

# A1 JUNCTION IMPROVEMENTS DUBLIN/GROVEHILL ROAD, LOUGHBRICKLAND

DRD ROADS SERVICE, SOUTHERN DIVISION

Environmental Statement, Volume 1

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# Non Technical Summary

## 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 a lane 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 Dublin Road, Loughbrickland.

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 Dublin Road, Loughbrickland.

## 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 Dublin Road, Loughbrickland were initially considered. Following technical, economic and environmental assessment of the six options, five of the options were rejected for reasons of operation, buildability and cost and a preferred option was identified (Option 4).

The proposed scheme retains the existing junctions in their current location and a new underbridge is proposed to link the accesses immediately to the north of the existing accommodation/pedestrian underbridge, which would be retained for use by pedestrians and equestrians.

A ghost island junction would link the proposed underbridge to the existing Grovehill Road, with priority being given to Grovehill Road.

## 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 new junction would lead to an insignificant increase in regional pollution levels when compared to the existing junction during the year of opening (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*

The assessments undertaken up to this stage suggest that the proposals for the alteration of the junction at Loughbrickland would be unlikely to impact upon any known archaeological remains although there remains the potential for previously unrecorded archaeological sites to be found 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 0.22% 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 the subject to appropriate approval.

### *Ecology and Nature Conservation*

The overall appraisal of the scheme is rated as being slightly beneficial to the local ecology. This assessment is based on the fact that only limited areas will be affected by the scheme. It is mainly non-native woodland that will be removed and generally local habitats that are of low conservation value. There is also the opportunity to produce habitats of greater ecological interest.

### *Landscape and Visual Amenity*

The existing A1 is already a prominent feature in the area and imposes a degree of visual impact on properties and the wider landscape. The proposed junction would have a landscape and visual impact and would alter current views and increase the degree of visual intrusion until mitigating measures become effective. There would be relatively little loss of agricultural land or of existing vegetation.

Only one of eleven receptors has been identified as likely to experience moderate adverse visual effects on the day of opening.

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 development would have neutral impacts on the landscape.

### *Land Use*

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. A total of approximately 6590 m<sup>2</sup> of privately owned land will be taken by the scheme. None of the land taken is considered by the Department of Agriculture as Best and Most Versatile.

The scheme will affect the existing entrances to the underpass at Loughbrickland, however the proposed scheme will have full pedestrian access and meet safety standards for pedestrians. There should be no impacts on pedestrians using the historical trail.

### *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.

None of the properties close to the proposed junction are affected by increases in noise impact which would exceed the values used for determining eligibility for statutory sound insulation. Some properties located close to the A1 are currently exposed to noise levels that exceed this level. It is therefore not necessary to provide any mitigating measures.

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*

The works would not involve any severance to the existing community or access routes, however the new underbridge would provide pedestrians with a safer alternative to using the existing underpass. Footpaths and safety fences will be provided in the new underbridge.

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. Overall, driver stress levels would be significantly reduced overall. The underbridge removes the requirement to cross up to 4 lanes of traffic to get onto the opposite carriageway and will remove the build up of queues on Dublin and Grovehill Road. The overall significance score for quality of journey has been assessed as being of Moderate Beneficial Effect because 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 reconfiguration of the local topography to accommodate the new underbridge.

The proposed works have the potential to cause slight adverse effects on geology, geomorphology and soils within the area of the junction improvement. Land take within this area will entail disruption of surface materials (drift and soils) during construction.

Proposed mitigation measures will however 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 Loughbrickland 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.
- Enhanced access to amenities.
- The underbridge 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.

Adverse effects identified include:

- Loss of range of habitat types, however all are of low conservation value.
- Potential increase in localised flooding through increased run-off, but this will be managed through a retention pond etc
- Some disruption during the construction phase.

None of the identified adverse impacts are predicted to be significant. Mitigation measures are proposed to minimise any environmental impacts of the Scheme.