



Thames Valley Berkshire Local Economic Partnership

## **Independent Assessment Summary Report: A355 Route Enhancement**

Full Business Case Independent Assessment

WYG  
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## Appendices

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# 1 Executive Summary

- 1.1 This technical note provides an independent review of the A355 Route Enhancement Scheme Business Case submission to the Thames Valley Berkshire Local Enterprise Partnership.

## SCHEME SUMMARY

- 1.2 The A355 Route Enhancement Scheme provides infrastructure improvements to a section of the A355 between the roundabout of Cippenham Lane/Church Street to M4 Junction 6.
- 1.3 The scheme consists of improvements to the layout of the roundabout, creating a 'hamburger' style roundabout with the north-south (A355 Tuns Lane) prioritised to cut across the circulatory carriageway. A flare will be provided on the southern arm to allow for left-turning traffic to bypass the junction, and road widening to three lanes from the roundabout through to M4 J6.

## REVIEW FINDINGS

- 1.4 The review of the submitted Business Case identified the following:
- 1.5 The Business Case is detailed and comprehensive and addresses all of the main areas expected within a major scheme Business Case submission (checklist provided as **Appendix A**).
- 1.6 The predicted overall Benefit to Cost Ratio (BCR) of the scheme is 5.83. This represents very high Value for Money (VfM).
- 1.7 It should be noted that the ASR identifies that the traffic model used has not been revalidated to a new base year. Instead, to reflect major network changes since 2010 the model has been adjusted and subsequently tested using TomTom journey time data for 2014 as a result it has been agreed that the model is comparable to existing conditions.

## 2 Process

### MEETINGS

- 2.1 An initial project inception meeting was held at the Atkins Euston Towers Offices on 25<sup>th</sup> September 2014 to introduce the scheme and to discuss the timescales and requirements for the full Business Case submission.
- 2.2 This was followed by subsequent telephone discussions and emails during September, October and November 2014 to discuss queries on the scheme assessment work. It is recommended that the business case submitted to WYG is updated to reflect the comments provided, in particular those made post submission of the business case on 31/10/14.

### OPTION ASSESSMENT REPORT (OAR) / APPRAISAL SPECIFICATION REPORT (ASR)

- 2.3 As part of the submission of documents for independent review, an OAR and ASR have been provided alongside the Full Business Case. This allowed an informative review of the options which have been appraised to form the proposal which is to be taken forward and the modelling conducted to evaluate what benefits would be created as a result.
- 2.4 It was identified that there were five options identified to be assessed within the OAR, these included;
- i) A Do Minimum scenario which included the SMaRT scheme and planned signal improvements on the A332.
  - ii) A355 Route Enhancements which included changes to the layout of the Copthorne Roundabout, reduction of the speed limit on the arms of the roundabout and increasing to three lanes the A355 southbound carriageway between the roundabout and M4.
  - iii) A355 Route Enhancement – low cost option which included signalisation of the Copthorne Roundabout and the reduction of the speed limit on the arms of the roundabout.
  - iv) Demand management measures which included a combination of business and general travel planning measures.

- v) Traffic management measures which include implementation of smart technology to reroute vehicles and/or encourage peak spreading to reduce congestion.
- 2.5 The OAR concludes that the A355 Route Enhancement Scheme was considered to be the preferred option with a low cost option to also be considered in the Full Business Case.
- 2.6 The ASR includes information concerning the specifics of how the modelling for the scheme to be taken forward for development has been undertaken to create the benefits which can be identified within the FBC.
- 2.7 The model is a SATURN model using Fixed Assignment, and includes a public transport assignment model in EMME and a DIADEM model for assessing the impact of highway interventions. COBALT has also been used to identify if there is an increase in accidents resulting in the development of the scheme and has used the 'Link and Junction Combined' method for assessment.

## REVIEW

- 2.8 Following the WYG review of the Appraisal Specification Report, a draft of the full Business Case was submitted for review on the 31<sup>st</sup> October 2014, with the information provided (including all appendices) summarised in Section 3. Section 4 then provides a summary of the review findings.

