

Appraisal Summary Table		Date produced:	14-Sep-15	Contact:														
Name of scheme:	Broughton Bypass			Name	Martin Galloway													
Description of scheme:	The Broughton Bypass is a key component of the programme of transport infrastructure investments, agreed as part of the Preston City Deal, that will collectively support the scale of development set out in the Core Strategy and will mitigate its impact on the transport network. It has been identified as the preferred solution to the congestion, environmental and road safety problems experienced in and around Broughton village. It is also a precondition of the development in Whittingham in place of the former Whittingham Hospital and will support potential future development in Longridge. The proposed bypass is approximately 2km in length and has been designed as two sections running north and south of the existing B5269 Whittingham Lane along the A6 corridor.			Organisation	Lancashire County Council													
				Role	Promoter/Official													
Impacts	Summary of key impacts	Assessment																
		Quantitative	Qualitative	Monetary £ (NPV)	Distributional 7-pt scale/ vulnerable grp													
Economy	Business users & transport providers	<table border="1"> <tr> <th colspan="2">Value of journey time changes (£)</th> <th>£54.7m</th> </tr> <tr> <th colspan="3">Net journey time changes (£)</th> </tr> <tr> <th>0 to 2min</th> <th>2 to 5min</th> <th>> 5min</th> </tr> <tr> <td>£6.8m</td> <td>£14.8m</td> <td>£33.2m</td> </tr> </table>		Value of journey time changes (£)		£54.7m	Net journey time changes (£)			0 to 2min	2 to 5min	> 5min	£6.8m	£14.8m	£33.2m	N/A	£54.9m	
	Value of journey time changes (£)		£54.7m															
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Reliability impact on Business users	Reliability for business users and transport providers is expected to be positive due to increase in capacity and expected decrease in travel time variability and delays caused by incidents. However, no formal quantification of journey time reliability was undertaken.	N/A		N/A														
Regeneration	Regenerative impact has been assessed as part of the GVA benefit analysis which considered increase in the employment as a result of the scheme. Over 750 jobs are expected to be unlocked by the scheme which demonstrates a positive impact of the scheme on regeneration.	N/A		N/A														
Wider Impacts	The scheme is expected to generate £153m GVA benefits over 60 years through unlocked development and increase in productivity which shows that the Broughton Bypass will have positive wider impacts by strongly supporting local economic activity. This represents an annual average benefit of £2.5m to the Lancashire economy, 650 houses and over 750 jobs will be unlocked by the scheme.	N/A		N/A														
Environmental	Noise	In terms of properties potentially eligible for noise insulation (under the Noise Insulation Regulations), 21 dwellings located within 300m of the proposed scheme are predicted to experience DS2032 noise levels greater than or equal to 68 dBA10,18hr and an increase in noise level of at least 1.0 dB compared to the equivalent DM2017 noise level. These properties are located on Whittingham Lane to the east of the proposed scheme and on D'Urton Lane. Further assessment work will be required to accurately establish the number of dwellings eligible for noise insulation. For the night-time assessment, 478 households are predicted to experience free-field noise levels > 55 dBAeq,8hr in the DM2032 scenario. By comparison, there are predicted to be 33 fewer households in the DS2032 scenario (445). There is a school (with associated playing field) and a church in close proximity to the proposed scheme. The school is likely to see a "moderate adverse" noise impact on scheme opening (DM2017 vs DS2017) and a "minor adverse" noise impact in the long term (DM2017 vs DS2032), whilst the church is likely to see "minor adverse" noise impacts both on scheme opening and in the long term. Distributional Impact analysis showed that only Income group 5 will be affected by change in noise. It will receive a large beneficial impact. Slight adverse impact is forecast for children	Total people annoyed without scheme = 729 Total people annoyed with scheme = 705 Total change in people annoyed = -24		N/A	£1.2m	Income Quintile 5 - Large Beneficial. Income Quintiles 1, 2, 3, 4 - Neutral. Children - Slight Adverse.											
