

PART 2 : SUMMARY OF EFFECTS OF THE SCHEME

2.1 The following Table 4.2.1 summarises the key effects of the scheme on each of the environmental topics that would remain after inclusion of the mitigation measures:

Table 4.2.1: Summary of Effects of the Scheme

Topic	Effects of the Scheme	Assessment
Air Quality	<p>All existing and future (with the scheme) pollution levels of PM₁₀ (small particles) and NO₂ (nitrogen dioxide) are significantly below the threshold levels set by the Government and European Union.</p> <p>There would be an improvement in air quality to 67% of properties within 200m of roads assessed and a worsening in air quality to 33% of properties.</p> <p>There would be slight improvements in air quality (NO₂) in 5 Air Quality Management Areas (AQMAs) and a slight worsening in 4 AQMAs, but below the threshold levels set by the Government and European Union.</p> <p>As a result of the predicted increase in vehicles that would use the improved A453, there would be a very slight increase of less than 1% in emissions of the greenhouse gas CO₂ (carbon dioxide). However, other wider (regional) emissions of nitrogen oxides (NOx), total hydrocarbons (THC) and carbon monoxide (CO) will reduce by a similar amount.</p>	Neutral
Cultural Heritage	<p>No historic buildings or historic landscapes would be directly affected. However, there would be slight adverse impact on the setting of some listed buildings, 2 Conservation Areas, Clifton Village Green and the historic landscape of Clifton Pasture and Barton Moor.</p> <p>Twelve areas of known archaeological interest would be affected. Overall impact on archaeological remains would be moderate adverse</p>	Moderate Adverse
Disruption due to Construction	<p>Construction of the scheme would be carefully managed to minimise disruption and to ensure that any impacts are temporary and reversible, and that any long-term adverse effects are avoided. Potential impacts would be mostly confined to a short distance from the works are noise, vibration, air quality impacts (dust), impacts on wildlife, areas of archaeological interest, water courses (pollution) and temporary disruption to walkers, cyclists, equestrians and road users.</p> <p>Most material generated during road construction would be re-used or recycled. Approximately 42,000m³ of road building material would need to be imported, using authorised delivery routes only.</p>	Slight Adverse
Ecology and Nature Conservation	<p>No Sites of Special Scientific Interest (SSSI) or other UK or EU statutory designated sites would be affected. There would be slight adverse impact to 6 local Sites of Importance for Nature Conservation (SINCs) but this would be temporary and reversible.</p>	Neutral

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	<p>No rare habitats or plant species would be affected. Approximately 8 hectares (ha) of woodland and roadside scrub would be removed and approximately 6,000 linear metres of hedgerow. However, there would be an overall increase in wildlife habitats provided by the scheme, including more than 14 hectares (ha) of woodland and scrub, approximately 5ha of species-rich grassland, a further 9ha of pond/wetland habitats and over 13,700 linear metres of species-rich hedgerows.</p> <p>The route of the scheme has been designed to avoid protected species. Wildlife underpasses will be provided beneath the road and boundary fencing will improve safety for protected species. Bat boxes would be provided along the River Soar.</p>	
Landscape Effects	<p>The scheme route follows the existing road alignment for most of its length. Replacement planting would be in keeping with the character of the landscape in the rural section and townscape in the urban section.</p> <p>In the rural section, there would be significant visual impact to some properties in Ratcliffe on Soar, to Dowell's Barn, Winking Hill Farm and Glebe Farm. South of Clifton the road would be lower down the ridge than the existing A453 and boundary hedges and occasional roadside planting would help restore the more enclosed character that used to exist in this landscape. Mill Hill Roundabout would be in a cutting to reduce its impact but lighting around the junction would make it a more obvious feature. The route of the published scheme would pass through the Nottingham – Derby Green Belt but would not affect the openness of the Green Belt.</p> <p>Widening the road through Clifton will inevitably bring it closer to some properties where there would be significant visual impact.</p>	Slight Adverse
Land Use	<p>The majority of land needed to build the road is farmland. Approximately 59 ha of agricultural land would be built on out of a total of approximately 87 ha occupied by the scheme. Some farmland would be severed but would still be farmable. No farms would be put out of business as a result of the scheme, but for some there may have to be a change in day-to-day farm management primarily concerned with re-routing of farm vehicles where direct access on the A453 would no longer be possible. Some routes would be longer but safer.</p> <p>Principal land losses other than agricultural land would be from E.ON at the Power Station, Lark Hill Retirement Village grounds and from the University frontage.</p> <p>There would be no loss of open space, and a very small area of approximately 50m² would be added to the Clifton Village Green by moving the A453 further away.</p>	Slight Adverse
Traffic Noise & Vibration	<p>In some locations, in particular along Barton Lane and Clifton Lane, noise levels will reduce as a result of traffic using the A453 rather than diverting on to other routes to avoid congestion. Nearby villages including Kingston on Soar and Gotham would benefit in this way, where there could be very large reductions of up to 10 decibels (dB).</p> <p>Elsewhere there will be a net increase in traffic noise by up to 5dB, as a result of the predicted increase in traffic using the improved A453.</p>	Slight to Moderate Adverse

