

Appraisal Summary Table		Date produced:	25 7 2019		Contact:			
<b>Name of scheme:</b> A582 South Ribble Western Distributor <b>Description of scheme:</b> The scheme includes provision of a 5.2 kilometre stretch of dual two-lane carriageway with solid concrete central reservation barrier with a parallel segregated combined cycle track/footway, providing a total transport corridor generally 35 metres wide, along the existing A582 corridor between Broad Oak Roundabout and Stanfield Lane Roundabout. Additionally, 0.5 kilometres of narrow widening from dual two-lane to dual three lane on the westbound carriageway between the South Rings Roundabout and Stanfield Lane and 0.25 kilometre of widening from dual two-lane to dual three-lane of the northbound carriageway between the M65 Terminus Roundabout and South Rings Roundabout will be provided. The segregated 3-metre-wide combined cycle track/footway will be provided along one side of the carriageway, separated from the carriageway by a 0.5m buffer strip, and will be built along the east side of the A582 Penwortham Way, and the South side of the A582 Flensburg Way and Farington Road.		<b>Name:</b> Richard Askew <b>Organisation:</b> Lancashire County Council <b>Role:</b> Project Manager						
<b>Impacts</b>		<b>Summary of key impacts</b>		<b>Assessment</b>				
				<b>Quantitative</b>		<b>Qualitative</b>		
				<b>Monetary £(NPV)</b>		<b>Distributional 7-pt scale/ vulnerable grp</b>		
<b>Economy</b>	Business users & transport providers	The scheme generates significant <b>journey time savings of £37.9m</b> , for business trips, due to reduced congestion on A582 and faster travel times to and from Preston. The time benefits are highest for short journey time savings as expected due to the nature of the scheme. The scheme also produces a <b>disbenefit of -£0.8m</b> through an increase in <b>Vehicle Operating Costs</b> for business users, adding to the scheme net disbenefit for VOC (-£5.6m). There is also <b>disbenefit of -£1.6m</b> due to <b>construction and maintenance delays</b> to business users.	<b>Value of journey time changes(£)</b> £37.9m <b>Net journey time changes (£)</b> 0 to 2min £26.7m    2 to 5min £10.8m    > 5min £0.3m		N/A	£35.5m	A high level assessment has been undertaken. Preston receives high benefits from the scheme and majority of the area are within 20% most deprived LSOAs. A detailed assessment to be undertaken in OBC stage.	
	Reliability impact on Business users	Positive <b>journey time reliability</b> effect is expected for business trips due to scheme because of reduction in congestion and accidents on A582 and B5254, and is estimated to be a total <b>benefit of £1.2m</b> (17% of total journey time reliability benefits). The journey time reliability analysis was limited to the A582 and B5254 routes only. Quantification of reliability benefits across the wider network has not been undertaken.	N/A		N/A	£1.2m		
	Regeneration	N/A	N/A		N/A	N/A		
	Wider Impacts	The scheme will generate <b>£42.5m of benefits from labour supply impacts (£0.8m), productivity (Static Clustering) (£38.2m), and output change in imperfectly competitive markets (£3.5m)</b> . This benefit can be considered in total PVC to calculate an <b>adjusted BCR</b> for the scheme.  In addition, unlocking the <b>Pickerings Farm</b> housing development and <b>Cuerden Business Park</b> will generate <b>£33.6m of benefits</b> , which cannot be used in the BCR calculation. This benefit is monetised as indicative impact to support the overall Value for Money of the proposed scheme.	N/A		N/A	Labour supply impacts: £0.8m Productivity: Static Clustering: £38.2m Output change in imperfectly competitive markets: £3.5m Net NPV: £42.5m		
<b>Environmental</b>	Noise	Night time noise levels have been derived from predicted day time levels in accordance with the procedures set out in the 'Calculation of Road Traffic Noise', Design Manual for Roads and Bridges Volume 11/Part 7 HD 213/11 Revision 1, and TRL report 'Converting the UK traffic noise index LA10,10h to EU noise indices for noise mapping'.  Analysis of the predicted daytime noise levels indicates that no dwellings would be expected to meet the noise insulation eligibility criteria contained in the Noise Insulation Regulations 1975.  The number of properties predicted to experience 55dB L <sub>night</sub> or greater in the future assessment year is 1,388 with the scheme in place, and 1,489 without the scheme in place. Therefore there are 101 fewer properties above the night-time SOAEL with the scheme in place.  No properties are predicted to experience 80dB LAeq,16h or greater in the future assessment year with and without the scheme in place.  Of the 297 non-residential sensitive receptors, the majority experience negligible impacts or no change in both the short-term and long-term assessments with the scheme in place. There are a small number (38 in the short-term and 2 in the long-term) that are predicted to experience perceptible decreases with the proposed scheme in place, whilst there are 21 non-residential receptors in the short-term, and 5 in the long-term, predicted to experience perceptible increases in noise level.  The proposed scheme would result in negligible effects in the noise environment for the majority of dwellings in the study area. In the short-term 2,016 dwellings are predicted to experience perceptible noise level increase and 1,805 dwellings are predicted to experience perceptible noise level decreases. In the long-term daytime period with the proposed scheme in place, there are 653 dwellings predicted to experience perceptible noise level increases, compared to 94 perceptible noise level decreases, however, in the long-term without the proposed scheme in place, no dwellings are predicted to experience a perceptible noise level increase or decrease. For the night-time period with the proposed scheme in place, 5 dwellings are predicted to experience perceptible noise level increases and 2 are predicted to experience noise decreases, whilst no perceptible changes in noise level are predicted for the night-time period if the proposed scheme does not go ahead.	