	Air Quality	All the properties within the Broughton AQMA will be removed from exceedance of the annual mean Air Quality Objective. The proposed scheme is anticipated to lead to an improvement in air quality (exposure to PM10 and NO2 concentrations) overall. The Defra PCM model indicates that there are no links in exceedance of the NO2 EU Limit Value in the DM or DS scenarios. Income group 5 is expected to benefit from the change in Air Quality. Income quintiles 1, 2 and 4 will be negatively affected and income group 3 will not experience any change in Air Quality as a result of scheme.	Number of properties with an improvement (PM10): 1170 Number of properties with no change (PM10): 746 Number of properties with a deterioration (PM10): 668 Number of properties with an improvement (NO2): 1665 Number of properties with no change (NO2): 0 Number of properties with a deterioration (NO2): 919 Local Air Quality Assessment Score PM10: -81 NO2: -528 Regional Emissions (Opening Year) NOx: +3.3 tonnes/yr		N/A	Value of change in PM concentration: NPV: +£253k Value of change in NOx emissions: NPV: -£33k Total value of change in air quality: +£0.2m	Income Quintile 5 - Large Beneficial. Income Quintile 3 - Neutral. Income Quintiles 1, 2, 4 - Large Adverse.											
	Greenhouse gases	The increase in CO2 emissions is primarily due to increased vehicle flows and distance travelled due to the scheme. All emissions are non-traded, and rail emissions have not been considered in this assessment.	<table border="1"> <tr> <td>Change in non-traded carbon over 60y (CO2e)</td> <td>+65 kT</td> </tr> <tr> <td>Change in traded carbon over 60y (CO2e)</td> <td>0 kT</td> </tr> </table>		Change in non-traded carbon over 60y (CO2e)	+65 kT	Change in traded carbon over 60y (CO2e)	0 kT	N/A	-£3.0m								
	Change in non-traded carbon over 60y (CO2e)	+65 kT																
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	Landscape	The scheme will significantly effect landscape character by passing through / adjacent to mature woodland and hedgerows and locally important non-designated cultural heritage sites and cause a minor urbanising effect to the open countryside. Furthermore the scheme would effect the tranquillity of this large rural area. The overall impact on Landscape is moderate adverse.	N/A		Moderate Adverse	N/A												
	Townscape	The bypassing of Broughton village and D'Urton Lane would provide benefits to the local population from the reduction in traffic and removal of signage which would reduce landscape impacts and visual impacts. The overall impact is moderate beneficial.	N/A		Moderate Beneficial	N/A												
Historic Environment	There would be physical impacts on 22 archaeological remains, 2 undesignated structures and 5 Historic Landscape Types. There would also be an impact on setting, including that of one Grade II* Listed Building and 6 Grade II Listed Buildings. The remaining impacts are on settings. The predicted physical impacts during construction are moderate or slight adverse. During operation the impacts on the setting of two undesignated historic buildings. The overall impact is slight adverse.	N/A		Slight Adverse	N/A													
Biodiversity	There are six Biological Heritage Sites and four Local Nature Reserves within 5km, the nearest being the Lancaster Canal which is 1km northwest. None of these sites will be directly or indirectly affected by this scheme. The predominant habitats through which the route would pass are improved grasslands and associated field boundaries (hedgerows with some mature trees). A designated broadleaved woodland, which contains a limited number of ancient woodland indicators in the ground flora, would be disturbed by a proposed underpass. This would have a moderate adverse effect on this habitat at construction reducing to slight adverse with mitigation 15 years after construction. A small number of mature trees would be lost, which are located along field boundaries, water courses, adjacent to ponds and within gardens within the footprint. Mitigation measures address these losses. There are a total of 25 hedgerows that are crossed by the Scheme footprint, of these 14 are species-rich and 11 are species-poor; the route is likely to cause slight adverse effects through habitat fragmentation and severance for associated flora and fauna at construction, reducing to neutral after 15 years as the result of habitat creation. There is a slight adverse effect predicted for barn owls in the area due to the increased risk of mortality with the introduction of a new road. This would be mitigated by appropriate habitat management to discourage barn owls from roadside habitat. No ponds would be lost to the Scheme but there will be fragmentation of core terrestrial habitat for a small population of GCN in the centre of the scheme, There is also a risk of damaging/polluting ponds adjacent to the scheme including a GCN pond. A moderate adverse effect in the short-term due to risk of damage to GCN breeding pond during construction, with no adverse effects by 15 years after construction when the mitigation to be developed under an EPSP would be fully effective. It is anticipated that there is potential beneficial effects on the GCN population in the longer term. The overall impact on biodiversity is neutral.	N/A		Neutral	N/A													
Water Environment	Most of the residual impacts on the identified water environment attributes would be insignificant. One of the attributes would experience an impact of low significance. As a result the overall impact would be neutral.	N/A		Neutral	N/A													