## 3 Submitted Information

3.1 The Business Case independent assessment was carried out based upon the following reports and appendices submitted by Slough Borough Council and their consultant team:

- A355 Route Enhancement Business Case
- Appendix A – LTB SEP Programme entry forms
- Appendix B – Scheme drawing
- Appendix C – Letter of support
- Appendix D – Option Assessment Report
- Appendix E – Appraisal Specification Report
- Appendix F – Modelling Report
- Appendix G – Appraisal Summary Table
- Appendix H – Environment technical note
- Appendix I – Accident Assessment
- Appendix J – Distributional Impact Appraisal
- Appendix K - QRA and Risk Register
- Appendix L - Programme



## 4 Review

### OPTIONS ASSESSMENT

- 4.1 An Option Appraisal Report has also been submitted alongside the Business Case for the widening of the A355 and identifies the need for intervention and the process of option development and selection.
- 4.2 The scheme proposed for current funding represents the strategic approach considered to be the most deliverable of the main options. With the main alternatives including a low cost alternative which includes signalisation of the Copthorne Roundabout and the reduction of the speed limit, route enhancements which includes changes to the layout of the Copthorne Roundabout, reduction in the speed limit, and increasing the A355 southbound carriageway to three lanes, as well as a do minimum which considers the SMaRT scheme and the planned signal improvements on the A332.
- 4.3 The OAR also sets out two other options which were seen to be undeliverable including demand management measures, including general travel planning measures and traffic management measures which involves implementation of smart technology.
- 4.4 It is noted that no public transport measures have been outlined as an option which could have been used as a deliverable suitable alternative solution to those highlighted.
- 4.5 The options assessment complies with the DfT's WebTAG guidance for Options Assessment but no methodology on how each scheme was scored has been provided. As such it hasn't been possible to understand how some aspects of a proposal scored neutral, negative or positive points leading to the preferred option to be selected.
- 4.6 The report doesn't suggest the physical reasons why any improvement needs to occur in the first instance, although from a subsequent review of additional documents it was identified that this information has been included.
- 4.7 The OAR highlights objectives resulting from the scheme's development; the core objective is that of opening up housing development. However, it is not clear in the OAR where this would occur in the immediate vicinity of the scheme itself.

## APPROACH TO MODELLING

- 4.8 The main impacts of the scheme have been assessed using the Slough Multi Modal Transport Model, which uses Saturn for highway assignment and EMME for public transport assignment and is a fixed assignment model.
- 4.9 The main initial discussion held with regards to modelling was to identify whether the scheme was reasonably expected to require a fixed highway assessment to be WebTAG compliant.
- 4.10 Following a review of the ASR changes to highway journey times reported do not appear material, as such it is agreed that, whilst desirable, variable demand modelling is not required in this case, mostly due to the scheme costing below £5m.
- 4.11 The base model is for a 2009 base year which is within the six year WebTAG guidance. It has been noted that the model has been updated to include 2014 network changes and we note that the journey times are comparable with 2014 TomTom data provided within Appendix E.
- 4.12 The accident assessment was originally assessed on a combined link and junction basis using the COBALT software package, with the 'hamburger' roundabout assessed as a series of smaller links and junction due to the lack of this junction type in the COBALT software. Following initial comments, Atkins remodeled the A355/Church Street junction as a signalised junction type in COBALT and the two through traffic link have been assessed separately in the 'with scheme' condition.' In this assessment it is unknown if Atkins have subtracted the straight on flows from the first signalised roundabout and used them for the two link assessments undertaken separately. If this hasn't been done then there is possible double counting of accidents and therefore increased disbenefits of accidents on the proposed junction. It is therefore recommended that the COBALT assessment should be based on a signalised junction with all flows included.

## BUSINESS CASE

### Format and Content

- 4.13 Having undertaken a review of the submitted Business Case it was identified that it is comprehensive and covers each of the main categories expected for a scheme of this scale. A Business Case checklist is provided as **Appendix A**.

- 4.14 This checklist confirms whether each of the expected sub-sections within the 5 cases have been adequately covered within the submitted Business Case and provides explanatory notes where a specific area may not be fully addressed.

#### Value for Money

- 4.15 The A335 scheme Business Case details a Benefit to Cost Ratio (BCR) of 5.83, which represents a very high Value for Money (VfM) scheme.

#### Appraisal Summary

- 4.16 A review of the appraisal summary contained within the Business Case submission is provided in Table 1 on the following page, areas where the review disagrees or queries the proposed level of benefit or disbenefit associated with the A355 scheme are detailed and explanatory notes provided (note some of these are an issue of the presentation of the results in the AST rather than the findings themselves).

