

APPRAISAL SUMMARY TABLE (AST)
June 2009

Scheme Name: A46 Newark to Widmerpool Improvement	Description: Up-grading of the existing 28km single carriageway to dual 2-lane standard and eliminating all the existing at-grade junctions, except the northern terminal roundabout at Newark, and replacing them, where appropriate, with full grade separation. Approximately 15km of the Scheme is offline from existing alignment.	Problems: Sub-standard road geometry and congestion caused by numerous direct accesses onto the existing road, poor overtaking opportunities, mixture of agricultural, local and long-distance traffic and over-capacity of junctions at Stragglethorpe, Saxondale and Margidunum. The trend in accidents is towards an increase with a high percentage (27%) of 'killed and serious injury' accidents.	Present Value of Costs to Public Accounts £m Present Value Cost = £65.3M (i.e. raises revenue) (2002 market price discounted to 2002 present value year) Mid Range Scheme Cost Estimate = £383M	
OBJECTIVE	SUB- OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE ASSESSMENT	ASSESSMENT
ENVIRONMENT	Noise	The study area consisted of all properties within 600 metres either side of the Scheme and 600 metres either side of all road links which experience a change in traffic flow greater than +25% / -20% as a result of the Scheme. There would be areas that would experience an overall improvement in noise climate (including Newark, Kinoulton, parts of Bingham, East Stoke and Farndon). Elsewhere, the settlements of Cropwell Bishop, Cropwell Butler and Elston would experience slight increases in traffic noise levels. Number of properties experiencing noise levels ≥ 66 dB LAeq (Year 0) Do Minimum 496, Published Scheme 371. Number of properties experiencing noise levels ≥ 66 dB LAeq (Year 15) Do Minimum 578, Published Scheme 434. 3 residential properties demolished as part of the Scheme	People annoyed by noise – Published Scheme vs Do Minimum 2027. Total Population in Assessment: 34,041, Do Minimum: 2,464 annoyed, Published Scheme: 2,463 annoyed	Change in Population Annoyed (Year 15) = -1 PVB (Residential) = +£1,957,298
	Local Air Quality	A total of 6603 properties are located within 200m of the existing A46 and/or the Scheme and/or surrounding affected roads, 3 properties would be demolished due to the Scheme, 5677 (86%) would experience an improvement in local air quality and 926 (14%) a worsening. Will give improvements to air quality at East Stoke and Farndon, although there will be a slight worsening in air quality at the west edge of Syerston and Coneysgreys Spinney. No exceedances of the current air quality objectives are predicted at any affected property with or without the Scheme; the Local Authorities have not declared any AQOMAs in the vicinity of the Scheme.	No. of properties with an improvement in air quality in 2016 due to the Scheme: 5677 No. of properties with worsening of air quality in 2016 due to the Scheme: 926	NO2: -1837 PM10: -555
	Greenhouse Gases	Total road traffic CO2 emissions in the Traffic Model Study Area increase by 21% in 2012 and 22% in 2027. This is due to the increase in the vehicle kilometres travelled in the Traffic Model Study Area of 12-14% and the increase in average speed on the A46 of around 40 km/hr due to the operation of the Scheme	Total emission of CO2 (tonnes/yr): DM 2012: 138,160 DS 2012: 167,098	Increase in emissions of CO2 due to the Scheme: +28,938 tonnes PVB -£35.2M
	Landscape	Scheme would follow alignment of existing A46 along former Roman Road through a gently rolling and agricultural landscape for the majority of its route, retaining vegetation to the east where possible. Planting lost to the west would be replaced and hedgerows translocated where practicable. On the off line section, planting to reconnect severed hedgerows would be provided. The roundabouts at Stragglethorpe, Saxondale, Margidunum and Farndon would be lit. Lighting on the new roundabout at Lodge Lane and the existing A46 would also be provided. The mainline would not be lit. Significantly more vegetation would be provided by the Scheme than lost.	-	Slight Adverse
	Townscape	Scheme would improve the setting of the conservation areas at East Stoke and Farndon. Similarly, human interaction would be improved as a result of ease of movement within and between local settlements and isolated properties.	-	Slight Beneficial
	Heritage of Historic Resources	Scheme causes changes to the setting of 20 listed buildings, 9 locally listed buildings and 4 conservation areas although reduced traffic on existing A46 would benefit other heritage features. Scheme will affect 9 SAMs, 1 English Heritage registered battlefield and a number of archaeological sites. A programme of detailed archaeological investigation and research, building recording and investigation of historic landscape features would be undertaken prior to construction.	-	Moderate Adverse
