

# A1 JUNCTION IMPROVEMENTS DROMORE ROAD, BANBRIDGE

DRD ROADS SERVICE, SOUTHERN DIVISION

Environmental Statement, Volume 1

November 2005

## Introduction

The Department for Regional Development (DRD) Roads Service has recognised that the A1 between Hillsborough and Loughbrickland which forms part of the Euro Route between Belfast and Dublin, is of strategic importance and has specified safety improvements that it wishes to adopt along the route. These improvements include changing four junctions so that travellers do not need to cross up to four lanes of oncoming traffic. This is achieved with what is known as a grade separated junction, which requires either an overbridge or underbridge. One of the junctions identified is at Dromore Road, Banbridge.

This Non-Technical Summary presents a brief overview of the findings of the Environmental Statement, which reports on the environmental impacts, mitigation proposals and general effects of the A1 junction improvement at Dromore Road, Banbridge.

## Scheme Objectives

The main objectives of the Scheme are:

- To improve safety by reducing the number and severity of road accidents
- To accommodate increasing traffic flows by assisting the flow of traffic from the minor roads onto the A1

## The Proposed Scheme

Six potential junction options for Dromore Road, Banbridge were initially considered. Following technical, economic and environmental assessment of the six options, a preferred option was identified.

The proposed scheme makes use of the existing junction location and positions the new southbound junction immediately opposite the northbound. A new overbridge would be sited to the south of the merge and diverge junctions and the approach embankments would not impact on adjacent properties.

The design of the junction will minimise the impact on land take and a roundabout is proposed at the junction of the A1 southbound loop with Dromore Road. Both Lisnaree Road and the access road to the north have very low traffic flows and hence the junctions with Dromore Road are to remain unaltered. The loop road connecting the Dromore Road with the southbound A1 traffic would adopt the minimum 40m radius and would form a compact junction.

Drivers approaching the junction from the Banbridge direction would take access by means of a roundabout. The geometry associated with a Compact Junction would be isolated from the existing road network reducing the potential risks associated with the change in standards.

## Effects of the Scheme on the Environment

### *Air Quality*

Local air quality impacts were considered at Stage 2 of the assessment, which concluded that National Air Quality Standards will not be exceeded with regard to Carbon Monoxide, Hydrocarbons, Oxides of Nitrogen and Particulate Matter. Results for 2010 are lower than those presented for the year of opening because background concentrations for all the regulated pollutants are expected to decline in future years, as a result of Government and EU policies and legislation to reduce pollutant emissions.

It is concluded that the proposed safety improvement would lead to an insignificant increase in regional pollution levels when compared to the existing junction opening year (2008) and the design year (2023). The marginal increase is attributable to the introduction of a new road link and the resulting increase in total distance travelled. Observable increases or decreases in total

emission levels reflect the relative balance between traffic growth and emission forecasts inherent in the National Atmospheric Emissions Inventory.

### *Cultural Heritage*

In terms of the cultural heritage, no known archaeological sites will be affected by the proposed alterations to the junction. There is though the potential for previously undiscovered archaeological remains to be discovered during ground excavation. If remains are discovered, it is proposed that a mitigation strategy entailing trial trenching prior to construction and archaeological monitoring of topsoil during removal.

### *Disruption due to Construction*

During the construction stage of the project, traffic using the A1 may be affected through minor road closures however this will be minimised by the introduction of temporary traffic management schemes. Over the course of the contract, import of material for embankment construction etc and removal of excess material from the site will generate an increase of around 0.82% of annualised daily vehicle movements along the local stretch of A1.

As with any construction scheme, there will be noise, vibration, visual and air quality impacts in the immediate vicinity of the works. Construction works will result in the excavation of grassland and woodland habitats, however these areas are of low conservation value. No adverse effects on sites of archaeological or historical importance are predicted. Disruption to properties caused by construction works will be minimised by contractual requirements that will encompass working hours, noise pollution, public safety, traffic management and other best working practices. All borrow pits, disposal sites and site compounds proposed by the Contractor will be subject to appropriate approval.

### *Ecology and Nature Conservation*

The overall impact of the scheme on ecology is regarded as neutral. This assessment is based on the low conservation value of habitats that will be removed, the likely low impact on birds and mammals and the potential for the introduction of more diverse habitats as mitigation and compensation.

The major residual effect of the scheme will be a reforming of the land surface to accommodate the new overbridge, with new species-rich grassland and woodland habitats produced as a result of mitigation planting.

### *Landscape and Visual Amenity*

The existing A1 already imposes a degree of visual impact on properties and the wider landscape. The proposed junction would not only have similar levels of landscape and visual impact but it would alter current views, and increasing the degree of visual impact until mitigating measures become effective. There would be a loss of agricultural land (2.26 ha) and existing roadside vegetation.

