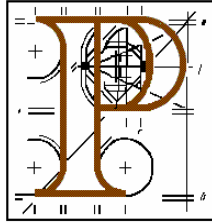

An Bord Pleanála



Inspector's Report

File References : **21.HA0044** Collooney to Castlebaldwin Road Development, Co. Sligo
21.KA0030 CPO Application to facilitate the above scheme

Address : Collooney to Castlebaldwin Co. Sligo

Applicant : Sligo County Council

Dates of Site Inspection : 14th, 15th & 16th April

Dates of Oral Hearing : 28th, 29th & 30th April

Inspector : Pauline Fitzpatrick

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1.0 INTRODUCTION

- 1.1 An application has been made by Sligo County Council for the provision of a road referred to as the N4 Collooney to Castlebaldwin Road Development Compulsory Purchase Order 2013 (No 1). The Order was made pursuant to the powers conferred on the local authority by section 76 of the Housing Act, 1966, and the Third Schedule thereto, as extended by section 10 of the Local Government (No. 2) Act, 1960, as substituted by section 86 of the Housing Act 1966, as amended by section 6 and the Second Schedule of the Roads Act, 1993, and as amended by the Planning and Development Act, 2000-2013.
- 1.2 The Order would, if confirmed, authorise the local authority to acquire compulsorily the lands described in Part 1 of the Schedule to the Order, for the purposes of improving 14.71km of the N4 National Primary Road and associated works from the townland of Rathrippin in Collooney to the townland of Cloghoge Lower south of Castlebaldwin in Co Sligo. The order would also authorise the local authority to temporarily acquire the land described in Part 2 of the Schedule and extinguish the public and private rights of way described in Part 3.
- 1.3 The full extent of the lands required for the scheme as described are shown outlined in red and coloured grey on the deposited maps (Drawings No's. SCC/CPO/N4 sheets 1- 8). The locations of the public rights of way proposed to be extinguished as part of the scheme are indicated between the lines coloured green with the private rights of way proposed to be extinguished indicated between the lines coloured pink.
- 1.4 The request for confirmation of the compulsory purchase order was received by the Board on the 31st December 2013. Revised public notices were received on the 5th February 2014.
- 1.5 An application is also made for the approval by the Board of the proposed road development under Section 51 of the Roads Act 1993-2007 and is accompanied by an Environmental Impact Statement and a Natura Impact Statement.

2.0 DESCRIPTION OF LANDS

- 2.1 The existing N4 is sub-standard with overall pavement widths varying from c.6.5m to 7.5m and average verge widths of 1m. There is restricted overtaking along c. 70% of its length due to inadequacies in cross section and alignment. It also passes through the village of Castlebaldwin which has a speed limit of 50kph. The 2.6 km northern most section leaving Collooney, through Toberbride and Doorly was improved geometrically in the 1980's whilst alignment improvement works at Ardloy have been recently completed.
- 2.2 There are c. 29 junctions with local roads and there are approx. 78 houses and 130 agricultural entrances onto the existing route.
- 2.3 The proposed road development passes through the margins of a drumlin zone, comprising a series of low, interlocking hills aligned in a northwest to southeast direction. The area is relatively low lying, ranging in elevation from about 40m ASL to 100m ASL. Extensive wetland and peatlands and several small lakes are found throughout the area.
- 2.4 In terms of lands use and landcover the area is used primarily for agriculture. A network of hedgerows and shelterbelts covers much of this landscape. Angular conifer plantations are also located within the larger peatland basins.

3.0 PROPOSED DEVELOPMENT

- 3.1 The main line of the proposed road is approx. 14.71 km long. Approx. 20% is online with the remaining 80% offline. The proposal extends from the junction between the N4 and N17 approx. 0.5km south of Collooney and follows the existing N4 alignment in a southerly direction for 2.85km. The road then diverges to the west (Ch 2,750m) and runs parallel to the existing road alignment by-passing Lackagh and Drumfin for 7.5km before crossing the existing N4 at Aghalenane (Ch. 10,230m). The road alignment then runs to the east of the existing N4 for 3.8km by-passing Castlebaldwin, rejoining the existing N4 alignment (Ch. 14,000m) c.0.5km south-east of Castlebaldwin. The proposal follows the existing alignment for a further 0.5km and finishes at Cloghoge Lower Td.

3.2 It comprises:

- 2.58km of widening and improvement of the existing single carriageway to a Type 2 Dual Carriageway between the townlands of Collooney/Toberbride (tying into the existing N4/N17 roundabout) and Doorly,
- 12.13km offline realignment from Doorly to Cloghoge Lower with 11.23km between Doorly and Castlebaldwin proposed to be Type 2 Dual Carriageway and the remaining tie-in section of 0.89km proposed to be Type 1 Single Carriageway. The off-line realignment is first to the west of the existing N4 with the greatest separation being c.450 metres between the existing and proposed in the vicinity of Drumfin. The realignment crosses the N4 in the vicinity of Ardloy and remains to the east of the existing road with the greatest separation being in the region of 350 metres at Drumderry before tying into the Castlebaldwin junction roundabout and reverting to a Type 1 Single Carriageway.
- New side roads (which in some cases are to be parallel links) and upgrading of existing roads;
- One at grade roundabout on the mainline
- One compact grade separated junction on the mainline
- Three at grade roundabout junctions on side-roads
- Four road overbridges
- Six road underbridges
- Two river bridges

The Type 2 Dual Carriageway consists of a 21.5m total cross sectional width comprising 2 x 7m two lane carriageways, 2 x 0.5m hard strips, 2 x 2.5m hard shoulders and 2 x 3m grass verges. A segregating barrier within the paved median is proposed to separate the traffic streams.

The single carriageway will be commensurate with the existing improved section (known as Curlew Mountains By-Pass). It consists of an 18.3 metre total cross sectional width consisting of a single carriageway 2 x 3.65m single lane, 2 x 2.5 m hard shoulders and 2 x 3m grass verges.