	Biodiversity	Scheme would have a direct impact on 10 SINC's and result in the loss of one field pond supporting Great Crested Newts. Some mature trees, woodland, hedgerows and ditch habitats would be lost, which would affect birds, invertebrates and mammals (including bats and badger). There would be a significant amount of habitat created by the Scheme providing a net increase of trees, woodland, hedgerows and scrub as well as provide ecology ponds and ditches.	-	Moderate Adverse
	Water Environment	Existing floodplain storage capacity for the Rivers Trent and Devon would be maintained by Scheme. The water quality of receiving ditches, and streams along the existing A46 would be slightly improved with the Scheme due to better drainage design. Minor aquifers used for agricultural supply would not be affected by the Scheme.	-	Neutral
	Physical Fitness	Unlikely that the Scheme would change the existing pedestrians travel in terms of journeys greater than 30 min. There is however, a potential for new leisure journeys between villages with the provision of bridged crossing points and the creation of new off-road cycle ways.	Change in number of cyclists/pedestrians making journeys of > 30 minutes = 0	Neutral
	Journey Ambience	Reduced driver stress, enhanced highway design and carrying capacity, separation of NMU facilities and uninterrupted travel along the new A46 would provide improved journey ambience.	-	Large Beneficial
SAFETY	Accidents	Accidents assessment over 60 years and for all roads local to the Scheme based upon Central growth forecasts.	Number Personal Injury Accidents: 1,671. Casualties: Deaths: 64 Serious: 395 Slight: 2,299	PVB £114.0 M
	Security	Lay-bys on the Scheme will be unlit although the landscaping design will ensure that sight lines are clear and that the lay-bys are visible at all times. No additional security improvements are proposed by the Scheme.	-	Neutral
ECONOMY	Public Accounts	Scheme cost estimate on 'Green Form' October 2007. Assessment based on the Central scenario over a 60 year appraisal period and are present values discounted to 2002, in 2002 prices, £Millions	Investment costs: £261.1 M Indirect Tax Revenue: -£195.8 M	PVC £65.3 M
	Transport Economic Efficiency: Business Users & Transport Providers	Assessment based on the Central Growth scenario over a 60 year appraisal period and are present values discounted to 2002, in 2002 prices, £Millions.	-	PVB £ 668.2 M
	Transport Economic Efficiency: Consumers	Assessment based on the Central Growth scenario over a 60 year appraisal period and are present values discounted to 2002, in 2002 prices, £Millions	-	PVB £239.4 M
	Reliability	Reliability in two sections to the south of Saxondale assessed as slight beneficial. Three sections assessed to the north of Saxondale show a moderate beneficial impact in terms of reliability based on an assessment of links using 2016 Central growth forecasts.	Route Stress (Opening year 2016):	Moderate Beneficial
	Wider Economic Impacts	No assessment required.	-	Neutral
ACCESSIBILITY	Option Values	No substantial change to transport services created by this Scheme.	-	Neutral
	Severance	Scheme provides new safe crossing points at Saxondale and Farndon, which greatly improves non-motorised user provision along the Scheme and reduces existing severance. Bridges at Owthorpe, Roehoe, Stragglethorpe, and Flintham provide safe crossing points, improvements to severance and counteract some increases to footpath lengths. Significant sections of old A46 contribute to increased non-motorised user provision and provide a new north-south cycleway facility.	-	Slight Positive
	Access to the Transport System	With the exception of the relocation of bus stops at Saxondale Village and Butt Lane, the access to the public transport system would remain unchanged in the Do Something scenario.	-	Neutral
INTEGRATION	Transport Interchange	No inter-modal interchanges would be provided as part of this Scheme.	-	Neutral
	Land-Use Policy	Scheme would support some land use policies (e.g. recreation, employment allocations, habitat creation and non-motorised user provision), but hinder other policies (e.g. loss of best and most versatile agricultural soils, effects on Green Belt and policies to protect heritage, landscape and ecology). Overall, Scheme judged to be Neutral in respect of national, regional and local planning policies.	-	Neutral
	Other Government Policies	Scheme would have a Neutral effect in terms of other Government policies relating health, social inclusion, education etc.	-	Neutral