Only three out of eight visual receptors have been identified as likely to experience moderate adverse visual effects on the day of opening, however all but one can be sufficiently mitigated against to result in the effects being reduced to slight for two of the receptors, and neutral for the other receptor by Year 15.

Landscape proposals will, as far as possible, reduce the predicted impacts, enhance the wider landscape and integrate the proposed junction into the surrounding landscape through the creation of ponds and new native plantings.

In visual terms, the proposed junction would have slight adverse impacts on the landscape.

### *Land Use*

No property demolition will result from the proposed junction improvement and no community or development land will be taken as a result of the proposed junction improvement. The existing habitat is predominantly improved grassland and through mitigation, the quality of the ecology of the area will be improved resulting in greater species diversity.

All the agricultural land taken is of Best and Most Versatile quality. The amount lost equates to approximately 22500m<sup>2</sup> of land classified as BMV. The scheme will result in no additional severance issues relating to farms or field severance.

#### *Traffic Noise and Vibration*

Due to the high existing noise environment influenced by the A1, it is predicted that the proposed junction will not result in a significant contribution to the future noise environment.

At a property on the road to the north west of the proposed junction, the noise impact of transportation movement is at a level that exceeds the 68 dB L<sub>A10, 18hr</sub> value used for the determination of statutory sound insulation eligibility due to the impact of new road schemes. However this is due to the impact of the existing A1, and not the proposed junction layout, which actually provides a reduction in noise levels. The impact at Location 2 does not exceed the 68 dB L<sub>A10, 18hr</sub> value

The potential noise impact of temporary construction noise has been assessed and a number of mitigation measures and best practice guidelines have been provided to minimise the noise impact.

#### *Pedestrians, Cyclists, Equestrians and Community Effects*

There are no community facilities in the area of the proposed junction and because there are none planned, there are no severance issues to address at the Dromore Road, Banbridge junction.

The result of the changes would have a neutral impact on the community as a whole.

#### *Vehicle Travellers*

The impact on views from the road would be neutral. Driver stress levels would be significantly reduced overall. The overbridge removes the requirement to cross up to four lanes of traffic to get onto the opposite carriageway and will relieve the build up of queues on Dromore Road. The significance score for quality of journey has been assessed as being of Moderate Beneficial Effect as the number of travellers affected by the proposed scheme is between 500 and 10,000 per day.

#### *Water Quality and Drainage*

Drainage provisions will maintain a low and acceptable level of risk of serious pollution incidents arising from the junction improvement. Furthermore, the provision of improved pollution prevention and control measures within the drainage system will have a significant positive benefit for long term water quality within the area of the improved junction. The provision of retention ponds and other discharge control measures will improve the capability for local flood control.

#### *Geology and Soils*

The main effect on geology and soils of the proposed scheme is the loss of best and most versatile agricultural soils within the bounds of the new construction. The scheme will also have a localised, limited impact on regionally extensive soil, drift and bedrock structures.

Proposed mitigation measures will reduce the potential extent and degree of soil degradation and should reduce the significance of adverse effects.

#### *Policies and Plans*

The A1 is part of a Regional Strategic Transport Network identified in 'Shaping Our Future – Regional Development Strategy for Northern Ireland 2025' and any improvements to its current condition will help to safely facilitate future growth both on the locality around Banbridge and as part of a network covering Belfast to Dublin. Through this, the scheme complies with the national policy relating to transport. The design and development of the scheme implements mitigation measures designed to reduce the environmental impacts on the area. The scheme is

therefore generally in accordance with the policies and plans of the authorities concerned. The overall impact is beneficial.

### **Conclusions**

The Scheme supports regional and local transport planning objectives. Key benefits of the Scheme are:

- Significant improvements in safety and driver stress
- The overbridge removes the requirement to cross up to four lanes of traffic to access the carriageway
- Through mitigation, the ecological quality of the area will be improved by increased botanical diversity due to the retention ponds
- Improved pollution prevention and control measures will have a significant positive benefit for long term water quality within the area of the proposed junction

No significant adverse impacts have been identified affecting air quality, archaeology, geology, traffic noise and vibration or policies and plans.

The Scheme would have some adverse effects, including:

- Loss of range of habitat types, however all are of low conservation value
- Loss of a small area of Best and Most Versatile land
- Potential increase in localised flooding through increased run-off but this will be managed with retention ponds etc.
- Some disruption during the construction phase

Significant mitigation measures are proposed to minimise the environmental impact of the Scheme.