

6.8.2 The calculated BCR this suggests that the scheme has a HIGH value for money according to the Value for Money categories.

7 Appraisal Summary Tables

7.1.1 The AST for option 4 is shown in Table 7.

Table 7 Appraisal Summary Table

Appraisal Summary Table			Date produced:		16/11/2016		Contact:		
Name of scheme:			A47 NORTH TUDDENHAM TO EASTON - Option 4					Name	Aaron Douglas
Description of scheme:			As specified in the Road Investment Strategy, 2014, the scheme is "dualling of the single carriageway section of the A47 between Norwich and Dereham, linking together two existing sections of dual carriageway". OPTION 4. This alignment is primarily an offline dualling, with the route travelling south of Hockering before crossing the existing A47 and travelling north of Honingham. The route goes offline just after the junction with Fox Lane before crossing the A47 east of Church Lane / Sandy Lane junction before coming back online at the Dereham Road roundabout. The quantitative information in this AST is based on a spreadsheet transportation modelling similar to Stage 0+ and a HE Commercial estimate. The figures will be updated and ASTs prepared for Options 1,3 and 6 once strategic transportation modelling is completed and HE commercial estimates are available, in PCF Stage 2.					Organisation	Highways England
								Role	Project Manager
Impacts			Summary of key impacts		Assessment				
					Quantitative		Qualitative	Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp
Economy	Business users & transport providers	Business users are predicted to have journey time benefits of \$210.5 million. Transport Provider benefits have not been specifically assessed.	Value of journey time changes(£)		Beneficial	£210,498,000			
Economy	Reliability impact on Business users	The journey time reliability is expected to improve with dualling, due to improved resilience to incidents and reduced impact of slow moving vehicles.	-		Beneficial		-		
	Regeneration	The expected journey time benefits are likely to support planned regeneration (predominantly residential developments) in the Dereham, Hethersett and Easton/Cotessey areas.	-		Beneficial		-		
	Wider Impacts	Option located in the hinterland of the FUR of Norwich. The expected journey time benefits may help.	-		Beneficial		-		
	Noise	Decreased noise levels at properties in Honingham and Hockering. Increased noise levels at scattered rural properties currently in quiet setting. Decreased noise levels at 2 NIAs (5200 and 6287). No change in noise levels at 1 NIAs (5201 and 5202). Overall neutral due to benefits in reducing noise levels at Hockering and Honingham balanced with increased noise levels at scattered rural properties.			Neutral				
Environmental	Air Quality	There are no AQMAs within the study area and the option is not expected to cause exceedances of threshold values. Reducing congestion will generally improve AQ. AQ improves at Honingham. AQ declines at scattered rural properties. Overall neutral, as the road moves further away from majority of receptors while balanced with AQ decline at rural properties.			Neutral				
	Greenhouse gases	Greenhouse gas emissions are related to traffic flows and traffic speed, based on the amount of fuel consumed and the amount of vehicle kilometres travelled. Whilst traffic volumes and speed are expected to increase as a result of the option, congestion would be reduced. It is considered unlikely that there would be any significant change in the emissions of greenhouse gases.	Change in non-traded carbon over 60y (CO2e) Change in traded carbon over 60y (CO2e)		Neutral	not calculated at this stage			
	Landscape	Option is wholly offline through tranquil rural landscape with associated loss of landscape features (hedgerows, trees, ponds, woodland and arable land). Adverse impacts on scattered rural visual receptors.			Slightly adverse				
	Townscape	The option does not encroach on any of the towns within the study area, and so no impacts on townscape are expected.			Neutral				
	Historic Environment	No nationally designated historic environment features affected. Numerous HER sites within scheme footprint.			Slightly adverse				
	Biodiversity	No designated sites within 500m. Approximately 3 ponds within footprint. Priority habitat (good quality semi-improved grassland, lowland fen, deciduous woodland and coastal and floodplain grazing marsh) within footprint. 2 crossings of the R Tud.			moderate adverse				
	Water Environment	1 crossings of the R Tud. Approximately 3 ponds within footprint. Areas of flood risk along the R Tud that could be affected.			moderate adverse				
	Social	Commuting and Other users	Commuters and other users are predicted to have journey time benefits of £126.8 million.	Value of journey time changes(£) Net journey time changes (£) 0 to 2min 2 to 5min > 5min		Beneficial	Benefit £ 126,766,000		
Reliability impact on Commuting and Other users		The journey time reliability is expected to improve with dualling, due to improved resilience to incidents and reduced impact of slow moving vehicles.							
Physical activity		No changes in physical activity are expected							
Journey quality		Benefits in journey time savings will improve resilience and reliability which directly affect journey quality, predominantly associated with traveller stress.			Beneficial				
Accidents		Accident savings of £ 5.126 million are expected on the link.			Beneficial	Benefit £ 5.126 million			
Security		No changes in security are expected			Neutral				
Access to services		No changes in access to services are expected			Neutral				
Affordability		Improved reliability may be balanced against changes in speeds depending on time of day, which may increase or decrease fuel efficiency based on speed flow curves and fuel consumption assumptions.			Neutral				
Severance		It is unlikely that there is an increase in the number of people affected by severance			Neutral				
Option and non-use values		It is not expected that there will be any major changes in the provision of public transport services			Neutral				
Public Accounts	Cost to Broad Transport Budget	Present Value of Costs of £130.9 million (in 2010 discounted market prices and including construction costs only)				Cost £ 130,907,000			
	Indirect Tax Revenues	Indirect tax revenue of -£ 2.531 million				Revenue -£ 2,531,000			
NOTE			The figures quoted are based on spreadsheet transportation modelling similar to Stage 0+. ASTs will be completed for Options 1,3 and 6 when options estimate and updated strategic modelling and economic analysis has been completed.						