Households experiencing noise above the night-time SOAEL: - 101 Households experiencing increased daytime noise in forecast year: 653 Households experiencing reduced daytime noise in forecast year: 94 Households experiencing increased night time noise in forecast year: 5 Households experiencing reduced night time noise in forecast year: 2		N/A	£1.8m	A high level assessment has been undertaken. The noise assessment identifies that the proposed scheme would result in negligible effects in the noise environment for the majority of dwellings in the study area. Around 25% of the receptors in the study area are located within 40% most deprived LSOAs, out of which 10% experience an increase in noise levels and 9% experience a reduction in noise levels. Despite the negligible effects in noise environment and small number of affected receptors in the most deprived area, a change of flows of greater than 25% on A582 is expected and therefore a detailed DI assessment will be undertaken in the next stage of the scheme.	
	Air Quality	The scheme will result in a net increase (deterioration) in local air quality due to an increase in emissions in the opening and design years, likely due to the attraction of extra traffic onto the road network, and away from surrounding areas. This is likely to be reflected in concentrations (not predicted). However, South Ribble Borough Council AQMA No. 3 (Lostock Hall) has a reduction in traffic flows. This reduction in traffic flows is likely to result in an improvement in air quality in this AQMA.	Opening Year Change in NOx Emissions: +3.87 tonnes Forecast Year Change in NOx Emissions: +2.56 tonnes Total AQ valuation for the sensitivity test NPV is: -£1.8m Change in NOx emissions over a 60 year period: 164		N/A	NOx: -£0.08m Total: -£0.08m	A regional assessment of Air Quality has been undertaken. The Air Quality impact of the scheme on receptors will be analysed in the OBC stage and the distributional impacts will be assessed.	
	Greenhouse gases	Difference between the upper and lower bounds estimate +/- £3,917,849 variation of NPV. The forecast traffic data is for 2037 however the latest year that best practice tools (EFT) have CO <sub>2</sub> emissions data for is 2030. Improved vehicular technologies by 2037 should see that newer less polluting technologies will have been developed or become more typical (e.g. electric vehicles) that will result in fewer CO <sub>2</sub> emissions at the scheme.	Change in non-traded carbon over 60y (CO <sub>2</sub> e) 162,314 Change in traded carbon over 60y (CO <sub>2</sub> e) 0		N/A	-£7.3m		
	Landscape	The removal of woodland and trees adjacent to the A582 and B5253 would result in the presence of traffic initially being a more noticeable element within the landscape and some reduction of perceived tranquillity would be apparent adjacent to the scheme. At design year the landscape would be restored by establishment of replacement planting and have a neutral impact. Some locations such as the B5253 are considered to have a slight improvement in landscape quality. The increased width of the A582/B5253 corridor would barely be perceived in the context of the wider landscape as it is an existing road corridor.	N/A		Neutral	N/A		
	Townscape	The SRWD is situated on the periphery of the built up area of Lower Penwortham, Farington and Leyland there will be limited impact on local townscape character owing to the dualling following the alignment of the existing A582	N/A		Slight adverse	N/A		
	Historic Environment	A total of 109 heritage assets have been identified by the desktop assessment none of which would be impacted by the scheme. After mitigation, residual impact is assessed as being neutral. The potential for as-yet unknown archaeological remains is considered to be low.	N/A		Neutral	N/A		
	Biodiversity	No significant residual impacts have been identified for any ecological receptors during the construction and operational phases. Design options have been selected during route development to reduce the extent of woodland habitat loss where practicable. Significant short-term impacts are predicted through habitat loss and/or fragmentation, but these impacts will not persist medium to long term as compensatory habitats will mature. Plans for replanting and new compensatory habitats (including new wetland) have been designed to enhance the ecological connectivity and functioning of the existing habitat network and the combined areas of mitigation and compensatory woodland planting will result in a net gain of woodland in the study area.	N/A		Slight adverse	N/A		
	Water Environment	The results show that impacts of the scheme on water environment during operation with mitigation would be negligible. Most of the impacts on the identified water environment attributes would be insignificant. Potential impacts were identified prior to the application of any mitigation measures. However, impacts from construction runoff, routine road runoff and spillages will be mitigated through a drainage system designed to attenuate flows and treat pollutants. Culverts and watercourse diversions will be designed with sufficient capacity to convey anticipated flows and to minimise erosion.	N/A		Neutral	N/A		
	<b>Social</b>	Commuting and Other users	The scheme generates significant <b>journey time savings of £63.6m</b> , for commuting and other users, due to reduced congestion on A582 and faster travel times to and from Preston. The time benefits are highest for short journey time savings as expected due to the nature of the scheme. The scheme also produces a <b>disbenefit of -£5.2m</b> due to increase in <b>Vehicle Operating Costs</b> for these users. An overall VOC disbenefit, small in comparison to travel time benefits, is logical as the total travel distance across the network is slightly higher with the scheme than without the scheme. In addition, the impact of Variable Demand Modelling on the travel pattern also contributed to longer journey distances. There is also <b>disbenefit of -£2.9m</b> due to <b>construction and maintenance delays</b> .	<b>Value of journey time changes(£)</b> £62.4m <b>Net journey time changes (£)</b> 0 to 2min £49.7m    2 to 5min £12.6m    > 5min £0.1m		N/A	£55.0m	A detailed assessment will be undertaken in OBC stage.
