

Appendix 4.2

Optimism Bias Note

Stafford Western Access Route Proposed Level of Optimism Bias

Stafford Western Access Route is a Standard Civil Engineering project that does not require special design considerations. In 2010, a business case was submitted to the Department for Transport for Programme Entry. Due to the early stage in the development of the scheme an optimism bias uplift of 44% was applied.

Since 2010 further significant technical work, drawing on the previous business case, has been carried out on scheme feasibility and design, involving collaborative working with the County Council's Infrastructure+ partners, Amey. Detailed engagement has taken place with all identified stakeholders and there is now a greater understanding around risks and uncertainties. By way of examples, significant investigations have been undertaken around ground conditions, statutory undertaker costs and environment issues. The need to rebuild the Doxey Road Rail Bridge (which had both significant cost and risk) has been de-scoped from the original design. This has all contributed to a more robust and accurate scheme cost.

Table 7 in TAG Unit A1.2 (Jan 2014) states that there are three stages of scheme development with the following optimism bias uplifts:

Stage 1: Programme Entry	44%
Stage 2: Conditional Approval	15%
Stage 3: Full Approval	3%

TAG Unit A1.2 also states in paragraph 3.5.7 that the allowance for optimism bias should be largest at the initial stage of life of a transport project (e.g. Strategic Outline Business Case); to decrease in a more detailed business case (e.g. Outline Business Case); and smallest in the presence of a fully detailed business case (e.g. Full Business Case).

As a project develops, the DfT expects the scheme cost estimate to be refined based on better quality data. As risk analysis improves as a scheme develops, it is expected that the risk-adjusted scheme cost estimate will become more certain while the applicable level of optimism bias will decrease.

The Stafford Western Access Route is theoretically only at Stage 1 (Programme Entry) however due to the extensive work that has been carried out since 2010, it is considered that the 2014 business case can be considered as an Outline Business Case, in line with 'The Transport Business Cases' published by the Department for Transport in January 2013. An adjustment has therefore been made to the optimism bias based on the approach provided in Supplementary Green Book Guidance published in April 2013. This guidance sets out the contributory factors to the upper bound optimism bias of 44% and the justification for adjustment.

Table 1 below justifies the degree to which each of the contributory factors is considered to be mitigated for the Stafford Western Access Route. The resultant capital expenditure optimism bias is calculated as follows:

$$(100\% - 66.5\%) * 44 = 14.74\%$$

Based on this analysis, 66.5% of the causes of optimism bias have been mitigated. This leaves an amended optimism bias factor of 14.75% for the scheme. For the purpose of scheme appraisal, the County Council is adopting the use of 15% optimism bias for consistency with DfT guidance. This is the recommended level for Stage 2 transport proposals.

Table 1: Managed Optimism Bias

Contributory Factors to Upper Bound Optimism Bias		Contribution to Optimism Bias	Mitigation Factor	Mitigated Optimism Bias	Comments
Procurement	Late Contractor Involvement	3	0.8	2.4	<ul style="list-style-type: none"> • SCC's strategic Infrastructure+ partnership with Amey allows designers to work alongside on-site delivery teams & ensures end to end approach. • Amey have provided ongoing buildability advice and contributed to cost estimates. • Back-up procurement option (MHA) has facility to engage framework contractors in ECI.
	Dispute and Claims Occurred	21	0.6	12.6	<ul style="list-style-type: none"> • Engaged with all stakeholders including utilities, Network Rail, land owners. • SCC delivery team have proven capability of delivering schemes with multiple stakeholders. Project programmed to ensure sufficient float for third party deadlines (refer to Project Plan). • Infrastructure+ partnership is long term (10 years with the option to extend to 20 years) and will reduce likelihood of contract related disputes that occur more frequently on individual contracts. • Construction contract to be let as 'Target Cost with Priced Activity Schedule' and operated in spirit of mutual trust. • Land is being acquired through negotiation with a parallel CPO (Compulsory Purchase Order) process to avoid programme delays. • The District Valuer has made allowance in the land estimate for any Part 1 claims that may arise. • Residual mitigation due to factors outside SCC control such as programming of utilities during construction phase.
Project Specific	Environmental Impact	22	0.8	17.6	<ul style="list-style-type: none"> • No element of EIA has been scoped out. • No adverse stakeholder reaction to scoping opinion consultation. • SCC environmental advice team have extensive

					<p>knowledge of area and potential impacts particularly relating to the SSSI.</p> <ul style="list-style-type: none"> • Phase 1 habitat survey has been carried out. • Surveys carried out to date include wintering birds, amphibians and bats and have indicated no significant issues.
	Other	18	0.5	9.0	<ul style="list-style-type: none"> • SCC is working closely with the EA and flood mitigation is included in the design. However a detailed Flood Risk Assessment is not yet complete and the most suitable compensation area has not been confirmed. • Discussions with Network Rail are ongoing regarding strengthening works and a 'most likely' allowance has been made in the costs, based on NR advice. However, the final extent of any strengthening works that may be required is not yet agreed.
Client Specific	Inadequacy of the Business Case	10	0.8	8	<ul style="list-style-type: none"> • The MSBC has been developed over a five year period and has involved all known stakeholders • This 2nd version of the MSBC has been revised to address changes in guidance and scheme specific details. • Stafford Borough Council's adopted Local Plan provides project and housing development certainty. • Critical friend advice from Atkins with extensive experience of preparing MSBC's. • Cost estimate independently reviewed by third party. • Risk workshop facilitated by third party and risk register developed based on this.
	Poor Project Intelligence	7	0.8	5.6	<ul style="list-style-type: none"> • Detailed GI carried out including chemical testing. • Previous experience of viaduct construction across floodplain in Stafford (Queensway Structure).
Environment	Public Relations	9	0.6	5.4	<ul style="list-style-type: none"> • OAR outlines options considered and consulted on. • Only three respondents out of 145 to the Local Plan (Publication version) objected to the scheme. • Preferred option was amended to offset carriageway from Castletown frontages following consultation. • Engaged with Natural England, English Heritage &

					<p>Environment Agency since 2009 and letters of support have been provided by each.</p> <ul style="list-style-type: none"> • Area of destroyed SSSI re-instated and offered for community benefit. • Refresh of consultation is proposed to be targeted at local residents and businesses, and focussed with residents groups.
	Site Characteristics	3	0.8	2.4	<ul style="list-style-type: none"> • Extensive SCC in-house knowledge of Doxey & Tillington SSSI & the species present in this area. • Only a very small potential for archaeological finds.
External Influences	Economic	7	0.5	3.5	<ul style="list-style-type: none"> • Scheme is a priority in the SEP. Anticipated Local Growth Fund settlement will fund the scheme. • Allowance made for risk related to funding in Quantitative Risk Assessment. • Deferral of scheme will increase delivery costs. • The Local Plan was adopted in June 2014 however any unforeseen reduction in housing demand will delay delivery of 'do minimum' section (Section C).
Total		100		66.5	