In addition the proposed road development is to include:

- All necessary drainage works including culverts and associated diversions of existing minor watercourse and drainage ditches.
- Retaining walls and noise barriers.
- Diversion of services and utilities

-
- 3.3 The project will also require earthworks operations including the management of spoil generated by the proposal, environmental mitigation works and services and accommodation tracks.
- 3.4 The main line finished road levels range between 32mOD and 74mOD. Approx. 10.5% will run at or close to existing grade with level differences of less than 1.5m. Approximately 55% of the road will run in fill, with the highest sections being at wetland areas north and south of Doorly Hill (c. Ch. 1,350m-2,750m and Ch.3,150m-3,850m), the area in the vicinity of the Turnalaydan Stream crossing (c. Ch. 4,200m-4,850m), the area in the vicinity of the Drumfin River crossing (c. Ch. 6,750m-7,600m), the wetland area and proposed underbridge in the townland of Carrownagark (c. Ch. 8,400-8,950m); the peatland basin surrounding Aghalenane Lough (c. Ch. 9,250m-10,300m) and the low lying farmland area between local hills south of Springfield (c. Ch. 10,550m-10,900m).
- 3.5 The proposed route realignment will be in cut for approximately one third of the proposed road development through slopes of several drumlin hills, including Doorly Hill (c. Ch. 2,800m-3,150m), at Drumfin (c. Ch. 5,750m-6,600m), at Carrownagark (c. Ch. 8,150m-8,400m), Kingsbrook (c. Ch.8,950m-9,200m), Ardloy/Springfield (c. Ch. 10,300m-10,550m), Tawnagh & Cloonmeenaghan (c. Ch. 10,900m-11,875m) and at Drumderry Hill (c. Ch. 12,600m-13,600m).
- 3.6 A detailed description of the proposed road development is provided in Chapter 4 of the EIS.

4.0 SUBMISSIONS BY PRESCRIBED BODIES

4.1 An Taisce

- The proposal must demonstrate that no increase in vehicular traffic will occur on the N4.
- Due cognisance is required of the objectives of Smarter Travel: A New Transport Policy for Ireland 2009-2020.
- The impact on modal share between road and rail needs to be addressed to ensure that no reduction in rail passenger use on the Dublin-Sligo line occurs.

4.2 Department of the Arts, Heritage and the Gaeltacht

- It is recommended that all the mitigation measures detailed in section 15.5 of the EIA relating to archaeological heritage are carried out in full in advance of the commencement of any construction works and that the archaeological component of the scheme be overseen by a Project Archaeologist.

4.3 Geological Survey of Ireland

- The GSI has datasets on bedrock geology, quaternary geology, mineral deposits, groundwater resources, geological heritage, landslides and the Irish Seabed.

4.4 Health Service Executive

- It is considered that subject to the implementation and maintenance of mitigation measures detailed in the EIS, in particular those concerning groundwater during both construction and operational phases, the department would have no substantial concerns regarding the proposal.

4.5 Inland Fisheries Ireland

- The proposal will result in the crossing of a number of tributaries of the Unshin River and Lough Arrow and has the potential to have significant negative impacts on the river system. The river is an important salmon and trout fishery and its tributaries provide spawning and nursery habitat for these species. Lough Arrow is a popular trout angling lake with limited spawning habitat available to the trout population, therefore the spawning habitat provided in the streams to the south of the development are highly valued. The Unshin River catchment located in the northern section of the development site has been allocated 'good ecological status' in the Western River Basin Management Plan and this status must be protected. Whilst the catchment drained by the southern section of the proposed site has been allocated 'moderate ecological status' this must be upgraded to 'good ecological status' by 2021. No activities carried out in this catchment should prevent the achievement of this target.
- All pollution mitigation measures contained in the EIS including the Outline Erosion and Sedimentation Control Plan, must be included in the Construction Contract.

-
- IFI must be consulted in relation to the final detail of the Environmental Operation Plan, all culvert works, watercourse diversion works and any other works with the potential to impact on watercourses.
 - The guidance document 'Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites' as referred to in the EIS should be followed. These works should be scheduled for the drier months of the year with all in-stream works being carried out between May and September.
 - If fish salvage operations are required the contractor must incur the costs and IFI consulted in advance.
 - An Emergency Response Plan must be drawn up, with IFI included as a notifiable body in the case of an environmental emergency.
 - Section 12.4.5.2 of the EIS refers to a weir being installed upstream of culvert 'Cul O' on the Toberscanavan Stream, to retain the existing water level of the Toberscanavan Loughs. This culvert must not cause an impass to fish species in this watercourse.
 - Section 5.3.3.1.1 of the Outline Erosion and Sediment Control Plan refers to crossing of minor watercourses in 'wet watercourses'. This must be avoided to prevent sedimentation of waters. Methods which allow the crossings to be installed in a dry channel, such as the use of a cofferdam, should be used.

IFI is satisfied that concerns raised in previous meetings and correspondence with regard to this project have been addressed and there will be continued consultations with IFI in relation to the design and construction of the road.

5.0 OBSERVATIONS ON THE PROPOSED N4 ROAD DEVELOPMENT

5.1 Aurivo Co-Operative Society Ltd.

- The proposal would bring significant economic and social benefit to the region and would be a great boost to business.
- The stretch of road has claimed a significant number of lives and the improvement in terms of safety is welcomed.

5.2 Cleveragh Park Management (rep. tenants of Cleveragh Retail Park)

- The proposed route has a key role in the access into the town.

5.3 Cllr. Gerard Mullaney

- The road improvement is needed on safety grounds.
- From a tourism point of view it will improve Sligo County's infrastructure.
- A modern and safe road network is essential in attracting new industry. It will enhance the attractiveness of Sligo as a potential location for new enterprise.

5.4 Cromlech Lodge

- The road improvement is needed on safety grounds.
- From a tourism point of view it will improve Sligo County's infrastructure.
- A modern and safe road network is essential in attracting new industry. It will enhance the attractiveness of Sligo as a potential location for new enterprise.

5.5 IDA Ireland

- Potential investors will look for locations/sites with safe and efficient road access. A divided highway is a typical inter-urban access standard in other countries. Sligo is one of the few Gateway locations that does not meet this standard and is therefore, at a competitive disadvantage to locations such as Athlone, Galway, Limerick, Cork, Waterford and Dundalk.