		Reliability impact on Commuting and Other users	Positive <b>journey time reliability</b> effect is expected for Commuting and Other trips due to scheme because of reduction in congestion and accidents on A582 and B5254, and is estimated to be a total <b>benefit of £5.5m</b> (83% of total journey time reliability benefits). The journey time reliability analysis was limited to the A582 and B5254 routes only. Quantification of reliability benefits across the wider network has not been undertaken. Commuting benefits: £3.0m Other benefits: £2.4m	N/A		N/A	£5.5m	
Physical activity		Overall, non-motorised users (NMU) would experience long-term positive benefit as a result of the introduction of a new three metre wide shared use cycle track along the full length of the proposed scheme (6.5km) combined with the provision of new toucan crossings at Croston Road and Longmeanygate where there is no provision at the present time.	N/A		Moderate beneficial	N/A		
Journey quality		It is concluded that the scheme would have a neutral impact on travellers' views from the road and remain in-line with the semi-rural setting. The scheme would be designed to a higher standard than the existing road which reduces driver uncertainty and stress also reducing the opportunity for collisions and drivers' fear of potential accidents. Overall the scheme would result in a long-term moderate benefit to driver stress levels. A slight beneficial impact on traveller care would be experienced through slight improvement the landscape and environmental quality of the journey in some locations. The provision of a combined footway / cycle track along the dualling will provide a facility creating a moderate safety benefit.	N/A		Moderate beneficial	N/A		
Accidents		Because of the higher standards of the new carriageway, the number of accidents on the A582 is expected to decrease. The number of accidents on the surrounding area is also expected to decrease due to reduction in traffic. The total number of accidents however is expected to increase because of the increased traffic at the A582 junctions. The scheme will result in reduction in accidents with fatal and serious injuries. The monetary value of the <b>overall change in accidents</b> would be a benefit of <b>£3.9m</b> .	Change in total number of accidents: 30 Change in number of casualties: Fatale= 4 Serious= 19 Slight= 256		N/A	£3.9m	A high level assessment has been undertaken. A qualitative assessment to be undertaken in OBC stage.	
Security		The scheme is not expected to have any impact on security.	N/A		Neutral	N/A	N/A	
Access to services		The scheme is not expected to have any impact on access to services.	N/A		Neutral	N/A	N/A	
Affordability		The scheme is not expected to have any impact on affordability.	N/A		Neutral	N/A	N/A	
Severance		Severance impact is considered to be moderate beneficial to the communities adjacent to the scheme such as at Lostock, Farington and Lower Penwortham. The scheme provides new formal crossing access at Croston Road / Farington Road and also at Longmeanygate which do not exist at the present time. The new facilities provided along the road would provide increased level of access for NMU but owing to the limitations on the type of crossings and the level of safe provision possible after dualling some journeys along existing PRoWs will be diverted owing to the provision of a central crash barrier. Impact on PRoWs is considered to be neutral.	N/A		Slight beneficial	N/A	Screening step undertaken and distributional impact to be assessed in OBC stage.	
Option and non-use values		The SRWD scheme is not expected to have any impact on option and non-use values.	N/A		Neutral	N/A		
<b>Public Accounts</b>	Cost to Broad Transport Budget	For the purposes of the Economic Assessment and the generation of the BCR, costs are discounted to 2010 prices and exclude the costs already incurred.	N/A		N/A	£60.3m		
	Indirect Tax Revenues	There would be an increase in tax being paid to the Exchequer as a result of higher distances travelled.	N/A		N/A	-£4.0m		