Appraisal Summary Table

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Name of scheme:	Slough Mass Rapid Transit (SMaRT) Phase 2
Description of scheme:	The improvements comprise: • London Road widening on westbound approach to M4J5; • London Road link widening to 2 lanes westbound between M4J5 and Sutton Lane; • Provision of a new PArk & Ride site; • Signal provision at Sutton Lane gyratory, including pedestrian facilities; and Public realm improvements

Impacts		Summary of key impacts	Assessment: Quantitative				Qualitative	Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp
Economy	Business users & transport providers	Business users benefit significantly from the highway improvements through reduced travel time (£9.7m PV), vehicle operating costs (£2.5m) with user charge disbenefits (£45k) respectively. Of these impacts, £1.8m of journey time benefit and the £45k of user charge disbenefits are attributable to the Park & Ride users. The P&R operator will gain £2.6m of additional fare revenue while losing £3.0m from reduced payment of parking charges at Heathrow.	Value of journey time changes(£): £9.7m Net journey time changes (£) 0 to 2min: £6.4m; 2 to 5min: £2.1m; > 5min: £1.1m					11,847,000	
	Reliability impact on Business users	Reliability benefits of £0.2m for business highway trips will result from increased capacity and junction improvement enhancing day-to-day reliability. Reliability will also be improved by the attraction of traffic from other local roads therefore reducing incidents. The monetised benefit does not capture improved reliability for bus services which will result from the inclusion of an extended dwell time at the P&R site.					Moderately Beneficial	211,000	
	Regeneration	No assessment at this stage							
	Wider Impacts	No assessment at this stage							
Environmental	Noise	An additional lane or road widening could reduce the distance between the road and homes along the route; there are approximately 2,427 residential homes within the 600m buffer surrounding the scheme widening. Widening of the A4 could also increase traffic flow and ease congestion, therefore increasing motorists' speeds along the route, which could in turn have an impact on noise. However, adding in a green screen as a possible sound barrier could positively affect the noise levels where the public realm improvements are located.							
	Air Quality	The scheme lies within two AQMAs - areas which are exceeding the national annual average air quality objective for nitrogen dioxide. There are approximately 5100 properties within a 200m buffer of the scheme on the A4. Preliminary analysis of roadways that experienced an increase or decrease in traffic of more than 1000 AADT due to the scheme found that there were approximately 9,800 homes within 200m of affected roadways that are likely to have a deterioration in air quality, compared to 6,600 households likely to have a decrease in pollutant concentrations, a net difference of 3,138 more households experiencing air quality disbenefits due to the scheme. Full AQ assessment will be undertaken at a later stage to understand the full effect of the scheme, and whether the expected reduction in congestion outweighs the effects of any increases in traffic.	Households within 200m of roadway that experience an increase of over 1000 AADT: 9,754 Households within 200m of roadway that experience a decrease of over 1000 AADT: 6,616				Slight Adverse		
	Greenhouse gases	Overall decrease in CO2 emissions with scheme option over 60 year appraisal period due to mode shift to P&R reducing the vehicle kilometers travelled.	Change in non-traded carbon over 60y (CO2e): -73,532t Change in traded carbon over 60y (CO2e): -872t					3,317,000	
	Landscape	The entire scheme area is within the urban and suburban Dudley Stamp land use inventory classification. All of Slough is part of the agri-environment scheme - South East Region Theme Area. The scheme is also within a freely draining slightly acid loamy soils area. There will be changes to the existing landscape, although public realm improvements will provide beneficial improvements to that area. The improvements will require re-designing of the junctions and extending the existing highway boundaries. However, these changes are unlikely to have a significant impact on the landscape.					Neutral		
	Townscape	The scheme will involve extending the existing highway boundary by widening the existing westbound carriageway, as well as creating new cycleway and footpaths. However, the extent of this will not have a significant impact on the townscape.					Neutral		
	Historic Environment	It is not anticipated that there will be any impact on the historic environment of Slough. There are relatively few historic resources nearby to the scheme and it is unlikely that any of the scheme elements will negatively impact upon these during construction or maintenance.					Neutral		
	Biodiversity	There is a small priority habitat - Traditional Orchards (0.31 acres) and 2 deciduous woodlands (0.18 acres) near to the affected scheme area. There are also two woodland improvement areas designated as high spatial priority near the A4/M4 roundabout. Slough falls within the Farm Wildlife Package Area and also falls in a Lapwing bird species area. As the scheme includes only a slight extension to the highway boundary in an urban area, it is unlikely that there will be any substantial negative impacts upon biodiversity.					Slight Adverse		