5.6 Sligo Chamber

- The healthcare/pharmaceutical manufacturing industries in Sligo are heavily dependent on a modern and efficient road structure for their export business. Millions of euro worth of product is lost from the locally based multi-national industries each year owing directly to problems arising from the deficient and substandard road network.
- The section of road between Collooney and Castlebaldwin is seen as a deterrent to inward investment due to road safety and transportation concerns and is seen as an obstacle to the future development of Sligo and the North-West.
- The sourcing of employment and materials during pre-construction and construction phases, where possible, would provide a boost to the local economy.
- The socio-economic effects discussed in section 6 of the EIS are considered to be understated as the analysis pertains to the local area rather than encompassing Sligo City and County. It will assist in

improving the competitiveness and efficiency of the economy both locally and nationally.

- Tourism development depends heavily on having a good road infrastructure in place in the region.
- The reduction in fatalities that would result is to be welcomed.

5.7 Sligo Tourism

- The N4 is one of the main arteries to Sligo and its upgrade is critical for the future development from both a business and tourism perspective. The section between Cloonamahon and Castlebaldwin is the only section of the road between Dublin and Sligo that has not been upgraded to a safe standard and is recognised as one of the most treacherous sections of road in the country.
- Tourism is an integral component of the Sligo economy and its development will be underpinned by having a good road infrastructure.

5.8 Barry Walsh

- The new roadway will have a significant visual and noise impact on those living in proximity to it.
- The road will pass within 125 metres from their house at Kingsbrook, Riverstown. The impacts will be magnified by the roadway being raised 6.5 metres from the existing ground level for the section in question.
- The following are requested for consideration:
 - Measures to mitigate the visual impact along the relevant section (c.Ch.9300 – 9500).
 - Measures to mitigate noise impact.
 - Any advice and/or assistance regarding measures which they can take themselves.

5.9 Sydney & Olive Taylor

- They have a permanent, authorised advertising sign (Taylors Motoring School) on the edge of the N4 between Drumfin and Castlebaldwin. The lack of advertising along the new road will result in a loss of business.
- An identical double sided sign (4ft x 4ft) is requested to be erected on the new road. Compensation for loss of business is sought should such a sign not be accommodated.

5.10 Peter Sweetman

- The Board has an obligation to undertake EIA and AA.

Note: Submissions by Carrownagark Water Scheme (rep. by Martin & Rea) and Richard Rea of Rea Agri Environmental Consultants Ltd. were withdrawn.

6.0 COMPULSORY PURCHASE ORDER

6.1 The CPO submitted to the Board on the 23/12/13 refers, and is titled *Sligo County Council Compulsory Purchase Order 2013 (No.1), N4 Collooney to Castlebaldwin Road Development*, and is accompanied by:

- Manager's Order No. 28/13 signed on 13/12/13 accompanied by a report from the Director of Services (Infrastructure), to the County Manager, which is accompanied by supporting documentation including a letter from the NRA.
- Copies of the newspaper notices dated 19th and 21st December.
- The Schedule consists of three parts, the first detailing the lands being permanently acquired, the second detailing the lands being temporarily acquired and the third detailing the public and private rights of way proposed to be extinguished.
- 8 no. officially sealed deposit maps.

The full extent of the lands required for the scheme are shown outlined in red and coloured grey on the deposited maps (Drawings No's. SCC/CPO/N4 sheets 1- 8). The locations of the public rights of way proposed to be extinguished as part of the scheme are indicated between the lines coloured green with the private rights of way proposed to be extinguished indicated between the lines coloured pink.

- Certificate of postage regarding service of notices on landowners, occupiers and lessees.

Revised public notices following notification by the Board regarding the omission of townlands in the description of the location of the proposed works were received on the 05/02/14.

A proposed Erratum to Schedule Part 1 and evidence of postage was submitted 01/04/14.

An Erratum to the Schedule was presented to the oral hearing (held between 28th-30th April).

- 6.2 The report by the Director of Services (Infrastructure) notes that the proposed road development will involve the permanent acquisition of 181.5 ha of land and 15 residential dwellings. It will also include the extinguishment of 22 public and 8 private rights of way.

It is stated that the Compulsory Purchase of lands for the development will have the following effect:

- It will secure the acquisition of all land required.
- It will provide objectors to the scheme with a forum by which they can outline their objections.
- It will facilitate the acquisition of lands within a reasonable timescale.
- It will afford an arbitration forum to assess compensation payable.
- It will permit Sligo County Council to plan a programme for the scheme confident in the knowledge that the lands required will be available.
- It will permit Sligo County Council to acquire proper title to unregistered land.
- It will facilitate the implementation of the Sligo County Development Plan 2011-2017.

7.0 OBJECTIONS TO THE CPO

The Board is advised that 81 written objections to the CPO were received. At the time of writing this report 4 objections remain. The full list of the submissions and their status is attached in Appendix 3 for the Board's information.

The four objections can be summarised as follows:

7.1 Eugene Brehony (CPO No. 153)

The submission by Martin & Rea, Agriculture and Business Consultants on his behalf can be summarised as follows:

- No consideration has been given to possible unauthorised parking and dumping of rubbish on proposed accommodation roads.
- Noise mitigation is required to ensure that the road design complies with WHO standards.
- Noise monitoring proposals are inadequate.

-
- Dust mitigation and monitoring proposals during the construction phase are inadequate.
 - Details of proposed landscaping are required. Planting design is inadequate.
 - The location of the construction compounds should be clearly identified so that the environmental impact of same can be addressed by the property owners in terms of noise, dust, drainage and other factors.
 - Suitably designed safety barriers should be provided where either the national road, secondary/regional road, accommodation roads and private roads are in cut.
 - The EIS is deficit in certain areas and is lacking in legal commitment and is not legally binding in relation to the final levels.
 - As the proposal will be design and build the LA has been requested to facilitate land owners by discussing and agreeing accommodation works so as to mitigate the impact on the property.
 - It is unclear as to the final location of the land take post works.
 - A post and rail fence is not acceptable at an entrance to a residence in circumstances where there is an existing wall.
 - The final design level should be the same as that detailed in the EIS. Should there be a change, the affected property owners need to be advised and the professional costs incurred in relation to advice sought such changes to be paid for. Any change should be agreed in writing.
 - The land take is excessive
 - The EIS is deficient

7.2 Repts of Anthony Molloy c/o May Molloy (CPO No. 154)

The submission by Rea Agri Environmental Consultants on their behalf can be summarised as follows:

- No consideration has been given to possible unauthorised parking and dumping of rubbish on proposed accommodation roads. The access road as designed would be attractive for illegal parking.
- Noise mitigation is required to ensure that the road design complies with WHO standards.
- Noise monitoring proposals are inadequate.
- Dust mitigation and monitoring proposals during the construction phase are inadequate
- Details of proposed landscaping are required. Planting design is inadequate.

