



Thames Valley Berkshire Local Enterprise Partnership

Independent Assessment Summary Report: South Reading Mass Rapid Transit Phases 3 & 4

Business Case Independent Assessment

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Appendices

Appendix A – Business Case Checklist

1 Executive Summary

- 1.1 This technical note provides an independent review of the South Reading Mass Rapid Transit (MRT) Phases 3 & 4 Business Case submission to the Thames Valley Berkshire Local Enterprise Partnership.

SCHEME SUMMARY

- 1.2 The South Reading Mass Rapid Transit (MRT) Phases 3 and 4 will provide a series of bus priority measures on the A33 between Rose Kiln Lane and Bennet Road, for bus services operating between central Reading to existing / proposed residential and employment areas to the south of Reading including Green Park and the new Mere oak Park and Ride facility which was delivered in 2015.
- 1.3 The scheme will thus expand on the existing Bus Priority facilities in the A33 Corridor, through the M4 junction 11, as well as SRMRT Phase 1 which is constructed and Phase 2 which is currently being constructed.
- 1.4 Phase 3 comprises a northbound 3.25metre minimum width bus lane on the A33, between Longwater Avenue/Bennet Road Gyratory and Island Road. The existing northbound parallel footway will be retained with a minimum width of 2 metres.
- 1.5 Phase 4 of the scheme, consists of a southbound bus lane of 3.25 metres minimum width on the A33 between Rose Kiln (Reading Link Retail Park) to Rose Kiln Lane (Brunel Retail Park). A further southbound bus lane of similar quality and dimensions, will be provided between Rose Kiln Lane (Brunel Retail Park) to Island Road to the south.
- 1.6 MOVA will also be implemented on the approach and intermediate junctions between the bus priority lanes at; Bennet Road gyratory; A33/Island Road junctions; the Oracle roundabout; London Road/Kendrick Road junction; London Road/London Street junction; and at the junction of the Inner Distributor Road (IDR)/London Street junction to optimise the signal operation to reduce delays for buses and will also benefit general traffic leading to more efficient use of available road space.

- 1.7 The purpose of the scheme is to improve the journey times and reliability of bus/MRT services on the main corridor into Reading, whilst reducing forecast congestion and air quality by attracting people to switch to bus travel.

REVIEW FINDINGS

- 1.8 The Value for Money assessment has been conducted entirely using monetised benefits and the report conclusion shows a **High Value for Money** with a **BCR of 3.29**.
- 1.9 It is possible to fully recommend the business case for the South Reading Mass Rapid Transit.

2 Submitted Information

2.1 The business case and further documents were submitted in October 2017. This business case independent assessment is based on these documents, submitted by Reading Borough Council and their consultant team (Peter Brett Associates):

- South Reading MRT Phase 3&4 - Business Case v2 0.pdf;
- South Reading Mass Rapid Transit Phase 3 and 4 - Economic Assessment Report v2 0.pdf;
- MRT South - Phase 3 to 6 - OAR v1 0 - With Drawings.pdf;
- 28791-5526 SRMRT Phase 3 & 4 Demand Modelling Report v3 0.pdf;
- 28791-5506 Reading Transport Model - MFR v1 0.pdf;
- 28791-5506 Reading Transport Model - LMVR v2 0.pdf.

3 Option Assessment Report

- 3.1 The OAR is well written and fulfils the requirements. The option descriptions are sufficiently detailed to understand each option.
- 3.2 The Options Assessment Report is acceptable.

4 Appraisal Specification Report

- 4.1 The Appraisal Specification Report (OAR) has been previously submitted for assessment and reviewed by WYG [ref: WYG_SRMRT-ASR_Review_(2017-09-15)_DRAFT].
- 4.2 On the whole the methodology for assessing the scheme, as set out in the ASR, is sound. Some details and requirements are missing from the ASR, particularly details of the scheme itself. Some, but not all, of these requirements have since been supplied in the business case.
- 4.3 It is noted that the VISSIM element of the scheme modelling found in the ASR has been replaced with use of the Saturn model in the business case.
- 4.4 An updated ASR will not be required.

5 Full Business Case - Review

The Business Case Document

- 5.1 The Business Case Submission is reasonably well set out, detailed and comprehensive. The scheme is stated to have a BCR of 3.3.
- 5.2 Details of the scheme, in the form of scheme drawings, have been supplied.
- 5.3 Scheme capital costs are given in the PA table as £13.7m in 2010 prices and discounted values. Developer contributions of £2.5m bring the capital cost to government down to £11.3m. Operating costs are given as £0.246m, giving a PVC of £11.5m.
- 5.4 The scheme appraisal period is 60 years.
- 5.5 Benefits amount to £37.9m of which around 45% accrues to new and existing bus passengers, with the rest accruing to highway users.
- 5.6 Three scenarios have been assessed: the Core scenario (Scenario 1) and two alternative scenarios (2 and 3). The scenarios are:
- Scenario 1 – The Main Scenario (Core);
 - Scenario 2 – Low demand scenario (10% lower demand).
 - Scenario 3 – 50% CIL (50% lower developer contribution).
- 5.7 The above scenarios are not in the business case document, being instead presented in the Economic Assessment Report (EAR) of the previous submission.
- 5.8 The scheme costs have been supplied as a break-down.
- 5.9 The level of optimism bias is normally set to reflect the level of knowledge of risks to the project construction. The scheme has a Quantified Risk Assessment and has been assessed at an optimism bias level of 15%, which is appropriate given the detail of the scheme costs and the risk elements that are included.

