Appraisal Summary Table

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Contact:	
Name	
Organisation	Highways England
Role	Promoter/Official

Name of scheme:	M60 Junction 18 Simister Island - Option C2-2
Description of scheme:	• New route within J18 roundabout circulatory segregating M66 southbound to M60 westbound flow; • Additional lane for M60 J18 eastbound exit slip road and new 3 lane route within circulatory for M60 eastbound to southbound traffic; • New two-lane interchange link (replacing segregated left turn) linking M60 northbound with M60 westbound; • New two-lane interchange link (replacing segregated left turn) linking M60 eastbound with M66 northbound; associated works. • All-lane running in both directions between M60 J17 and J18.

	Impacts	Summary of key impacts	Assessment: Quantitative	Qualitative	Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp
Economy	Business users & transport providers	The additional capacity delivered by the scheme will provide journey time benefits especially during the peak periods. However there will be an increase in vehicle operating costs due to higher running speeds. There will also be delays during construction. 57% of journey time and vehicle operating costs benefits are for business users. This option reduces capacity for movements through signals at M60 northbound approach to roundabout due to additional signal stage.	**Value of journey time changes(£)** £75.5m **Net journey time changes (£)** 0 to 2min: £18.3m; 2 to 5min: £30.9m; > 5min: £26.3m	N/A	£91.0m	Not completed at this stage
	Reliability impact on Business users	By providing additional capacity and removing conflicts between turning movements, reliability should be improved for journeys through Junction 18 and between J17 and J18, reducing incidents of recurring congestion.	N/A	Slight Beneficial	N/A	
	Regeneration	By improving highway accessibility at a regional level, there should be a marginal net positive increase in regeneration. The scheme assists regeneration in South Heywood, as additional capacity is created to accommodate additional vehicles from the area.	N/A	Slight Beneficial	N/A	
	Wider Impacts	The scheme will lead to increased output in an imperfectly competitive market valued at 10% of the business user benfits. Other Wider Impacts have not been assessed at this stage.	£9.1m	N/A	£9.1m	
Environmental	Noise	There are more receptors expected to experience a decrease than an increase in road traffic noise levels in the forecast year both in the daytime and night-time period. The noise increases arise as a result of widening of the traffic running lane between Junctions 17 and 18 and also overall increases in traffic volume and speeds. Noise decreases are also expected at dwellings close to the westbound off-slip road of M62 at J18 as this is proposed to be narrowed. Some dwellings on Unsworth North and Unsworth South are also expected to experience noise decreases due to favorable changes in road traffic flows along the M66. The increases in noise in this area are at maximum 2.1 dB. Although some of these locations are above the SOAEL so are currently experiencing a high level of noise, an increase of 2.1 dB is considered to not be noticeable in the outdoor environment. Likewise, there are no perceptible noise increases predicted at any other sensitive receptors in the study area, including educational facilities. No significant impacts have therefore been identified and the overall effect is expected to be beneficial (including at Noise Important Areas).	Households experiencing increased daytime noise in forecast year: 32 Households experiencing reduced daytime noise in forecast year: 2,034 Households experiencing increased night time noise in forecast year: 206 Households experiencing reduced night time noise in forecast year: 1,768	Not used for noise (ref: Unit A3, para 2.4.2)	+9,489,717	Not completed at this stage
	Air Quality	Dust during construction could occur and therefore appropriate mitigation will be required to manage dust. With this in place, effects should be not significant. A simple assessment has been used to assess the air quality impacts of the operation of the proposed scheme options at receptors using the DMRB criteria. The model has been verified against air quality monitoring data across the affected road network, and used to estimate the air quality impacts of the proposed scheme, following current best practice guidance. The operational air quality assessment predicted pollutant concentrations below the AQS objectives both with and without the proposed option C2-2, except for 5 receptors for which the magnitude of impact was small increase. According to the Highways Agency Significance criteria (IAN174/13) it is unlikely that air quality impacts are significant for this design option. There is also a low risk from the scheme to the Pollution Climate Model (PCM), used by the UK government for compliance with the EU Limit Values.	**Assessment Score:** PM10: 19.65 NO2: 52.85 **Emissions:** PM10: -12 tonnes NOx: +212 tonnes	The scheme is not anticipated to have a significant impact on air quality	**AIR QUALITY VALUATION:** Value of change in PM10 concentrations: NPV: £0.0m Value of change in NOx emissions: NPV: £0.36m Total value of change in air quality: £0.36m	Largely Adverse for most vulnerable groups