Social	Commuting and Other users	<table border="1"> <tr> <th colspan="2">Value of journey time changes (£)</th> <th>£74.8m</th> </tr> <tr> <th colspan="3">Net journey time changes (£)</th> </tr> <tr> <th>0 to 2min</th> <th>2 to 5min</th> <th>> 5min</th> </tr> <tr> <td>£9.0m</td> <td>£20.4m</td> <td>£45.4m</td> </tr> </table>		Value of journey time changes (£)		£74.8m	Net journey time changes (£)			0 to 2min	2 to 5min	> 5min	£9.0m	£20.4m	£45.4m	N/A	£77.3m	Income Quintile 1: Slight beneficial Income Quintiles 2,3,4: Moderate beneficial Income Quintile 5: Large beneficial
	Value of journey time changes (£)		£74.8m															
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	£9.0m	£20.4m	£45.4m															
	Reliability impact on Commuting and Other users	Reliability for commuting and other users is expected to be positive due to increase in capacity and expected decrease in travel time variability and delays caused by incidents. However, no formal quantification of journey time reliability was undertaken.	N/A		N/A	N/A												
	Physical activity	Overall, Non-Motorised Users (NMUs) would experience significant long-term beneficial effects as a result of improved connectivity, improved safety and improved amenity throughout the study area. These effects outweigh the long-term insignificant adverse effect of diverting existing PRoWs as required and would result in the scheme having a long-term insignificant beneficial effect. The overall beneficial effects on the NMu network are likely to encourage physical activity.	N/A		Slight Beneficial.	N/A												
	Journey quality	Overall, Non-Motorised Users would experience significant long-term beneficial effects as a result of improved connectivity, improved safety and improved amenity throughout the study area. Although the route through Broughton would see a benefit in travellers' views, there would be a neutral effect on views as views would be similar to existing. Vehicle traveller frustration, fear of accidents and route uncertainty would reduce as a result of the scheme.	N/A		Moderate Beneficial	N/A												
Accidents	A reduction in the number of accidents is expected on the current A6 route in and around Broughton. However, the additional 2 km of the highway network will likely neutralise the positive effect. The overall impact is therefore neutral. According to the distributional impact appraisal the scheme is expected to reduce numbers of casualties among cyclists and young male drivers.	N/A		Neutral	N/A	Young male drivers - Slight Beneficial Cyclists - Slight Beneficial												
Security	There is unlikely to be a significant change to the security of travellers along the A6. As road users are more vulnerable to crime in circumstances where they are required to stop their vehicles or travel at slow speeds the reduced congestion in Broughton as a result of the scheme may offer some security benefits. However, due to the existing level of lighting and CCTV in this area, an overall assessment score of neutral has been awarded.	N/A		Neutral	N/A													
Access to services	The scheme does not directly affect the provision or location of public transport facilities and hence access to services is largely unaffected. However, the removal of through traffic from the A6 facilitates improved local journeys to community facilities with local trips experiencing less delay. There will also be improved crossing facilities and walking and cycling routes again facilitating improved access.	N/A		Slight Beneficial	N/A													
Affordability	The scheme does not affect public transport fares, parking charges or road user charges. There will be an overall increase in vehicle operating costs of commuting and other (i.e. non-business) car trips as a result of the scheme. According to distributional impact analysis all income groups will be affected evenly by an increase in vehicle operating cost.	N/A		N/A	N/A	All income quintiles - Moderate Adverse												
Severance	Overall the scheme is considered to have a beneficial impact on community severance between Broughton and the surrounding communities. The bypass would reduce traffic flows through Broughton thereby reducing the disturbance from road traffic. The school children travelling from the south of Broughton would experience beneficial impacts when travelling through Broughton due to the reduced congestion, however for many of them there would be a need to cross the new bypass which could potentially cause an adverse impact. The adverse impact will be mitigated through introduction of new crossings for pedestrians and cyclists and diversions provided for all affected footpaths making the overall impact on severance slightly beneficial.	N/A		Slight Beneficial	N/A	Children - Slight Beneficial												
Option and non-use values	The scheme does not affect the availability of transport services within the study area.	N/A		N/A	N/A													
Public Accounts	Cost to Broad Transport Budget	For the purposes of the Economic Assessment and the generation of the BCR, costs and contributions are discounted to 2010 prices and exclude the costs already incurred. A split of 64% Central and 36% Local Govt/ Developer has been assumed.	Local Government Funding (incl. Developer Contribution) = -£7.4m Central Government Funding = -£14.7m		N/A	-£22.1m												
	Indirect Tax Revenues	There would be a decrease in tax being paid to the Exchequer.	Central Government Funding: Wider Public Finances = -£1.4m		N/A	-£1.4m												

Note: All monetary figures are in 2010 prices, discounted to 2010.