-
- The location of the construction compounds should be clearly identified so that the environmental impact of same can be addressed by the property owners in terms of noise, dust, drainage and other factors.
 - Suitably designed safety barriers should be provided where either the national road, secondary/regional road, accommodation roads and private roads are in cut.
 - The EIS is deficit in certain areas and is lacking in legal commitment and is not legally binding in relation to the final levels.
 - As the proposal will be design and build the LA has been requested to facilitate land owners by discussing and agreeing accommodation works so as to mitigate the impact on the property.
 - The replacement of the existing stone boundary wall with a timber post and rail fence is not acceptable.
 - It is critical that the owners are allowed to rebuild a dwelling at this location to replace that being acquired and that there is certainty in same.
 - The EIS is deficient

7.3 Richard & Dorothy Taylor (CPO N0.238)

Rea McElhinney made two written submissions on their behalf which can be summarised as follows:

- They object to the CPO powers being used to acquire lands for the sole purpose of sourcing quality fill. There are alternative sites for fill from landowners willing to facilitate the Council.
- The combination of landtake from the original Castlebaldwin CPO and that proposed under this scheme equates to c.10 acres from 1 farmer. It is unfair and is excessive.
- The physical accommodation of the road does not warrant a 6.1597 acre land take and it is requested that it be reduced to what is reasonably required.
- The lands are essential for silage and represent the best quality land on the farm. No alternative source is available or convenient to the existing farm.
- The CPO represents a significant land loss to the farm and would isolate and render useless another portion of ground. It would have a significant adverse impact on the farm and on its management.

7.4 Charles Cooper, Mary Cooper, Patricia Cooper (CPO Nos. 149 & 307)

The written submission on their behalf by Mullaney's Solicitors can be summarised as follows:

- There will be an extinguishment of a right of way and loss of amenity on closure of the private road servicing the Markree Castle Estate and in particular, the gate lodge which is a protected structure. It is used as a private residence.
- Safety issues will arise.
- There will be a diminution in the value of the property, rights and interests.
- The lands being acquired are peripheral to the proposed development and are not essential.
- The proposed road will impact and compromise the integrity and structure of their property, and would impact on its air quality, archaeology, landscape and visual context.
- The EIS and NIS are deficient and are not in compliance with Irish or European Law.
- The Council has not complied with its obligations pursuant to Irish and European Law in the preparation of the CPO.

8.0 POLICY CONTEXT

National Policy

- 8.1 Whilst noted to be out of date the **National Development Plan 2007-2013** was a seven year investment programme for economic and social development in the State. Under the Roads Sub-Programme it stated that investment in national roads would be used to implement the objectives of the National Spatial Strategy and balanced regional development. Investment in road links between gateways would be a particular focus. A key development objective was the completion of the remaining sections of the N4 requiring upgrade.
- 8.2 In the **National Spatial Strategy 2002-2020** transport is identified as a key component of the overall spatial policy and an important tool in balancing regional development. Part of this involves building on Ireland's radial system of main roads and rail lines connecting Dublin with other regions, and developing an improved network of roads and public transport services. Implementing the road investment programme under the National Development Plan is considered to be a key element in enhancing regional

accessibility and underpinning better regional development. The N4 is identified as a Strategic Radial Corridor and that good quality road and public transport connections between Dublin and Sligo, which is a designated gateway, should be attained. The strategy seeks to strengthen the role and contribution Sligo will have in driving development through enhanced critical mass, accessibility and capacity for development. The subsequent review document titled **Implementing the National Spatial Strategy: 2010 Update and Outlook** notes that from a spatial planning and regional development perspective one of the key areas for continued investment is in the key inter-regional transport corridors between the NSS gateways including Sligo. The document notes that the funding of transport, water, wastewater and urban regeneration initiatives will continue to play a key role in enabling the regional gateways to fulfil their potential.

- 8.3 Transport 21**, which was published in 2005, is a capital investment programme through which Ireland's transport system will be developed over the period 2006-2015. In same the N4 was identified as a strategic radial route which should provide a high quality link between Dublin and Sligo. One of the key objectives of the 'national programme' is to create a high quality, efficient national road and rail network that are consistent with the objectives of the NSS.
- 8.4 Infrastructure Investment Priorities, 2010-2016** outlines the financial framework for capital investment in which it is stated that continued investment in the remaining road networks will include completion of the major inter-urban routes and other strategic routes. A review in 2011 states that in relation to national roads the targeting of specific road segment improvements is recommended where there is a clear economic justification.
- 8.5 Smarter Travel-A Sustainable Transport Future 2009-2020** sets out a transport policy for Ireland. The policy proposes to retain investment in roads that provide the necessary links to support the NSS.
- 8.6 The National Cycle Policy Framework 2009-2020** follows on from *Smarter Travel – A Sustainable Transport Future* and seeks to create a strong cycling culture in the country. It considers the planning and infrastructure, communication and education intervention measures necessary to encourage cycling. While many of the measures focus on urban cycling the document acknowledges the *Strategy for the Development of Irish Cycle Tourism*. In support of the objective to provide designated rural cycle routes the policies to be pursued include examining the use of hard shoulders and contiguous space on roads with an arterial character as part of the National Cycle

Network and ensuring that the upgrading of national roads does not impact negatively on the safety and perceived safety of the roads for cyclists.

Regional Policy

8.7 The **Regional Planning Guidelines for the Border Region 2010-2022** provides a framework for the long term strategic development of the Border Region over a twelve year period. The Guidelines emphasise that good transport infrastructure is vital to promote economic and social well being.

8.7.1 There have been significant improvements in terms of road access in the Border Region over recent years, for example, completion of the M1 (Dublin to Border) and M3, sections of the N2 and the N4/M4. Further development of the key transport corridors traversing the Border Region in addition to linking the Gateways and main development centres north of the border, still remain to be completed. Effective infrastructure is required as a pre-condition for economic success. However, there remains a lack of connectivity within the Region, and notwithstanding the infrastructure improvements in recent years (particularly in the East) it is clear that infrastructure deficits must be addressed if this Region is to compete with other regions as well as Northern Ireland. Connectivity, in this regard, includes all elements of infrastructure. Table 1.5 details significant Road Schemes in Planning within the Border Region and includes the N4 – Collooney to Castlebaldwin.