**Table 1 - Appraisal Summary**

Category	Sub-category	Business Case Assessment	Agree / Disagree with Assessment	Notes
Economy	Business users & transport providers	A Quantitative assessment has been undertaken	Agree	
	Reliability impact on Business users	A Monetary assessment has been included	Agree	
	Regeneration	Slight Beneficial	Agree	
	Wider Impacts	Slight Beneficial	Agree	
Environmental	Noise	Slight Adverse	Agree	
	Air Quality	Slight Adverse	Agree	
	Greenhouse gases	A Quantitative assessment has been undertaken	Agree	
	Landscape	Neutral	Agree	
	Townscape	Neutral	Agree	
	Historic	Neutral	Agree	

	Environment				
	Biodiversity	Slight Adverse	Agree		
	Water Environment	Slight Adverse	Agree		
<b>Social</b>	Commuting and Other users	A Quantitative assessment has been undertaken	Agree		
	Reliability impact on Commuting and Other users	A Monetary assessment has been included	Agree		
	Physical activity	Neutral	Disagree	We note the comment that this has <i>Scoped out as not relevant to the nature of the scheme</i> . Therefore, how can this be scored as neutral?	
	Journey quality	Neutral	Disagree	We note the comment that this has <i>Scoped out as not relevant to the nature of the scheme</i> . Therefore, how can this be scored as neutral?	
	Access to services	Neutral	Disagree	We note the comment that this has <i>Scoped out as not relevant to the nature of the scheme</i> . Therefore, how can this be scored as neutral?	
	Security	Neutral		We note the comment that this has <i>Scoped out as not relevant to the nature of the scheme</i> . Therefore, how can this be scored as neutral?	
	Affordability	Neutral	Agree		
	Severance	Slight Adverse	Agree		
	Option and non-use values	Neutral	Disagree	We note the comment that this has <i>Scoped out as not relevant to the nature of the scheme</i> . Therefore, how can this be scored as neutral?	
	Accidents	Monetary assessment has been included.	Disagree	See comments in report.	
	<b>Public Accounts</b>	Cost to Broad Transport Budget	Monetary assessment has been included.	Agree	
		Indirect Tax Revenues	Monetary assessment has been included.	Agree	

## Risks

- 4.17 The submitted Business Case includes a Quantified Risk Assessment, which provides a detailed breakdown of the project risks and associated weighted costs relevant to the project.
- 4.18 Within the report they have included a key project risk table and have identified two aspects of risk including;
- i) Cost risks, that of capital costs increasing as a result of factors uncovered at preparatory surveys and design surveys, and underestimations of Statutory Undertaker costs, and;
  - ii) Delivery Risks, including unknown service pipe lines damaged, delays during construction, ensuring works doesn't affect the busiest times of year and outlining that additional strengthening and other works may be required on Chavley Bridge following detailed structures assessment.
- 4.19 The QRA includes a further in depth register of risks and identifies six risks which score 50%, which include LTB application being unsuccessful, the bridge along the route could need additional support due to the widening of the road, issues concerning structures requiring remedial works leading to additional costs being created, risks concerning if previous utility's contractors works over run, restriction on working hours to avoid disruption, and lastly if the scheme were to go forward to the development stage, they will be carried out at the same period as the SMaRT and the A332 Widening Schemes.
- 4.20 However, in light of this it would be stated that overall the key issues for risk have been identified and suitable measures to mitigate from delay have been undertaken to a sufficient standard expected for a scheme of this size.



## Appendix A – Business Case Checklist

Project Number: A087383-06  
 Scheme: A355 Route Enhancement  
 Submitted by: Slough 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		Options appraised	Y		Costs	Y		Output based specification	Y		Evidence of similar projects	Y	
Problem Identified	Y		Assumptions	Y		Budgets / Funding Cover	Y		Procurement Strategy	Y		Programme / Project dependencies	Y	
Impact of not changing	Y		Sensitivity and Risk Profile	Y		Accounting Implications	N		Sourcing Options	Y		Governance	Y	
Drivers for change	N	But included within Impact of not changing.	Appraisal Summary Table	Y					Payment Mechanisms	Y		Programme / Project Plan	Y	
Objectives	Y		Value for Money Statement	Y					Pricing Framework and charging mechanisms	Y		Assurances and approvals	Y	
Measures for success	Y								Risk allocation and transfer	Y		Communication & Stakeholders	Y	
Scope	Y								Contract length	Y		Project Reporting	Y	
Constraints	Y								Human resource issues	N		Implementation	Y	
Inter-dependencies	Y								Contract management	Y		Key Issues	Y	
Stakeholders	Y											Contract Management	Y	
Options	Y											Risk Management	Y	Included within Chapters 5 and 6 of the FBC
												Benefits realisation	Y	
												Monitoring and evaluation	Y	
												Contingency	N	
												Options	N	