

Appraisal Summary Table		Date produced:	9 Mar 2020		Contact:						
Name of scheme:		Westwood and Technology			Name						
Description of scheme:					Organisation						
					Role	Promoter/Official					
Impacts	Summary of key impacts	Assessment									
		Quantitative			Qualitative	Monetary £m(NPV)	Distributional 7-pt scale/ vulnerable grp				
Economy	Business users & transport providers	Benefits from roundabout upgrade for the duration of the scheme assessment. Journey Time Benefits mainly sourced from AM and PM peak periods with Interpeak showing increasing contributions to benefit as forecast flows rise. Vehicle operating cost impacts not considered due to localised nature of assessment.			Value of journey time changes(£M)	£41.0	n/a	41.0			
					Net journey time changes (£m)						
					0 to 2min	2 to 5min				> 5min	
					0.7	18.4				21.9	
	Reliability impact on Business users	Not assessed but positive impact expected on journey time reliability			Not Assessed						
	Regeneration	No regeneration areas close to scheme			Not Assessed						
	Wider Impacts	Need for Wider Impact assessment considered outside scope and disproportionate for the scale of the scheme.			Not Assessed						
Environmental	Noise	<p>Dominant existing noise source in the area is from road traffic at the junction and feeder roads. Calculations for construction noise have been predicted and summarised below:</p> <ul style="list-style-type: none"> Noise levels are predicted to exceed the criterion of 75dB L_{Aeq,T} during weekday at the Premier Inn Sheffield/Barnsley during the pre-construction ground investigations, grouting works (phase 1) and works to the A61 East Approach & Departure and A616 West Approach (phase 3). During the evening and weekend periods the criterion of 65dB L_{Aeq,T} is likely to be exceeded at the Premier Inn Sheffield/Barnsley (receptor 2) during the pre-construction period and phases 1,2, 3, and 5 (Island Construction, Verge Works & Final Pavement Treatment). During the night time period it is predicted that noise levels will exceed the 55dB L_{Aeq,T} criterion at 11 Highgreen, Greaves Lane and the Premier Inn Sheffield/Barnsley during A616 West Departure Widening (phase 4). <p>Although impacts have been identified it is not anticipated that they will be over a "significant time period" at a given receiver. With implementation of best practical means and mitigation, it is anticipated that impacts will be temporary slight adverse, and will not be "significant".</p> <p>PCF Stage 3 Environmental Assessment Report (EAR) concluded that based upon the flow levels associated with the Scheme traffic data, there are no exceedances of the DMRB LA111 defined threshold criteria; namely 1dB for opening year or 3dB for future assessment year. Affected Road Network (ARN) is limited to three small links at the Westwood roundabout where there was a speed change, but no relevant receptors identified within 200m. Therefore no significant impacts are expected during operation.</p>			N/A	N/A	Not calculated	Not calculated			
	Air Quality	PCF Stage 3 EAR identified that the ARN was limited to three small links at the Westwood roundabout where there was a speed change, but no relevant receptors identified within 200m. Therefore, calculations were not been undertaken and the expected change in air quality would be negligible. Further traffic modelling undertaken for PCF stage 5 is not expected to result in a change from PCF Stage 3.			Not calculated			N/A	Not calculated	Not calculated	
	Greenhouse gases	Emissions not calculated, but expected to be negligible due to very limited ARN. Further traffic modelling undertaken for PCF Stage 5 not expected to result in a change from PCF Stage 3. As identified in the Environmental Management Plan (EMP), the Highways England Carbon Tool will be used to report embedded carbon in materials used for the scheme at a later stage.			Change in non-traded carbon over 60y (CO2e)	Not calculated	N/A	Not calculated			
					Change in traded carbon over 60y (CO2e)	Not calculated		Not calculated			
		Landscape	Removal of 1200m ² (approx.) of scrub vegetation and 9 trees due to embankment works. Approx. 1200m ² of scrub and 9 new trees to be replanted. Additional inclusion of 2350m ² of wildflower meadow grass mix within the project boundary to enhance biodiversity (habitats). No significant landscape or visual effects are predicted, no added lighting and highly sensitive receptors limited with most falling beyond the Zone of Theoretical Visibility (ZTV).			N/A			Slight adverse effect	Not calculated	
		Townscape	Any changes to the character of the Westwood Roundabout would be negligible based upon the current proposals due to a lack of local and national character areas. However, temporary but insignificant impacts would be experienced by those staying at the Premier Inn Sheffield/Barnsley. No adverse impacts to the nearby urban landscape is anticipated, due the majority of works being contained within the existing highways boundary.			N/A			Slight adverse effect	Not calculated	
		Historic Environment	There are no impacts as the roundabout is within existing disturbed ground and the compound is on hardstanding so will not have any implications for undiscovered archaeology. No designated heritage assets will be impacted either.			N/A			Neutral effect	Not calculated	
		Biodiversity	Approx. 3400m ² of habitat would be permanently removed during construction. A proportion of this (220m ²) was included on an ancient woodland inventory but that status is no longer valid because of previous construction, and will be confirmed through discussion with the local authority. Sowell Bridge has bat potential, but if bats are present, the impact limited to disturbance and only for the duration of works. There is an overall -28.15% change in biodiversity units from the baseline.			N/A			Slight adverse effect	Not calculated	
		Water Environment	The works are outside of any flood zone with no impact on any watercourse in the vicinity. Any increase in surface water runoff from additional hardstanding would be minimal and would be managed through an appropriate surface water management strategy.			N/A			Neutral effect	Not calculated	
	Social	Commuting and Other users	Benefits from roundabout upgrade for the duration of the scheme assessment. Journey Time Benefits mainly sourced from AM and PM peak periods with Interpeak showing increasing contributions to benefit as forecast flows rise. Vehicle operating cost impacts not considered due to localised nature of assessment.			Value of journey time changes(£m)	83.2	n/a	83.2		
					Net journey time changes (£m)						
					0 to 2min	2 to 5min	> 5min				
					0.7	26.0	56.4				
		Reliability impact on Commuting and Other users	Not assessed but positive impact expected on journey time reliability			Not Assessed					
		Physical activity	Additional pedestrian crossings may release some suppressed walking demand but expected to be a minor effect.			Not Assessed			Neutral effect		
		Journey quality	Significant positive impact for all roundabout users due to reduced congestion and delays. Improved journey quality through additional information provision using signage from technology upgrade.			Not Assessed			Moderate beneficial		
		Accidents	Existing Junction has accident rate well below default rate. Accident analysis evaluates savings from modified accident rate assuming accidents attributable to approach arm to circulatory accidents can be avoided.			Casualty reduction 0.3 fatal, 4.1 serious and 58.8 slight, evaluated over 60 year appraisal			1.5		
		Security	No material impact on users			Not Assessed			Neutral effect		
		Access to services	There are no identified impacts on public transport network as a result of the scheme.			Not Assessed			Neutral effect		
	Affordability							Not calculated			
	Severance	No local community severance in this location			Not Assessed			Neutral effect			
	Option and non-use values	The scheme does not include any measures that will substantially change the availability of transport services within the study area therefore this impact is n/a.			Not Assessed						
Public Accounts	Cost to Broad Transport Budget	Investment Costs from Highways England Commercial Team.						-14.9			
	Indirect Tax Revenues	Descoped from requirements due to scale and scope of local model coverage.			Not Assessed						