

Annex I – ASTs for Recommended Strategy vs Do-Minimum

Problem:		GOVERNMENT OBJECTIVES – DO-MINIMUM		Cost:	
Core Government Objectives	Sub-Objectives	Qualitative Impacts	Quantitative Measure	Assessment	
Environment	Noise	The main area to benefit in the design year (2021) is Zone 1 (City), with disbenefits distributed between Zones 2, 3, and 4 (Outer city, West Bridgford and the A52 corridor).	Change in numbers annoyed	576 more annoyed	
	Local Air Pollution	Negative values indicate an overall improvement in air quality due to reduction in vehicle kilometres travelled with the scheme. The actual change in emissions would be negligible. Four AQMAs lie within the assessment area and further assessment would be required to determine impact upon them.	PM10 "losers" 3 "winners" 8 NO2 "losers" 4 "winners" 7	2021 scheme emissions estimate index -6941 NO2 and -606 PM10 compared to do-min 2021.	
	Greenhouse Gases	Negligible change in CO2 emissions with the scheme	Changes in tonnes/yr	2021 scheme emissions are 16,586t CO2 more than do-min 2021	
	Landscape	The Radcliffe and Gedling bypasses would both result in landscape and visual impacts which would be difficult to mitigate fully. The introduction of other new features, including grade separation at several junctions and a new river crossing at Radcliffe may also be considered adverse impacts at a local level, though no nationally designated landscapes would be affected.	Not applicable	Moderate adverse	
	Townscape	Some settlements could experience severance linked to bypass proposals and bus priority measures could impinge on streetscape in some areas. One area of recognised townscape quality would be affected – by Radcliffe bypass. However traffic relief in other parts of the study area could facilitate townscape improvements.	Not applicable	Slight adverse	
	Heritage	Potential effects on the setting of a small number of listed buildings (Radcliffe river crossing) and one conservation area (Radcliffe bypass). Study area has clear archaeological potential which could be affected particularly by schemes in the Radcliffe and Saxondale area.	Not applicable	Moderate adverse	
	Biodiversity	No impact on nationally designated sites of nature conservation importance. A small number of schemes (Gedling Relief Road and Saxondale parkway) may involve direct impacts on locally important sites, There is scope for, mainly indirect, impacts on a number of protected species, which would need to be confirmed at the detailed design stage.	Not applicable	Significant adverse	
	Water Environment	Only the proposed river crossing at Radcliffe could potentially have a significant adverse effect on the water environment as it crosses a regionally important floodplain. Careful scheme design would be to the Environment Agency's requirements for maintaining flood capacity and flows. The addition of new infrastructure could increase runoff to local watercourses which would need to be controlled.	Not applicable	Slight adverse.	
	Physical Fitness	Both the general road schemes and public transport improvements, are expected to create the conditions which may encourage walking and cycling in the settlement centres and recreational areas of the Trent valley.	Not applicable	Beneficial	
	Journey Ambience	There is likely to be improved journey ambience as a result of the majority of the schemes which are aimed at improving the quality of the route and public transport facilities. New park and ride sites would provide high quality facilities and key highways schemes would offer more attractive views of the local area. Reductions in congestion should help to reduce stress levels in the urban area.	Not applicable	Beneficial	
Safety	Accidents	Grade separated junction improvements and reduced traffic flows in community areas contribute to an overall reduction of 6% in accidents across the network.	Accidents saved: Fatal – 21 Serious – 562 Slight - 7815	PVB £146m	
	Security	Bus priority, walking, cycling and village/town centre recommendations will contribute to an enhanced environment in which user security will be a high priority.	Not applicable	Slight benefit	
Economy	Economic Efficiency	The strategy provides a substantial return on investment.	Net Present Value - £1,126m Present Value Cost - £520.8m	BCR: 3.16	
	Reliability	Overall reduction in stress across the network and in the A52 corridor. Introduction of bus priority measures on all main corridors in the study area.	12.7% reduction in links in core area at/above capacity	Moderate Beneficial	
	Wider Impacts	The recommended strategy package will enhance accessibility to new development/employment opportunities across the study area.	Not Applicable	Slight Beneficial	
Accessibility	Option Values	Extension of the Robin Hood Line service provides an additional transport option for a population of 26,000 living within 800m of a rail station on this line.	Not Applicable	Strong Beneficial	
	Severance	Grade separated junction improvements and Radcliffe-on-Trent bypass contribute to significant reductions in degree of severance in the A52 corridor. Improvements will have similar benefits for pedestrians, cyclists and equestrians.	Not Applicable	Slight Beneficial	
	Access to Transport Systems	High level of existing transport provision results in small change in accessibility index. Extension of the Robin Hood Line service to Bingham provides access to a new service for a population of approximately 800 people living within 250m of Netherfield, Radcliffe and Bingham rail stations.	3.8% increase in accessibility index	Slight Beneficial	
Integration	Interchange	Recommended strategy package includes 2 new interchange opportunities; 1 rail-based at Saxondale, 1 bus-based at Gamston. Potential for a further bus-based park and ride interchange exists to the north of the river Trent.	Estimated 177 trips using interchange in AM PeakHour	Slight Beneficial	
	Land Use	The recommended strategy package measures are broadly compliant with National, Regional and Local land-use policies.	Not applicable	Slight Beneficial	
	Other Policies	The strategy is broadly compliant with other government policies.	Not applicable	Beneficial	