8.7.2 Chapter 5 - Sustainable Transport Strategy notes that the **Western Radial Route (M4/N4)** links Dublin with Sligo via Mullingar and is the primary access route to the west of the Region. This route has seen significant investment in recent years in areas outside of the Region, however, two significant substandard sections remain and their improvement is a priority for this route:-

- N4 Carrick-on-Shannon Bypass;
- N4 Collooney – Castlebaldwin;

The upgrading of N4 from Carrick-on-Shannon to Castlebaldwin (from single carriageway to 2+2) is also listed although it is noted that this is located in the Western Region.

8.7.3 **Roads Policy INFP2** seeks to facilitate the development of those sections of the Strategic Radial Corridors and Strategic Links identified above, as being

of priority importance for the Region, subject to relevant environmental assessments.

Local Policy

8.8 Sligo County Development Plan 2011-2017

8.8.1 Section 8.1.1 notes that the provision of a high-quality link between Sligo and Dublin is identified as a specific project to be delivered under *Transport 21*, and although this route has seen significant investment in recent years in areas outside of the Border Region, the Collooney–Castlebaldwin section remains substandard and its improvement is listed as “in planning stage” at the time of writing (2010).

8.8.2 It is an objective of Sligo County Council to:

O-R-1 Bring national roads up to appropriate standards, as resources become available, and continue improvement works on non-national roads, so as to develop a safe and comprehensive road system for the county with the N4 Collooney to Castlebaldwin realignment and upgrading specifically referenced in Table 8.B

In terms of cycling and walking the following objectives are noted:

O-CW-1 Provide, improve and extend cycle and pedestrian routes on existing roads, proposed roads, roads being upgraded and green corridors (including river corridors), where feasible and practical, subject to compliance with Habitats Directive.

O-CW-2 Develop cycle routes from Strandhill, Rosses Point, Ballysadare and Collooney to Sligo City subject to compliance with the Habitats Directive.

O-CW-5 Implement the relevant policies of the Department of Transport’s *National Cycle Policy Framework* and support the provision of a national cycle network.

9.0 ORAL HEARING

An oral hearing was held over three days from the 28th April at the Castle Dargan Hotel in Ballygawley. A brief summary of same is provided in Appendix 1 to this report.

10.0 ASSESSMENT

Under the proposed scheme consent is being sought for the road development as well as for the compulsory purchase of the lands required for its construction. The first sections of the assessment deal with the policy context and justification of the proposed road development (PRD). This is followed by consideration of the proposed development to include an environmental impact assessment and appropriate assessment. The CPO will then be assessed. Reference will be had throughout to the documentation on the file including the EIS and NIS, in addition to the information provided at the oral hearing.

11.0 COMPLIANCE WITH POLICY PROVISIONS

11.1 There is a suite of documents to which reference has been made by the applicant in setting the policy context of the PRD.

11.2 In a European context and as detailed in the oral hearing submissions by both Mr. Ward and Mr. Scott, the European Union has a new transport infrastructure policy with *Regulation EU NO. 1315/2013* enacted in January 2014. The current provisions set out the framework for policy development in transport up to 2030/2050 with the aim being to close the gaps between Member States' transport networks. As extrapolated from the map attached to Mr. Ward's submission, the Dublin Sligo N4/M4 forms part of the TEN-T comprehensive road network, which is the basic layer of the TEN-T and which feeds into the core road network at regional and national level. The core network is shown as the M1, M7 & M8. The Collooney - Castlebaldwin section of the N4 is part of a larger section of the route which is identified for upgrading. In this regard I note that Article 17 of the Regulations which specifically addresses road transport, states that in terms of the comprehensive network high-quality roads shall be either motorways, express roads or conventional strategic roads. Mr. Scott in his submission referred to the high quality roads being either motorways or express roads but does not mention the last option, namely conventional strategic roads. He advised the hearing that as yet standards have not been issued as to what would constitute 'express road standard' however he considered that it would be comparable to dual carriageway standard.

11.3 The NRA *National Roads Needs Study 1998* covering the period 1999-2019, whilst over 16 years old remains the most recent study on national roads needs. The section of road subject of this application was identified in same

as having Phase 2 needs and was scheduled for improvement during 2005-2009.

- 11.4 Sligo is identified as a Gateway in the *National Spatial Strategy*, the aim of which is to capitalise on its strategic location and energise its associated hinterland. The N4 National Primary Route is identified as a strategic radial corridor linking Dublin and Sligo and is described in the NSS as a National Transport Corridor fundamental to the development potential of the north-west region. The strategy identifies the need to improve access to Sligo that builds on recent investment in road and rail routes. The subsequent review document titled *Implementing the National Spatial Strategy: 2010 Update and Outlook* repeated the importance of the said strategic radial route and noted that one of the key areas for continued investment is in the inter-regional transport corridors between the NSS gateways including Sligo.
- 11.5 I note that the *National Development Plan 2007-2013*, although out of date, and *Transport 21*, both stipulate the completion of the remaining sections of the N4 requiring upgrading so as to advance the objectives of the NSS and balanced regional development.
- 11.6 The *Infrastructure Investment Priorities 2010-2016* document published by the Government outlines the financial framework for capital investment in the stated period. Specific reference is made to the continued investment in the remaining roads networks including the completion of the major inter-urban route. As the proposal pertains to a section of the N4 strategic radial corridor identified in the NSS, it is considered that it accords with this policy.
- 11.7 In terms of *Smarter travel: A New Transport Policy* for Ireland 2009-2020, An Taisce in its written submission to the Board, stresses the need to ensure that the PRD is in accordance with and advances the policies contained therein. In the applicant's response presented to the hearing it is considered that the PRD would support the future growth of Sligo but without unduly influencing the demand for travel or pattern of local development or car use along the corridor. In this regard I note that under a medium growth scenario the traffic model predicts increases in AADT for the mid-section of the proposal of 3.8% in the opening year of 2017 compared with the existing N4 under a Do-Minimum scenario. Thus the forecast figures would support the assertion that the PRD would not, in itself, encourage greater levels of traffic. With regard to issues relating to commuter travel and modal shift, public transport options in the area are largely limited to bus and I would submit that such provision would be assisted by the PRD with increased accessibility to Sligo.

