

Department for Regional Development – Transport NI

**ANNAGHMORE ROAD / BELLSHILL ROAD
JUNCTION**

**Public Inquiry
September 2015**

**Proof of Evidence
(Summary)**

Environmental Statement

by

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1.0 INTRODUCTION

1.1 Introduction

My name is Gareth Coughlin, Associate and Environmental Scientist with AECOM, appointed consultants to the scheme. I hold a First Class Bachelor of Science (Honours) degree in Environmental Science, and a Master of Philosophy degree, by research, in quarrying and its impacts on the environment. I am a Chartered Environmentalist, Chartered Water and Environmental Manager, Chartered Scientist, and Fellow of the Chartered Institution of Water & Environmental Management (CIWEM). I am also past Chairman of the Northern Ireland Branch of CIWEM.

I am the Environmental Coordinator for this project, responsible for the environmental assessment of the scheme, and subsequent preparation and delivery of the latest scheme layout for the A6 Annaghmore Road / Bellshill Road Junction at Castledawson Environmental Statement, June 2013. I have been involved in the management and coordination of the environmental assessment of the overall scheme since 2003 with AECOM and its various legacy companies of URS, Scott Wilson, and Ferguson McIlveen.

The environmental assessment reported in the Environmental Statement has been undertaken by environmental specialists from AECOM, with the Cultural Heritage assessment undertaken by Northern Archaeological Consultancy, and the Noise & Vibration assessment by FR Mark & Associates.

1.2 Legal Basis for the Environmental Statement

The Environmental Statement was issued in accordance with the Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2012, which apply the EIA Directive (Directive 85/337/EEC, (as amended)), to the planning process in Northern Ireland. The Environmental Statement was prepared in support of the planning application lodged in June 2013 (Ref. No: H/2013/0243/F) for the construction of the compact grade-separated junction located between the existing Bellshill Road and Moyola River, south-east of Castledawson. The planning application was subsequently granted approval by DOE Planning in December 2014.

1.3 Structure of the Environmental Statement

The Environmental Statement adopts the structure set out in the Design Manual for Roads & Bridges (DMRB) Volume 11: Environmental Assessment as follows:

VOLUME 1

Non-Technical Summary

Part I - Introduction

- Introduction
- Need for the Proposed Scheme
- Alternatives Considered

- Scheme Description
- Existing Conditions
- Consultations

Part II - Environmental Assessment

- Environmental Impact Assessment Methods
- Air Quality
- Cultural Heritage
- Ecology & Nature Conservation
- Landscape & Visual Effects
- Land Use
- Noise & Vibration
- Pedestrians, Cyclists, Equestrians & Community Effects
- Vehicle Travellers
- Road Drainage & the Water Environment
- Geology & Soils

Part III – Conclusions

Cumulative Effects

Summary of Environmental Effects

Schedule of Environmental Commitments

Part IV – References and Glossary of Terms

References

Glossary of Terms

Where relevant, reference has been made to the methodologies outlined in the DMRB Volume 11: Environmental Assessment.

VOLUME 2

Appendices

- Consultations
- Air Quality
- Cultural Heritage
- Ecology & Nature Conservation
- Landscape & Visual Effects
- Noise & Vibration
- Vehicle Travellers
- Road Drainage & the Water Environment

Each of the environmental topics is reported in the same format namely an Introduction, Methodology, synopsis of Consultations, Regulatory & Policy

Framework, Baseline Conditions, Predicted Impacts, Mitigation & Enhancement Measures, Residual Impacts and Summary & Conclusions.

1.4 Summary

On the basis of comprehensive preliminary investigations and extensive public and statutory consultations, the significant environmental effects have been identified. These effects have been investigated and reviewed, and are presented in the Environmental Statement, Volume 1, Sections 8.0 through to 17.0.

It is important to note that the process of junction layout selection has by its nature resulted in reducing impacts for many of the aspects considered. Clearly these benefits are not revisited in the Environmental Statement, which only reviews the proposed junction layout. This should be borne in mind when reviewing the Environmental Statement.

2.0 AIR QUALITY

An air quality assessment was carried out using the recognised screening methodologies to determine the likely impacts of the proposed scheme at carefully selected receptors in close proximity to the existing and proposed junction layouts. The methodology is outlined in DMRB 11.3.1.3. The assessment concluded that no significant impact on air quality would occur in the vicinity of the proposed junction and predicted pollutant concentrations remain within the relevant legislative limit values.