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	<p>A preliminary estimate of properties likely to be eligible for noise insulation shows that 177 properties are likely to qualify under the 1975 Noise Insulation Regulations.</p> <p>There is expected to be an increase in vibration nuisance level to 92 properties and a reduction to 36 properties but well below the level likely to cause any damage to buildings.</p>	
<p>Pedestrians, Cyclists, Equestrians and Community Effects</p>	<p>Proposals have been developed which will improve amenity and provide better connectivity than the existing network, thus reducing severance. The scheme includes a continuous route for Non Motorised Users between Clifton and Long Lane, utilising sections of de-trunked road.</p> <p>The scheme also incorporates safe and convenient grade separated crossing points along the rural section where Public Rights of Way cross the A453 as well providing additional controlled crossing points and additional pedestrian and cycle facilities in the urban section.</p>	<p>Slight to Moderate Beneficial</p>
<p>Vehicle Travellers</p>	<p>Overall views from the roads will be similar to existing views.</p> <p>Overall traveller stress to a high number of road users on the A453 and surrounding local roads will be reduced as frustration and fear of potential accidents are reduced.</p> <p>The current level of traveller care, with lay-bys on the A453, good signage and facilities at the Clifton service Station and motorway services at M1 Junction 23A, will continue.</p>	<p>Large Beneficial</p>
<p>Road Drainage and Water Environment</p>	<p>The highway drainage scheme includes proposals to control run-off and reduce flows, with neutral impacts on surface flow of all watercourse. Proposals to limit pollutants entering the watercourses will result in neutral impacts on surface or groundwater quality overall but large–very large adverse impact on Nethergate Stream.</p> <p>There would be an overall reduction in flood risk due to the amount of flood compensation included in the scheme design.</p>	<p>Neutral</p>
<p>Geology and Contamination</p>	<p>There are no geological Sites of Special Scientific Interest (SSSI) or Regionally Important Geological Sites (RIGS) close to the site.</p> <p>Disturbance of contaminated soil would be avoided. No historical landfill sites would be affected. All suitable material removed during excavation for the road would be re-cycled for re-use during construction, to limit the number of lorry movements.</p> <p>Groundwater levels and ground conditions during construction would be monitored and works designed to minimise adverse impacts.</p>	<p>Neutral to Slight Adverse</p>
<p>Soils and Agricultural Land Quality</p>	<p>No Agricultural Land Classification (ALC) Grade 1 farmland is affected. Approximately 36ha of Grade 2 and 3a 'best and most versatile' land would be lost out of a total of 59ha of agricultural land lost for the road scheme (approximately 61%). Despite this relatively high percentage, this is made up of small fragmented areas of typically patterned land and thus overall there would be a slight effect on local land quality.</p> <p>It is intended to maximise the reuse of all excavated materials to reduce the environmental impact of the project. Loss of topsoil during stripping, storage and re-spreading will be kept to a</p>	<p>Slight Adverse</p>

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Impact on Policies and Plans	<p>minimum by careful control during construction.</p> <p>Several aspects of the scheme both hinder and help key Government strategies/objectives, for example the scheme encourages alternative modes of travel such as walking and cycling but will also encourage car use; and reduces accidents but in some areas air quality and noise will be worse.</p> <p>There is strong support for the scheme at the regional and local planning levels, which may be considered to outweigh some of the negative aspects of the scheme in respect of some planning policies.</p>	Neutral