Rail connection and train times currently do not support commuter travel within the area. The PRD, in itself, would not result in a material reduction in journey times (1.9 minutes) as to make a noticeable impact and thus would not have any discernible impact on longer distance rail patronage on the Dublin Sligo corridor. As it stands current car journey times are significantly lower than train journey times along the same route. Hence the assertion that the modal shift from train to car as a result of the proposed development would be negligible is accepted. Therefore I would submit that the PRD, in itself, would not be counter to the policies and objectives of the document.

- 11.8 In terms of regional policy the PRD is specifically referenced in the Border Regional Planning Guidelines 2010-2022 with the Collooney to Castlebaldwin realignment listed as one of the major schemes in planning which will have a significant influence on the region in the coming years.
- 11.9 At county level the current Sligo County Development Plan has been informed by both national and regional policy and notes the importance of a high quality link between Sligo and Dublin. The fact that the Collooney to Castlebaldwin section remains substandard is specifically noted and that it is an objective under O-R-1 to bring national roads up to appropriate standards, as resources become available, with the N4 Collooney to Castlebaldwin expressly referenced.
- 11.10 A detailed Planning Statement setting out the need for the road is set out in Appendix 1.1, Volume 4 of the EIS and in Mr. Ward's submission to the hearing. It is contended that the spatial development principles of the County Development Plan are closely linked to transport infrastructure. The N4 is considered to be a vital element of the Core Strategy, including the spatial development framework and the settlement structure. Improved accessibility is considered to be a vital aspect of economic development and the upgrading of the N4 would be considered a significant development in the challenge to attract investment to the area. In light of same it is contended that the N4 route plays a central and significant role in the context of the development of Sligo Gateway and the county as a whole. This, in turn, has the potential to contribute to balanced regional development as envisaged in the NSS.
- 11.11 In conclusion, therefore, I submit that the project has support at national, regional and local policy levels with the proposal being fully in accordance with, and would advance specific objectives as set out in the current County Development Plan.

12.0 JUSTIFICATION FOR PROPOSED ROAD DEVELOPMENT

12.1 The background and need for the scheme are set out in Sections 1, 2 and 3 of the EIS and in Mr. Scott's brief of evidence to the oral hearing (submissions 2a & 2b).

Existing N4

12.2 The section of road subject of this application is one of the few sections of the N4 between Dublin and Sligo which is not of a standard commensurate with the NRA's Design Manual for Roads and Bridges (DMRB). The road for the majority of its length would be classified as a Type 3 Single Carriageway road which would operate at a Level of Service (LOS) D up to an AADT of 5000. This section of the N4 is currently experiencing AADT flows in excess of 8,500. With regard to the c.2.62 km section between Toberbride and Doorly which was improved geometrically in the 1980's (referred to as the 'on line' section in the documentation accompanying the application), whilst meeting some of the current design criteria required for a 100kph design and is similar in width to a Type 1 Single Carriageway, Has two horizontal curves that have radii which are not recommended to be used for single carriageway design with a design speed of 100kph as they lead to long, dubious overtaking sections. I note that the section south of Castlebaldwin was realigned in the late 1990's to single carriageway standard as part of the N4 Curlew Mountains By-Pass. The Board is advised that the N4 north of the roundabout at Toberbride, Collooney (outside of the PRD) is a Type 1 Dual Carriageway.

12.3 The section of the N4 in question carries both inter urban and local traffic and the existing infrastructure is not sufficient to meet these demands which results in traffic congestion particularly at peak hours. This is reflected in the figures given in Table 3-12 of submission 2b in that the on-line section from the N4-N17 Toberbride roundabout to Doorly Td. is operating at 90% capacity LOS D with the off-line section between Doorly to Castlebaldwin operating materially in excess of capacity (192%).

12.4 The road is deficient in alignment, cross section, capacity and junction/direct access arrangements for both the calculated design speed of 100kph and the statutory speed limit of 100kph. The horizontal and vertical geometry provides Stopping Sight Distances (SSD) and Full Overtaking Sight Distances (FOSD) which are inadequate for the permitted maximum speed limits over

much of the route. Save for the 2.6km section between Toberbride and Doorly, the overall pavement widths vary from c.6.5m to 7.5 m with an average verge width of 1 metre. It also passes through the village of Castlebaldwin which has a speed limit of 50kph. There are 24 junctions with local roads, 78 houses and 152 field entrances on the existing route. In terms of the junctions all but 2 are simple junctions with no provision for right turning vehicles. In this regard I refer the Board to section 2.4 of Mr. Scott's brief of evidence which sets out the deficiencies of the road network in more detail.

12.5 The lack of overtaking opportunities and stopping sight distance, in combination with frequent junctions and accesses, many of which have restricted visibility, and the frequency of slow moving vehicles associated with agricultural activities along its length, gives rise to serious issues in terms of safety. This is unfortunately borne out by its poor safety record with 8 fatalities, 8 serious injuries and 56 minor injuries recorded between 1996-2011 in addition to a large number of material damage collisions equating to approx. 34 per annum. It is submitted by Mr. Scott in his submission to the hearing that taking the national average under reporting factors into account this figure would increase to 102 collisions per year. The assessment of collisions along this section of the N4 highlight that the majority of accidents reflect the poor alignment and gradients along the roadway. The Board will note the presence of white crosses representative of the fatalities along its length which were erected by a local action group canvassing for the road's improvement.

12.6 I consider that the detail provided clearly shows that the road is materially substandard giving rise to serious safety issues. This is borne out when travelling along the length of the road in question. The series of photographs (submission 2b) that accompanies Mr. Scott's submission detailing various sections of the existing N4 route travelling from north to south are, in my opinion, a fair representation of prevailing conditions.

Alternative Routes

12.7 Detail is given in the EIS to the background to the proposed development dating back to November 2000 with the publication of a Constraints Study followed by the consideration of alternatives (see chapter 3). In my opinion the assessment undertaken in terms of route alternatives is detailed and robust that allows for a reasonable and balanced comparative process. The following gives a brief synopsis.