For the majority of properties, the changes in predicted pollutant concentrations would be imperceptible, though some properties in close proximity to the proposed junction would experience a negligible deterioration and some properties in close proximity to the existing junction layout would experience a negligible improvement in air quality.

3.0 CULTURAL HERITAGE

A cultural heritage assessment was undertaken for the proposed scheme, which addressed potential for impacts on Scheduled and State Care Sites, known archaeological sites, listed buildings/structures, industrial archaeological sites, defence heritage sites, and historic parks, gardens & demesnes, as recorded and documented by the Northern Ireland Environment Agency. The assessment also attempted to determine the potential for yet unrecorded archaeology.

The assessment concluded that there would be no direct impact on recorded cultural heritage sites (including Scheduled and State Care Sites). The closest archaeological site is an Enclosure to the immediate east of Bellshill Road (south). Similarly, there would be no direct impact on industrial heritage sites, the closest being a bridge associated with the former Cookstown Branch Line of the Belfast and Northern Counties Railway. No listed buildings/structures, Historic Parks, Gardens or Demesnes, Battlefields or Defence Heritage Sites would be directly impacted.

The collection of known archaeology within the study area is negligible, and has almost certainly been destroyed by ploughing. Field boundaries are the most prominent feature of the landscape. The effects on the cultural heritage resource would be Slight Adverse.

Topsoil stripping would be monitored during construction and certain sites may have to be examined more closely by qualified archaeologists in advance of the construction works (in some cases by excavation).

4.0 ECOLOGY & NATURE CONSERVATION

An ecological assessment was undertaken for the proposed scheme, in accordance with the requirements of DMRB 11.3.4. This included a desk study and subsequent range of on-site specialist surveys, including an 'Extended' Phase 1 Habitat Survey, and invasive non-native species survey, as well as specific surveys for badger, bat, breeding bird, otter and smooth newt, all undertaken at the appropriate time of year.

No designated sites would be directly affected by or in close proximity to the proposed junction. The closest sites are Lough Neagh & Lough Beg Ramsar site, Lough Neagh & Lough Beg Special Protection Area (SPA), Lough Beg Area of Special Scientific Interest (ASSI), and Lough Neagh ASSI, which are situated over 3km east of Castledawson. Due to the proposed junction's hydrological link to Lough Neagh & Lough Beg SPA, a Habitat Regulations Assessment was undertaken, which concluded that there would be no significant effects on the integrity of the protected area or its selection features.

A small area infested with Himalayan balsam is situated on the boundary of the Flood Compensation Area adjacent to the Moyola River. Its permanent removal would represent a Minor Beneficial impact.

The proposed junction layout would have no significant impacts on the bird population in the local area, nor would it disturb or destroy any known bat roost. It would fragment habitat used by breeding badgers, but no existing setts would be impacted directly. It may also potentially impact on suitable otter habitat at the proposed crossing of Castle Hill Drain Branch. There would be no significant impact on habitat for smooth newt.

The junction alignment would inevitably impact on local ecology through fragmentation, disturbance and loss of existing habitat. However, the landscape proposals include substantial mitigation to compensate for these losses.

5.0 LANDSCAPE & VISUAL EFFECTS

A Landscape and Visual assessment was undertaken in accordance with guidance contained within the Highways Agency Interim Advice Note (IAN) 135/10 '*Landscape and Visual Effects Assessment*', published in November 2010. It was also supported by using guidance from the Landscape Institute and the Institute of Environmental Management and Assessment "*Guidelines for Landscape and Visual Impact Assessment: Second Edition*" (2002). This included a desktop study, regular site visits, and preparation of photomontages of critical viewpoints.

No Areas of Outstanding Natural Beauty (AONB), Areas of High Scenic Quality or Local Landscape Policy Areas (LLPAs) would be directly affected by the proposed junction. The proposed scheme would introduce new roads into a tranquil rural landscape south of the Castledawson bypass and in close proximity to residential areas north of the bypass. Sensitive design and landscaping would gradually integrate the road into the surrounding landscape.

Views from dwellings in proximity to the junction would change. Mitigation of these impacts has been considered through the arrangement of the junction, the initial design of structures and planting to address residual impacts. The construction of the junction and four-arm roundabout with associated lighting, large bridge structure, and associated embankments would be the most visually significant features of the scheme.

In general, the landscape and visual effects of the scheme will be very significant in the year following construction. However, over time, with the maturing of new vegetation and other mitigation measures, the significance of the residual effects will be reduced as the proposed planting establishes.