5.10 The scheme uses funding partial from the private sector in the form of developer contributions via a Community Infrastructure Levy (CIL). The funding from CIL is not secure and it is stated that Reading Borough Council will make up any shortfall. This means the scheme is not reliant on developer funding but it does mean the costs to the public sector could rise. A scenario with a pessimistic CIL contribution (50%) has been presented.

5.11 Further comments on the business case sections are found in **Appendix A**.

The Modelling

5.12 Link flow validation on the A33 is good in the AM, IP and PM (northbound). The model is under-representing link flow in the PM (southbound).

5.13 The journey time route of interest is Route 3. The journey time validation is good for the AM inbound, IP and PM. The modelled time is low for the AM outbound.

5.14 Whilst not ideal, the issues with the model validation are not sufficient to call into question the overall benefits of the scheme. However, since less than perfect validation is on the key A33 corridor it must be borne in mind that the estimates of the benefits will be subject to greater error than if the model were well validated in this location.

5.15 The model is considered a sound basis for appraising the scheme.

The Economic Assessment Report

5.16 The AM and PM peak annualisation factors would normally be 253 if only the peak hour has been modelled. The TUBA guidance has the proper methods for deriving benefits from the peak shoulders and these have been followed correctly.

5.17 The TUBA method of modifying the matrices to estimate the peak shoulder benefits has been applied. The peak hour demand has been factored down to the peak shoulders using ATC data. The cost matrices have also been factored down by the same factor as the demand matrices. It has been clearly stated that this relies on the assumption that the relationship between trip numbers and costs is linear.

5.18 Benefits broken down by peak period have been presented.

5.19 Certain benefits have been assessed qualitatively as it is unlikely the impact will be significant:

- Accidents (slight beneficial);
- Noise (slight beneficial);
- Air Quality (neutral).

Conclusion

5.20 The Value for Money assessment has been conducted entirely using monetised benefits and the report conclusion shows a **High Value for Money** with a **BCR of 3.29**.

5.21 In conclusion, it is possible to fully recommend the business case for the South Reading Mass Rapid Transit scheme.

Appendix A – Business Case Checklist

Project Number: A087383
 Scheme: South Reading MRT Phase 3-4
 Submitted by: Reading Borough Council

Strategic Case	Addressed within Business Case	Notes	Economic Case	Addressed within Business Case	Notes	Financial Case	Addressed within Business Case	Notes	Commercial Case	Addressed within Business Case	Notes	Management Case	Addressed within Business Case	Notes
Business Strategy	Y	Provides a good description of the organisational and strategic context of the business case. Wokingham Borough Council's Managing Development Delivery Local Plan (February 2014) is not included.	Introduction	Y		Introduction	Y		Introduction	Y		Introduction	Y	
			Options appraised	Y	Comments on OAR provided separately.	Costs	Y		Output based specification	Y	No annex provided.	Evidence of similar projects	Y	
Problem Identified	Y	Provide more details on the evidence base underpinning the scheme (journey time savings etc.)	Assumptions	Y	Include that WebTAG Databook version number used (1.8). Explain why no demand has been calculated for weekend trips.	Budgets / Funding Cover	Y		Procurement Strategy	Y		Programme / Project dependencies	Y	
Impact of not changing	Y	Acceptable	Sensitivity and Risk Profile	N	Not provided.	Accounting Implications	Y		Sourcing Options	Y		Governance	Y	
Drivers for change	Y		Appraisal Summary Table	Y	Provide a more detailed breakdown. Explain why benefits listed in Para 4.4.3 have not been included. 20% of 12.293m is 2.459m, not 2.469m.				Payment Mechanisms	Y		Programme / Project Plan	Y	
Objectives	Y	Objectives are not clearly timebound. Objectives iv-vi are not clearly measurable. Although improving air quality is mentioned as an aim/objective in Para 2.4, it is not included in the list of objectives.	Value for Money Statement	Y	The PVB and BCR values are not the same as the ones included in AMCB table provided with the Economic Assessment Report.				Pricing Framework and charging mechanisms	Y		Assurances and approvals	Y	
Measures for success	Y	Para 3.7.1 states there is at least one measure for success for each objective, yet only 3 of the objectives are covered in Table 3-1.							Risk allocation and transfer	Y		Communication & Stakeholders	Y	
Scope	Y	Consider including the bus services affected.							Contract length	Y		Project Reporting	Y	
Constraints	Y								Human resource issues	Y		Implementation	N	Not included but not necessary.
Inter-dependencies	Y	Provide information on when the funding is likely to be secured.							Contract management	Y	Implementation timescales not included.	Key Issues	Y	
Stakeholders	Y	Include the outcomes of consultation with members of the public and bus operating companies.										Contract Management	Y	
Options	Y											Risk Management	Y	
												Benefits realisation	Y	
												Monitoring and evaluation	Y	
												Contingency	Y	
												Options	Y	