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- 12.8 The examination of alternatives commenced with a route selection process conducted between 2001 to 2002. The results of the process were reviewed in the period 2012-2013 through a renewed assessment of the original route options. Additional alternatives in accordance with the NRA Project Appraisal Guidelines (PAG) were also considered including the Traffic Management Alternative.
- 12.9 Based on the information from the Constraints Study Stage five route options were initially identified during the route selection stage. Each route commenced in the townland of *Doorly* and tied back into the N4 at Carrowkeel (ED Templevanny). A Standard Single Carriageway cross section was considered during the original route selection stage. Following assessment of the route options, the optimal or preferred route was considered to be a combination of Options 2 and 4, namely the northern part of Option 2 to a point *at* Aghalenane Td. and continuing with the southern part of Option 4. The preferred route was referred to as option 6. The PRD now before the Board, referred to as option 6+, came about as a result of alterations to the original preferred option following detailed site specific information becoming available resulting in discrete alignment changes. All routes were assessed under the headings of engineering, economic, environmental considerations and public preference. As noted above the review in 2012/2013 revisited and reviewed the initial assessment. Sections 3.2 and 3.3 of the EIS summarise and compare the route options.
- 12.10 Subsequently a Project Appraisal undertaken by Aecom concluded that the high level of existing agricultural entrances (c.120), junctions (c.20) and residential/commercial properties (c. 70) fronting onto the road meant that a Traffic Management Alternative would be impracticable in terms of delivering the required levels of service as there would be a potential requirement to partially or fully acquire a significant number of residential properties along the route. Additionally as the route would continue to pass through the village of Castlebaldwin there would be the requirement to maintain the 50kph speed limit. I accept this conclusion.

Traffic Modelling

- 12.11 As per Table 3-12 of submission 2b presented to the hearing by Mr. Scott the on-line section from the N4/1N17 Toberbride roundabout to Doorly Td, which would be classified as equivalent to a Type 1 Single Carriageway based on 2008 traffic figures, is operating to 90% of its capacity with the section from

Doorly Td. to Castlebaldwin, equivalent to a Type 3 Single Carriageway operating materially above capacity (192%) with the final section at its tie in to the existing N4 (equivalent to Type 1 Single Carriageway) operating within capacity.

- 12.12 The Traffic Modelling Report (issue date 11/02/13) was submitted to the Board in support of the application with a summary given in the brief of evidence to the hearing by Mr. D. Keenan. The development of traffic growth forecasts and Local Area Models (LAM) is based on the methodology set out in *Unit 5.3 Traffic Forecasting of the NRA's Project Appraisal Guidelines*. The PAG sets out the criteria for using the Zonal Growth Rates forecasting methodology which is used for forecasting traffic growth when using Assignment Models.
- 12.13 The initial traffic model was developed in 2009 using 2008 traffic counts. Traffic counts show traffic volumes on the existing N4 in 2008 were 10,400 AADT at Toberbride Td. and 7,600 AADT at Castlebaldwin Td. (link numbers 3 and 29 Figure 4.5.1, Volume 3 EIS). Additional traffic data was collected both along a number of local roads and the N4 in 2012 which indicated that traffic levels along the N4 during 2012 remain comparable and reflective of 2008 traffic conditions. This data has not been presented to the Board. Mr. Keenan informed the hearing that on the basis of this data the 2008 data and subsequent base models were considered fit for use in the assessment. Further data collection was undertaken in early 2014 as shown on Figure 2 of Mr. Keenan's submission to the hearing. The assertion that the results suggest that flows along the N4 increased by nearly 2% in the last year does not appear to be borne out by the figures provided with a reduction (in the region of 18-20%) noted in all but traffic flows along the Ballymote Road. However as a corollary to this are the comparison of year on year flows from March from NRA Counter between Castlebaldwin and Boyle immediately south of the PRD as given in Figure 3 which do reflect the said 2% increase.
- 12.14 In terms of traffic growth the NRA medium growth scenario is the central forecast and is consistent with the MOF1 CSO growth projections. The medium growth scenario provides average growth rates of 13% between 2008 and 2017 and 33% between 2008 and 2032 over the study area. The traffic model predicts that these figures will rise to 13,000 AADT south of the roundabout at Toberbride and 9,500 AADT at Castlebaldwin in the design year of 2032 in a *Do Minimum* Medium Growth Scenario. Working on the basis of the projected 2032 traffic flows, all but the final section would be operating above capacity.

12.15 With the realisation of the PRD the majority of the existing N4 between the tie in points will experience substantial reductions in traffic volumes. There will be little change in trip patterns on the existing local road network with the exception of a marginal change in trip patterns to Ballymote on L1502-32. The journey time will be improved by 1.9 minutes (17%) between Collooney and Castlebaldwin.

Cross Section Proposed

12.16 As noted above the basis for the current proposal was highlighted in a report produced by the NRA entitled *The National Roads Needs Study (NRNS)* dating back to 1998. The N4 realignment (Collooney to Ballinafad) was identified at that time as having 'Phase 2' needs. This meant that the existing road was considered to be no longer able to provide LOS D, equivalent to an inter-urban travel speed of 80kph. By realigning the road the level of service would be improved; therefore it was scheduled at that time for improvements during 2005-2009. The study recommended a standard 2 lane road. At the time of the study the AADT along the section of road ranged between 3000 and 4000 with projections of between 7000 and 9000 by 2019. The AADT figures for 2008 range from 7600 and 10400 and therefore already exceed the projected 2019 figures.

12.17 A Type 2 Dual Carriageway is now proposed for the majority of the route with the change in cross section to a single carriageway south of Castlebaldwin to be defined by a roundabout. The cross section provides two lanes in each direction with no hard shoulder and a central median of 1.5 metres with a segregation barrier. It has an overall cross sectional width of 21.5 metres which is 3.2 metres greater than the cross sectional width of a Type 1 Single Carriageway. As per Table 6/1 of the NRA *DMRB TD09/12* the capacity for such a cross section to a LOS D is 20,000 AADT.

12.18 The applicant presents a detailed and considered rationale for the cross-section proposed. In this regard I refer the Board to section 3 of the EIS and to Mr. Scott's brief of evidence to the hearing. As per Mr. Scott's submission the selection of the Road type for the PRD was based on an incremental analysis approach in recognition of the fact that the AADT threshold flows outlined in Table 6/1 are to be used as a guide, only. As per note 2 attached to the said table the appropriate cross section is to be selected in accordance with the NRA *Project Appraisal Guidelines*.