6.0 LAND USE

The assessment of impact on land use has been undertaken in accordance with the requirements of DMRB 11.3.6. The assessment covers the impacts arising from the potential demolition of property, loss of residential, commercial and community land, loss of committed development land, loss and severance of agricultural land, and the effect on restoration proposals for abandoned waterways.

The proposed scheme would require the demolition of a complex of farm buildings to accommodate the north/south link road, as well as impacting on the access lane to a 10-unit terraced housing development, adjacent to Hillview Terrace. To facilitate access to this development (currently at foundations level), a partially realigned shared lane would be provided, though this would result in the removal of the [northern] end property from the terrace.

In terms of private land loss, eight properties would be subject to Negligible land loss; three properties would experience Minor land loss, associated with the tie-ins of the north link; and one property on Bellshill Road (south) would experience Moderate land loss, associated with the tie-in of the 'south link' with the new four-arm roundabout.

In terms of development land, the proposed junction would encroach into Housing (Land Use) Policy Area CN 05 causing land loss and severance, though would facilitate access to residual lands. Housing (Land Use) Policy Area CN 03/4 (to the rear of Bells Court, Bells Manor, Oak Grove and Castle Oak), would be directly impacted by a farm accommodation overbridge, however the impact would be minimal.

Three extant planning applications (at the time of ES publication) would be directly affected by the proposed scheme, one of which would be lost in its entirety (new single storey dwelling between 41 and 45 Bellshill Road) to accommodate the 'south

link' between Bellshill Road and Annaghmore Road. The impact of the proposed scheme upon the other applications would not be significant, with development of each site remaining a possibility post scheme implementation.

The proposed junction would result in the vesting of approximately 16.74 hectares (41 acres) of land, of which 15.6 ha is assessed as 'currently being in agricultural usage'. In total, fifteen individual agricultural plots would be affected by the proposed scheme, either by partial land loss of affected plots, or by total loss of the plot. A comprehensive schedule of accommodation works and mitigation measures would be developed through dialogue with landowners directly affected by the proposed scheme.

7.0 NOISE & VIBRATION

The potential impact of traffic noise has been assessed for all properties within 600m of the existing and proposed junction layout, following the methodology of the DMRB 11.3.7 HD 213/11 (Noise and Vibration) Chapter 3 (*Procedure for Assessing Impacts*) (February 2011) and in line with a 'Detailed' assessment. Calculations were carried out at heights of 1.5m and 4.0m within the baseline/opening and future/15th year for the 'Do-Minimum' and 'Do-Something' scenarios.

'Detailed' noise assessment comparisons have also been prepared and summarised in the Environmental Statement. The introduction of the proposed junction and associated link roads would result in changes to the number of vehicles on the surrounding link roads. Existing properties located close to the proposed junction would experience a relative increase in noise levels. The proposed junction would create a perceptible increase in noise levels at properties not currently exposed to high levels of transportation noise, due to their location relative to the existing road network.

Under the 'Do-Something' scenario, it is predicted that the noise level at a number of locations would be in excess of 68dB $L_{A10, 18hr}$ and experience more than a 1dB increase with scheme implementation. Specific mitigation measures are proposed to reduce this noise impact.

In terms of potential vibration impacts, the highest levels of traffic-induced vibration are generated by irregularities in a road, and this is unlikely to be an important consideration for new roads.

There is the potential for noise and vibration impact from construction works, associated with the proposed junction, although this is relatively short-term in nature and a temporary impact at any single property.

8.0 PEDESTRIANS, CYCLISTS, EQUESTRIANS & COMMUNITY EFFECTS

The assessment was undertaken in accordance with the requirements of DMRB 11.3.8 and included a review of community facilities used by pedestrians and others, which may be affected by the proposed junction. A review of the potential impact on the public transport network, local vehicle journey routes, cycling facilities, public equestrian facilities, and pedestrian facilities was included.

No community facilities would be directly affected by the proposed scheme. Strategic and local traffic interaction would be reduced. Access for all properties in the vicinity of the proposed junction and users of local roads to community facilities would be maintained for all modes during the construction and operation.

Whilst there would be loss of direct access to the A6 from the existing Annaghmore Road and Bellshill Road junctions, new access would be provided to the planned A6 dual carriageway via the proposed junction.

The bus stop in the vicinity of Bells Manor/Bells Court would no longer be serviced by the 389b Ulsterbus; however a new bus stop for this service would be provided on the north/south link road.

Grade-separation of the proposed junction would minimise local road user and strategic traffic interaction, generally improve accessibility, safety, journey ambience and journey times and alleviate the severance created by the existing A6 bypass between Castledawson and its hinterland to the south.