	Water Environment	All of Slough falls within the countryside stewardship water quality priority area - medium priority, and it also falls within a "Keeping Rivers Cool" area. A small part of the scheme area is within the "low" climate change vulnerability buffer. As the scheme only includes a slight extension to the highway boundary, it is unlikely that there will be any significant increase in surface water run off or that it will negatively impact upon the floodplain.					Neutral		
Social	Commuting and Other users	Commuting and Other users benefit more than business users from the highway and Park and Ride improvements. Reduced travel time generates benefits of £25.6m PV with vehicle operating cost benefits of £5.9m and a user charge benefit of £1.4m PV.	Value of journey time changes(£): £25.6m Net journey time changes (£) 0 to 2min: £16.2m; 2 to 5min: £6.9m; > 5min: £2.5m					32,851,000	
	Reliability impact on Commuting and Other users	Reliability benefits of £1.3m for commuting and other highway trips will result from increased capacity and junction improvement enhancing day-to-day reliability. Reliability will also be improved by the attraction of traffic from other local roads therefore reducing incidents. The monetised benefit does not capture improved reliability for bus services which will result from the inclusion of an extended dwell time at the P&R site.						1,266,000	
	Physical activity	The public realm improvements to the scheme on the A4 North of London Road include the addition of new pedestrian access, footpaths and cycle racks. These additions could create a mode shift to walking/cycling and therefore have a beneficial impact on physical activity. Furthermore, the addition of a segregated cycle lane and 2m footway on the A4 could also assist in creating mode shift and encouraging people to walk and cycle.	£0.24m				Slight Beneficial		
	Journey quality	The addition of a segregated cycle track 3m wide along the A4 has the potential to improve journey quality for cyclists by reducing their fear of potential accidents. Furthermore, the addition of the public realm improvements north of the M4 could improve the journey quality for pedestrians by improving the landscape and environment of the area. The addition of a central reservation may improve the journey quality by reducing the fear of accidents, furthermore the addition of the extra lane westbound and junction improvements could reduce congestion on the road and consequently reduce driver frustration.					Moderate Beneficial		
	Accidents	The addition of a central reservation along the A4 could improve safety and therefore reduce accidents. Furthermore, improvements to the junction could also decrease accidents in the area. However, widening of the A4 may potentially encourage a higher flow of traffic and increases in the speed of vehicles, which has the potential to increase accidents.					Slight Beneficial		
	Security	Public realm improvements and changes to pedestrian facilities on the A4 north of the M4 junction 5 have the potential to improve security and improve pedestrian access in the area. This current landscape changes could improve peoples' feeling of sense of place and a reduction in dark alleyways may lead to a positive impact on security. Furthermore, proposed changes to bus stops in the area have the potential to provide a beneficial impact on security.					Moderate Beneficial		
	Access to services	Public realm improvements on the A4 North of the M4 could have a beneficial impact on users of the bus stop, as a result of it being resurfaced and re-routed to better suit the layout. The new Park & Ride scheme provides an additional service to local commuters.					Slight Beneficial		
	Affordability	Widening of the westbound carriageway as well as junction improvements should reduce vehicle operating costs. However, it is difficult to determine definitively at this stage what impact, if any, the scheme will have on affordability.					Neutral		

	Severance	Public realm improvements in the immediate vicinity of the A4 London Road, north of the M4 Junction 5 will include creating new pedestrian footpaths and areas as well as a cycle lane along the A4. There will also be improved pedestrian crossing points and cycle facilities within the junction improvements, improving accessibility of sites by walking and cycling. However, there may be changes to speed and volume of traffic by adding a lane to the existing carriageway that could adversly affect severance.		Neutral		
	Option and non-use values	There are no changes to public transport or public transport facilities within this scheme.		Neutral		
Public Accounts	Cost to Broad Transport Budget	This option will require an investment in the transport network of £13.7m PV. There will be further ongoing costs to operate and maintain the P&R site over 60 years of £3.0m PV. A net revenue gain from vehicles parking and the P&R site of £3.0m will be recieved but this will be offset by reduced parking revenue at other locations in Slough of £4.2m.		£18.0m		
	Indirect Tax Revenues	As a result of vehicle operating costs being reduced and reduced expenditure on parking, there will be a loss of indirect taxation of £9.2m (PV over 60 years).		£9.2m		