Problem:		CORE OBJECTIVES – DO-MINIMUM			Cost:
Local Objectives		Local Sub-Objectives	Qualitative Impact	Quantitative Measure	Assessment
Support the economic and social vitality of the study area and surrounding region.	1a	Enhance transport access to internal and external markets	Overall reduction in stress across the network and in the A52 corridor. The inclusion of a Radcliffe Bridge results in improved access and travel times, providing greatest benefit for the areas to the east of the city.	12.7% reduction in links in core area at/above capacity	Moderate Beneficial
	1b	Increase accessibility to commercial centres by non-motorised and public transport.	Walking, cycling and bus priority measures and the Robin Hood Line Service extension will enhance accessibility.	Not applicable	Slight Beneficial
	1c	Enhance transport network efficiency including public transport service operations.	Bus priority measures and reduced congestion will also improve bus journey time reliability.	Not applicable	Slight Beneficial
Provide enhanced opportunity for all segments of the community to access employment, health, education, social and recreation facilities.	2a	Improve access for non-car users.	Walking, cycling, village/town centre, and public transport improvement measures will improve access for non-car users.	Not applicable	Slight Beneficial
	2b	Increase transport choice in rural areas.	Recommended strategy measures providing new transport opportunities occur on suburban fringe. The extension of the Robin Hood Line Service provides enhanced access for the rural areas to the east of the study area.	Not applicable	Slight Beneficial
	2c	Ensure safe walking, cycling and riding for local journeys including those for access to public transport services.	Overall reduction in accidents resulting from improvements to the A52 and grade separated junctions improvements.	Accidents saved: Fatal – 21 Serious – 562 Slight – 7815	PVB £146m
	2d	Improve perception of personal security for walk, cycle, ride and public transport journeys.	Bus priority, walking, cycling and village/town centre recommendations will contribute to an enhanced environment in which user security will be a high priority	Not applicable	Slight Beneficial
	2e	Improve interchange between transport modes.	Recommended strategy package includes 2 new interchange opportunities; 1 rail-based at Saxordale, 1 bus-based at Gamston. Potential for a further bus-based park and ride interchange exists to the north of the river Trent.	Estimated 112 trips using interchange in AM Peak	Slight Beneficial
Enable economic regeneration and development in a manner that maximises achievement of sustainability objectives.	3a	Ensure integration between land-use and transport planning.	Recommended strategy is broadly compliant with regional and local transport policy.	Not applicable	Slight Beneficial
	3b	Ensure walk/cycle/public transport access for new land use development.	Recommended strategy will provide enhanced walk and cycle access. New public transport access will be provided with the extension of the Robin Hood Line service from Nottingham to Bingham. The strategy supports the provision of an additional non-car mode crossing facility in connection with the Waterside Regeneration Zone.	Not applicable	Slight Beneficial
	3c	Encourage mode shift from car.	Reduction in highway trips across the network.	Reduction of approx 1900 highway trips in AM peak.	Slight Beneficial
Enhance the quality of life in communities in the study area through minimisation of transport impacts.	4a	Reduce severance impacts of transport upon communities.	Reductions in traffic flow through local communities.	Up to 15% reduction in traffic in local communities.	Moderate Beneficial
	4b	Improve road safety especially for vulnerable road users.	Grade separated junction improvements and reduced traffic flows in community areas contribute to an overall reduction of 6% in accidents across the network.	Accidents saved: Fatal – 21 Serious – 562 Slight - 7815	PVB £146m
	4c	Reduce impacts of rat-running traffic.	Impact of rat-running reduced in the West Bridgford area. % reduction in vehicles in AM peak.	Reduction of: 22% vehicles on the A606; 29% reduction on Boundary Road; 20% reduction on Stamford Road; 5% reduction on Wilford Lane; and, 9% on Rugby Road.	Slight Beneficial
	4d	Improve air quality in communities.	Negative values indicate an overall improvement in air quality due to reduction in vehicle kilometres travelled with the scheme. The actual change in emissions would be negligible. Four AQMAs lie within the assessment area and further assessment would be required to determine impact upon them.	PM10 "losers" 3 "winners" 8 NO2 "losers" 4 "winners" 7	2021 scheme emissions estimate index -6941 NO2 and -606 PM10 compared to do-min 2021.
Protect the natural, historic and built environment of the study area.	5a	Minimise the impacts of transport upon the natural, historic and built environment.	Overall the recommended strategy has slight to moderate negative impacts.	Not applicable	Moderate Adverse
	5b	Minimise the impacts of transport upon air quality.	Negative values indicate an overall improvement in air quality due to reduction in vehicle kilometres travelled with the scheme. The actual change in emissions would be negligible. Four AQMAs lie within the assessment area and further assessment would be required to determine impact upon them.	PM10 "losers" 3 "winners" 8 NO2 "losers" 4 "winners" 7	2021 scheme emissions estimate index -6941 NO2 and -606 PM10 compared to do-min 2021.