Footways would be provided north of the A6, reflective of existing footway provision along the existing road network and throughout the surrounding housing developments. The dedicated footway to the north/south link road overbridge would facilitate access between the developed residential area north of the A6, and the countryside to the south, opening-up a walking corridor devoid of strategic traffic; a significant benefit to pedestrians over current conditions.

There would be no specific dedicated provision for cyclists or equestrians; however improved accessibility to and across the A6 would provide a much safer highway environment.

During the construction phase, there may be adverse effects on access for local residents because of the need to potentially use diversionary routes and traffic management measures for example. Careful traffic management procedures would best attempt to minimise potential impacts.

9.0 VEHICLE TRAVELLERS

The assessment on vehicle travellers considers both views of the surrounding landscape from the new road, and the effects of the scheme on driver stress. The assessment was undertaken in accordance with DMRB 11.3.9.

The new north/south overbridge and link road would be prominent features in the travellers' view along the planned A6 Toome - Castledawson dual carriageway. New views will be opened-up to the vehicle traveller, particularly panoramic views of the Moyola River valley as they travel over the north/south link road/overbridge, and views towards the south from the Annaghmore Road/Bellshill Road south link. Views along the section of road between Bellshill Road (south) and Annaghmore Road (south) would be more attractive than that experienced at present on existing roads.

The north/south link road and safe access to the new dual carriageway would contribute to lower levels of stress for strategic traffic passing through the junction, for local traffic joining the strategic route, and for local traffic moving between

Castledawson and its hinterland to the south. During construction, vehicle travellers would experience a heightened sense of driver stress, however these effects would be transient.

10.0 ROAD DRAINAGE & THE WATER ENVIRONMENT

The assessment was undertaken in accordance with the requirements of DMRB 11.3.10.6, and included identifying principal watercourses and assessing the potential impact on floodplains. To analyse the polluting potential from road runoff on adjacent receiving waters, an assessment was made of accidental spillage risk and runoff contaminant concentrations.

Routine runoff from the proposed scheme would be within 1km upstream of an EC designated Salmonid fishery (Moyola River/Coppies Burn); as such, the importance of the wider water environment is considered to be very high. Routine runoff would change the quantity, quality and peak rates discharging to the affected surface waters. However with the incorporation of a SuDS detention basin at Castle Hill Drain Branch, the risk of negative effects occurring would be slightly reduced due to the ability of the proposed treatment system to attenuate flow by limiting discharge rates from outfalls, to reduce the pollutant concentration through in-basin treatment, and reduce the risk of a spillage causing a serious pollution incident. There would be direct discharges to groundwater from the SuDS detention basin, though the effect is considered neutral.

There would be loss of floodplain capacity west of the Moyola River at Castledawson, which (if not mitigated) may lead to localised flooding, though an additional Flood Compensation Area (FCA) would be provided at a level similar to that lost. Excavation of this area would have the potential to contribute to elevated suspended solids in the Moyola River during construction; however mitigation measures are proposed to reduce the potential for adverse effects.

Hydromorphological changes within the affected surface waters would be experienced as a result of culverting; however the effects would not be significant and loss of quality fisheries habitat would be minimal.

To control sediment erosion and contaminated silty runoff discharging to surface waters during construction, an Erosion Prevention & Sediment Control Plan would be included in the Contractor's Construction Environmental Management Plan (CEMP) prior to commencement of any works.

11.0 GEOLOGY & SOILS

The assessment examined the potential for impact on solid & drift geology, important geological mineral deposits, agricultural soil types, sites of educational or scientific interest, and the possibility of hazardous materials (contaminated land) being exposed. It was prepared in accordance with DMRB 11.3.11.7.

Residual impacts of the proposed scheme are considered to have a negligible effect on the geology and soils of the study area.

12.0 CONCLUSIONS

The Environmental Statement summarises the environmental assessment carried out in accordance with national and European regulatory requirements.

The environmental assessment has been undertaken following the standard methodology set out in the DMRB Volume 11: Environmental Assessment.

The gathering of baseline environmental data and subsequent assessment of the potential environmental impacts of the scheme have been used to develop appropriate mitigation measures. Many of these mitigation measures are incorporated into the design of the scheme and reduce the impacts of the proposal.

It is accepted that the proposed junction would have various adverse environmental impacts, however given the nature and scale of the proposed junction at Castledawson, the proposal integrates relatively well into the existing environment.