viability (e.g. public transport, park and ride, etc.).	4.27 to 4.31, 6.3 to 6.5 and 8.27
Full appraisal inputs/outputs (when used, COBA and/or TUBA input and output files should be supplied).	Appendix B-2
Details of the maintenance delay costs/savings.	4.19 to 4.26
Details of the delays during construction.	2.2 to 2.11, 8.18 to 8.25

NATA Assessment

Item		Section/Page
Evidence of consultation with key stakeholders (including any NGOs consulted and responses).		Appendix B-4
Assessment of Environmental impacts, to include an environmental constraints map.		Section B Chapter 2
Assessment of Safety impacts and the assumed accident rates presented (COBA output should be provided if an accident only COBA has been run).		Section B Chapter 3
Assessment of Economic impacts.		Section B Chapter 4
Assessment of Accessibility impacts.		Section B Chapter 5
Assessment of Integration impacts.		Section B Chapter 6
A comprehensive Appraisal Summary Table.		Section B Table 7.1
The following supporting analyses:		Section B Chapter 8
	Distribution and Equity.	8.3 to 8.12
	Affordability and Financial Sustainability.	8.34 to 8.36

	Practicality and Public Acceptability (Evidence of public consultation supplied).	8.13 to 8.33
	Contribution to 10 year plan targets.	8.37 to 8.41
NATA worksheets.		Appendix B-3

Modelling

Item		**Section/Page**
An Existing Data and Traffic Surveys Report to include:		
	Details of the sources, locations (illustrated on a map), methods of collection, dates, days of week, durations, sample factors, estimation of accuracy, etc.	References given in Appendix B-1. Detailed survey reports available on request
	Details of any specialist surveys (e.g. stated preference).	
	Traffic and passenger flows; including daily, hourly and seasonal profiles, including details by vehicle class where appropriate.	
	Journey times by mode, including variability if appropriate.	
	Details of the pattern and scale of traffic delays and queues.	
	Desire line diagrams for important parts of the network.	
	Diagrams of existing traffic flows, both in the immediate corridor and other relevant corridors.	
An Assignment Model Validation Report to include:		
	Description of the road traffic and public transport passenger assignment model development, including model network and zone plans, details of treatment of congestion on the road system and crowding on the public transport system.	Appendix B-1
	Description of the data used in model building and validation with a clear distinction made for any independent validation data.	
	Evidence of the validity of the networks employed, including range checks, link length checks, and route choice evidence.	
	Details of the segmentation used, including the rationale for that chosen.	
	Validation of the trip matrices, including estimation of measurement and sample errors.	
	Details of any 'matrix estimation' techniques used and evidence of the effect of the estimation process on the scale and pattern of the base travel matrices.	
	Validation of the trip assignment, including comparisons of flows (on links and across screenlines/cordons) and, for road traffic models, turning movements at key junctions.	
	Journey time validation, including, for road traffic models, checks on queue pattern and magnitudes of delays/queues.	
	Detail of the assignment convergence.	

Item		Section/Page
	Present year validation if the model is more than 5 years old.	
	A diagram of modelled traffic flows, both in the immediate corridor and other relevant corridors.	
A Demand Model Report to include:		
	Where no Variable Demand Model has been developed evidence should be provided to support this decision (e.g. follow guidance in WebTAG Unit 3.10.1 Variable Demand Modelling - Preliminary Assessment Procedures).	Discussed in Appendix B-1
	Description of the demand model.	
	Description of the data used in the model building and validation.	
	Details of the segmentation used, including the rationale for that chosen. This should include justification for any segments remaining fixed.	
	Evidence of model calibration and validation and details of any sensitivity tests.	
	Details of any imported model components and rationale for their use.	
	Validation of the supply model sensitivity in cases where the detailed assignment models do not iterate directly with the demand model.	
	Details of the realism testing, including outturn elasticities of demand with respect to fuel cost and public transport fares.	
	Details of the demand/supply convergence.	
A Forecasting Report to include:		
	Description of the methods used in forecasting future traffic demand.	Discussed in Appendix B-1
	Description of the future year demand assumptions (e.g. land use and economic growth - for the do minimum, core and variant scenarios).	
	Description of the future year transport supply assumptions (i.e. networks examined for the do minimum, core scenario and variant scenarios).	
	Description of the travel cost assumptions (e.g. fuel costs, PT fares, parking).	
	Comparison of the local forecast results to national forecasts, at an overall and sectoral level.	
	Presentation of the forecast travel demand and conditions for the core scenario and variant scenarios including a diagram of forecast flows for the do-minimum and the scheme options for affected corridors.	
	If the model includes very slow speeds or high junction delays evidence of their plausibility.	
	An explanation of any forecasts of flows above capacity, especially for the do-minimum, and an explanation of how these are accounted for in the modelling/appraisal.	
	Presentation of the sensitivity tests carried out (to include optimistic and pessimistic tests).	

Delivery – Section C

Item		Section/Page
Governance		
	Named Senior Responsible Owner (SRO)	4.14 Appendices C-5, C - 6 and C-7
	Proposed Governance Structure	4.1 – 4.14, Appendix C-5
	Composition of Project Board	Appendices C-5, C - 6 and C-7
	Details of resourcing level for the scheme	Appendices C-5, C - 6 and C-7
Project Planning		
	Project Plan (e.g. in GANNT chart form)	Figure 5.1 Appendices C-8, C – 9 and c - 10
	List of key milestones and dates	5.9, Appendices C-6 and C-7
	Clear critical path and dependencies	5.10,Appendices C-8, C-9 and C-10
Risk Management		
	Risk Register with likelihood, probability and mitigation measures, including Quantified Risk Assessment.	Appendix C-16
	Description of proposed Risk Management process and escalation procedures.	Chapter 4, Appendix C-11
Stakeholder Management		
	Identification and analysis of key stakeholders and their interests.	Chapter 7, Appendices C – 14 and C - 15
	Description of public consultation already carried out.	Via TWA process
	Plans for future consultation and stakeholder management.	Appendices C-14 and C-15
	Evidence of consultation with Statutory Bodies (Natural England, English Heritage and Environment Agency) and their responses.	Appendix C-14
Evaluation		
	Statement of core evaluation objectives	Table 8.1
Assurance (schemes with gross cost of £50m or more)		
	Confirmation of date Gateway Review carried out (or planned).	6.10 to 6.14

Commercial – Section C

Item	Section/Page
Preferred procurement route with rationale for choice	Chapter 2, Appendix C-1
For ECI proposals, contract type and risk sharing arrangement	N/A
Details of proposed risk sharing approach (for other than traditional procurement)	N/A

Financial– Section C

Item	Section/Page
Detailed cost breakdown	Appendix C16
Evidence of how cost estimates have been derived	9.1 to 9.26
Independent surveyor's report verifying cost estimates	9.4
Details of and justification for inflation assumption used.	9.15 to 9.21
Costing for risk based on QRA	Table 9.3
Estimate of eligible preparatory costs	9.11 and Table 9.1
Details of measures to secure necessary third party contributions, if applicable	N/A
Description and estimate of any ongoing revenue liability (other than routine maintenance) and proposals to meet it	N/A
Section 151 Officer sign-off for cost estimates	Appendix C - 4