	Greenhouse gases	During both the Construction and Operational Phases of the project small percental changes in CO2e emissions within the region. This is based on expected changes in traffic flow within the area, the use and sourcing of materials, potential peatland removal, as well as on the size of the scheme in relation to the area. Overall, the scheme will lead to a net increase in vehicle kilometres travelled across the road network which has the potential to result in an increase in CO2 emissions (as calcualted as part of the DMRB Regional Air Quality Assessment).	Change in non-traded carbon over 60y (CO2e): 242,604 tonnes Change in traded carbon over 60y (CO2e): 0	Based on the proposed Option C2-2's anticipated contribution to CO2e within the region, the option is not anticipated to have a significant impact on climate or on the UK Government in meeting carbon emission reduction targets. These figures will be recalculated at later project stages, once more information on Materials Handling and Regional AQ impacts are undertaken.	-£12.6m	
	Landscape	Loss of open Green Belt land and direct impacts on landscape character and features outside the M60/M66 highway boundary potentially causing short-medium term landscape and visual effects. Visual intrusion caused by vegetation clearance and new link roads, new gantries, signs, lighting and newly exposed views of traffic will be largley mitigated by replacement and new highway screen planting.	N/A	Slight Adverse	N/A	
	Townscape	No direct impacts on townscape character; short-medium term visual effects caused by vegetation clearance, new gantries, signs, lighting and newly exposed views of traffic in the adjacent character area will be mitigated by replacement and new highway screen planting.	N/A	Slight Adverse	N/A	
	Historic Environment	Potential impacts on the settings of one Grade II Registered Park and Garden and three undesignated historic buildings due to construction machinery and activities, assessed as Slight adverse significance of effect during construction. Potential partial removal of one asset during construction, assessed as slight significance of effect. Potential removal of previously unknown archaeological remains during construction. Potential impacts on the settings of one historic building and one historic landscape during operation.	N/A	Slight Adverse	N/A	
	Biodiversity	Potential indirect impacts of dust, runoff and other pollutants on statutory and non statutory designated sites which can be mitigated by implementing construction mitigation measures and through good construction practices. All direct habitat losses (semi-improved grassland, woodland, marshy grassland and possibly watercourses) can be compensated by replacement habitat creation within the scheme and implementation of robust pollution control measures. Option C2-2 has potential for indirect impacts on great crested newts, due to habitat loss (grassland) and disturbance/damage to individuals. There may also be impacts on bats considering the potential loss of woodland habitat and proximity of farm buildings. Other species which may be affected includes breeding birds, reptiles, brown hare and hedgehogs.	N/A	Slight Adverse	N/A	
	Water Environment	Potential impacts on water quality from increase in impermeable areas which is assessed as slight adverse impacts. Overall the scheme may result in a degradation of the water environment, which is of greater significance than the predicted improvements.	N/A	Slight Adverse	N/A	
Social	Commuting and Other users	The additional capacity delivered by the scheme will provide journey time benefits especially during the peak periods. However there will be an increase in vehicle operating costs due to higher running speeds. There will also be delays during construction. 43% of journey time and vehicle operating costs benefits are for social and commuting users. The option reduces capacity for movements through signals at M60 northbound approach to roundabout due to additional signal stage.	**Value of journey time changes(£)** £96.0m **Net journey time changes (£)** 0 to 2min: £15.0m; 2 to 5min: £52.7m; > 5min: £28.3m	N/A	£67.4m	Not completed at this stage
	Reliability impact on Commuting and Other users	By providing additional capacity and removing conflicts between turning movements, reliability should be improved for journeys through Junction 18 and between J17 and J18, reducing incidents of recurring congestion.	N/A	Slight Beneficial	N/A	
	Physical activity	The scheme is unlikely to have a significant impact on the level of walking and cycling in the area as NMU provision is unchanged by the scheme.	N/A	Neutral	N/A	
	Journey quality	Anticipated improvement to journey quality through reduction in driver stress. Segregation and new alignments are expected to reduce motorist frustration and fear of accidents.	N/A	Slight Beneficial	N/A	
	Accidents	An additional 0.8 accidents per year is forecast as the result of the scheme. The accident rate is forecast to come down in the scheme area as a result of the option. So, this is principally due to an increase in vehicle kilometres travelled, 2.9% higher than without scheme in place.	Increase of 50 accidents over 60 years	Not Assessed	-£2.1m	Not completed at this stage
	Security	The scheme is unlikely to have a significant impact on security.	N/A	Neutral	N/A	Not completed at this stage
	Access to services	Users on bus services at Junction 18, in particular the current X43 service, will benefit from improved journey times.	N/A	Slight Beneficial	N/A	Not completed at this stage
	Affordability	The scheme is unlikely to have a significant impact on affordability	N/A	Neutral	N/A	Not completed at this stage
	Severance	Severance is not anticipated to increase.	N/A	Neutral	N/A	Not completed at this stage
	Option and non-use values	Option values are unaffected as scheme does not involve the loss or introduction of a new mode of transport.	N/A	Neutral	N/A	
Public Account	Cost to Broad Transport Budget	Scheme costs are £112.7m in 2010 market prices (excluding VAT but including risk).	£112.7m (2010 market prices)	N/A	-£73.8m	
	Indirect Tax Revenues	Additional indirect tax revenues expected to be £15.8m as a result of increase in vehicle mileage and fuel use.	£15.8m	N/A	£15.8m	