

Appraisal Summary Table - A453 Widening M1 Junction 24 to A52 Nottingham.

December 2008

<b>A453 Widening M1 Junction 24 to A52 Nottingham</b>	<b>Description:</b> Widening of the existing A453 between M1 Junction 24 and Farnborough Road junction in Clifton (total length about 12 km) to Dual 2 lane (D2AP) standard in the rural section and to a single 4 lane (S4) carriageway through Clifton. (Expected year of opening is 2012; design year 2027)	<b>Problems:</b> Congestion due to high traffic flows, low standard of existing road provision (S2) and regular flow interruptions due to gradients and traffic incidents. Accident rate is higher than the national average. Existing traffic flow on the rural section is 23,000 AADT and 30,000 AADT through Clifton.	<b>Present Value of Costs to Public Accounts</b> <b>£98.38m</b>
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OBJECTIVE	SUB-OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE MEASURE	ASSESSMENT
<b>ENVIRONMENT</b>	<b>Noise</b>	In some locations noise will reduce (Barton Lane & Clifton Lane) but overall there will be a worsening in noise, due to predicted increase in traffic, by up to 5dB. Mounding and fencing will reduce noise levels in two locations (Lark Hill Retirement Village & Morgan Mews / Gavell Close). 222 properties will be exposed to noise levels above 68dB LAeq 18h.	Net Pop annoyed in 2027 Do-Min: 1626 Net Pop annoyed in 2027 Do-Something:1824	Change in population annoyed (Yr 15) = +199 PVB (Residential) = -£6.87m
	<b>Local Air Quality</b>	No exceedences of the PM <sub>10</sub> or NO <sub>2</sub> National Air Quality Strategy or EU Objectives. Net regional decrease in total PM <sub>10</sub> emissions of 0.739 tonnes. Net regional decrease in total NO <sub>x</sub> emissions of 47.267 tonnes. Overall neutral effect on air quality.	Properties with improved PM <sub>10</sub> 12587; worse 5043; no change 1754. Prop'ies with improved NO <sub>2</sub> 13304; worse 6080; no change 0	Change in overall exposure: -343 PM <sub>10</sub> ; +88 NO <sub>2</sub>
	<b>Greenhouse Gases</b>	Increase in greenhouse gases due to a general increase in traffic volume and speeds. Increase in CO <sub>2</sub> equates to approximately 0.05%.	Do-Minimum CO <sub>2</sub> = 98342667 tonnes Do-Something CO <sub>2</sub> = 98420364 tonnes	Increase in CO <sub>2</sub> = 77,697 tonnes NPV = -£0.9m
	<b>Landscape</b>	Generally ordinary landscape of local value. Offline section, including lighting at Mill Hill Roundabout, has minor urbanising effect on open farmland, affecting setting of historic moorland at Clifton Pastures & Barton Moor.	-	Slight adverse
	<b>Townscape</b>	Urban section retains similar characteristics as existing, retaining majority of trees and open areas. University frontage will be improved. The Clifton Conservation Area would be slightly affected by widening but impacts reduced by detailed design.	-	Slight adverse
	<b>Heritage of Historic Resources</b>	29 archaeological/heritage sites identified. 12 directly affected but only 2 completely lost. Generally medium value but 2 high value (but no SMs). Agreed mitigation by detailed excavation. Minor impacts on setting of 12 Listed Buildings (including Clifton Dovecote SM), 7 locally listed buildings, 2 Conservation Areas, and Clifton Pastures / Barton Moor historic landscape.	-	Moderate adverse
	<b>Biodiversity</b>	Barton in Fabis Fishponds SINC enhanced by new water vole habitat. Indirect effects to 5 other SINC's and the Lockington Marshes SSSI neutralised by new planting. Wildlife underpasses and fencing improve safety for protected species but slight increase in risk of road deaths for barn owl and birds. Scheme provides net increase in vegetation and habitats in time.	-	Neutral
	<b>Water Environment</b>	Scheme crosses R. Soar, Nethergate Stream and several smaller surface waters. No impact on surface or groundwater quality, tho' increased flow at N. Stream. Mitigation reduces risk of pollution from spillage. Floodplain compensation provided.	-	Neutral
	<b>Physical Fitness</b>	More walking and cycling will be encouraged by providing a continuous NMU route between Clifton and Long Lane, locations to cross the A453 safely at GSJs in the rural section and improvements to controlled crossing facilities in Clifton.	Change in pedestrians making trips of >30mins: 0 Change in cyclists making trips of >30mins: 45	Total number of people walking or cycling for more than 30 minutes: 80. Slight beneficial
	<b>Journey Ambience</b>	Higher design standard including GSJs and separation of NMUs will reduce stress despite predicted increases in traffic flows and speed in rural area. Lay-bys, signs & facilities similar to existing thus neutral impact on traveller care. Views also neutral.	-	Large beneficial
<b>SAFETY</b>	<b>Accidents</b>	-	Reduction of accidents: 488. Reduction of casualties: 43 fatal, 195 serious, 650 slight	PVB = £56.0m
	<b>Security</b>	Perception of risk of personal injury will be slightly reduced due to improved carriageway standard and measures to encourage pedestrians and cyclists to use controlled crossing points.	-	Slight beneficial
<b>ECONOMY</b>	<b>Public Accounts</b>	-	Central Govt. PVC = £98.38m Local Govt. PVC = £0.0m	PVC = £98.38m
	<b>Business Users &amp; Providers</b>	-	Users PVB = £168.42m Transport Providers PVB = £0m Other PVB = £0m	PVB = £168.42m
	<b>Consumer Users</b>	-	Users PVB = £96.12m	PVB = £96.12m
	<b>Reliability</b>	Reduced congestion will result in improved journey time and reliability for all transport users.	-	Moderate beneficial
	<b>Wider Economic Impacts</b>	Scoping exercise has demonstrated that there are no wider economic benefits of the scheme.	-	Neutral
<b>ACCESS-IBILITY</b>	<b>Option values</b>	Widening of the A453 is unlikely to produce any significant changes in existing transport services.	-	Neutral
	<b>Severance</b>	Continuous NMU route from Clifton to Long Lane covers almost 90% of scheme, using sections of existing A453 and GSJs which are provided at all junctions in the rural section. Improved controlled crossing facilities would be provided in Clifton.	Moderate positive change in rural severance; Slight positive change in urban severance	Moderate beneficial
	<b>Access to Transport System</b>	The scheme will provide improved access to the proposed East Midlands Parkway Rail Station and the proposed NET (tram) Park and Ride Site for people with use of a private vehicle and those without a car.	-	Slight beneficial
<b>INTEGRATION</b>	<b>Transport Interchange</b>	The scheme will provide access to the proposed East Midlands Parkway Rail Station and the proposed NET (tram) park and ride facility in accordance with the MMS, which could facilitate interchange between car and non-car modes of transport.	-	Slight beneficial
	<b>Land-Use Policy</b>	Adverse impacts on national, regional and local policy on soils, air quality and heritage in particular, and reducing car use in general, are balanced by support at regional and local planning level.	-	Neutral
	<b>Other Government Policies</b>	Several aspects of the scheme both hinder and help key Government strategies/objectives e.g. PPG13 and Sustainable Development - scheme encourages alternative modes of travel but will not reduce car use; Dept.of Health - scheme encourages walking & cycling and reduces accidents but in some areas air quality and noise will be worse.	-	Neutral