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- 12.19 It is noted that the AADT threshold figures given in the said table are based on the provision of a minimum LOS D which is defined as the point which the ratio of traffic flow to capacity is starting to result in difficult overtaking with 75% of journeys being delayed by slower vehicles resulting in platoons of 5 to 10 vehicles forming. I would accept that it is desirable to achieve better when possible rather than designing a road such that the carrying capacity of the road cross section is tailored to just exceed the forecast demand. Notwithstanding, the forecast AADT figures for the *Do Something* Scenario in the design year would average 9,500 which is materially lower than the 20,000 figure. It should also be noted that the figures given for the subject road are based on the highest AADT figures presented for the design year in respect of on-line section of the road at Toberbride.
- 12.20 The next step down in terms of cross section is a Type 3 Dual Carriageway which consists of two lanes in one direction of travel and one in the other. As per *TD 10/07* the Type 3 Dual Carriageway is considered appropriate for use on national road schemes in rural areas where the traffic flow in the design year are between about 11,600 and 14,000 AADT. However the road type is intended mainly where a road is to be upgraded on-line, to increase the capacity of the existing road.
- 12.21 A further step down is a Type 1 Single Carriageway which has a single lane in each direction with hard shoulders and no median barrier. From Table 6/1 of *TD09/12* this road type has a capacity of 11,600 AADT at LOS D. The forecast AADT figures for the *Do Something* Scenario in the design year do not exceed this figure with the on-line section from Toberbride to Doorly c.81% of the capacity.
- 12.22 The inclusion of the geometrically improved section between Collooney/Toberbride to Doorly followed an NRA Peer Review process which concluded that the 2.2km section of single carriageway with numerous direct accesses in place may, in the long term, impact on connectivity and level of service provided by the N4. This would be in addition to an inconsistency of layout insofar as a short section of single carriageway with direct access would separate two lengths of divided roadway which would be contrary to NRA recommendations. In this regard I would accept that the Type 2 Dual Carriageway provision at Toberbride would allow for consistency in cross section providing an unbroken dual carriageway layout between Sligo and Castlebaldwin. With base year AADT along this section of road at 10,400, it is near the design capacity based on the minimum LOS D for the Type 1 Single Carriageway and will exceed same in the 2032 design year in the *Do*

Minimum scenario and thus does not have sufficient capacity for future traffic needs.

- 12.23 The incremental analysis required to be undertaken considered a Type 1 Standard Single Carriageway and a Type 2 Dual Carriageway, the salient points of which are set out in section 5 of Mr. Keenan's brief of evidence. Incremental analysis is the process by which two variations on an alternative are compared in order to select the preferred solution. Typically such an analysis is undertaken to test the effect of an incremental increase in a scheme where a higher level of investment will lead to high benefits. The analysis determined that the Type 2 Dual Carriageway road type would have a significant impact on the safety of road users with historical data showing that dual carriageways result in accident rates 50% lower than for single carriageways. The analysis suggests that the dual carriageway option will result in daily journey time savings of over 28 hours in 2032 when compared to the single carriageway option. A costing exercise undertaken found that the dual carriageway option for the Castlebaldwin to Doorly section would be approx. €2.5-3 million ex VAT more expensive. Based on a Total Budget Cost of €80.67 million for the single carriageway option this equates to an increase in costs of approx. 3-4%. The analysis determined that construction cost benefits will largely be outweighed by the lifetime benefits of the Type 2 Dual carriageway over the Type 1 Single Carriageway.
- 12.24 Notwithstanding the economic justification significant emphasis is placed on the issue of safety in justifying the provision of a Type 2 Dual Carriageway. It is considered that such a cross section will reduce the accident rate. As noted above single carriageways have a higher accident rate with an increased risk of certain types of accidents such as fatal and serious injury accidents as a result of overtaking and head-on collisions. A Type 2 Dual Carriageway is also considered to have the benefit of separating local traffic from national traffic and does not allow for right turning movements such as those which would be required as Ghost Islands on a single carriageway road. Thus, I accept the argument regarding safety for users of the new road. I would also accept the premise that users of the existing road, in making short local trips, will find it safer to access and exit the road network due to significant reduction in traffic volumes and a lower speed limit following its re-designation.

Junction Strategy and Design

- 12.25 In terms of junction strategy the NRA *DMRB* has evolved in terms of design standards since the period of route selection process. The *DMRB* now restricts provision of major/minor priority junctions where the design flow is not expected to exceed about 300 vehicles 2 way AADT on the minor road and, on the major road is not expected to exceed 13,000 vehicles 2 way AADT. Cross roads are now prohibited.
- 12.26 In order to retain route capacity and safety, access onto the national road is restricted to junctions with the number of junctions limited to provide access into the main towns/villages. The parameters as set out in section 2.26 of the *TD 10/07 Road Link Design* for Type 2 and Type 3 Dual Carriageways are applicable.
- 12.27 In terms of the section where on-line improvements between Toberbride and Doorly Tds. are proposed the closure of all existing direct accesses on the route and collection of the severed local network east to west and vice versa are proposed. The eastern parallel link road will tie the existing N4 into the existing N4/N17 Toberbride roundabout. The western parallel link road is proposed between a proposed roundabout (Cloonamahan Junction, North) which will connect the L-3606-9 with an additional roundabout provided south-west of the proposed N4 in the townland of Doorly referred to as Doorly junction. It will be connected underneath the proposed N4 to the parallel link road via the Doorly Underbridge (North).
- 12.28 The roundabout where the PRD development is to tie-in with the existing dual carriageway at Toberbride is to be improved to bring it in line with design requirements.
- 12.29 A compact grade separated junction is proposed at Drumfin Td. on the Ballymote Road (L-1503-32) providing access to Ballymote to the west and Riverstown to the east. The proposal generally accords with the recommendations of paragraph 2.27 of *TD 10/97* in that such a junction arrangement is considered suitable where traffic flows would be between 1,000 to 3,000 AADT in the design year. As per the traffic projections on the compact connector roads (Turning Traffic) show AADT figures of between 1,300 and 1,500 in the design year of 2032.
- 12.30 A roundabout is proposed at Castlebaldwin and will clearly delineate between the change of cross section between the Type 2 Dual Carriageway and the

Type 1 Single carriageway. As per paragraph 2.41 of *TD 10/07* where there is a change from a Type 2 Dual Carriageway to a single carriageway the use of a roundabout is strongly recommended as a terminal junction in that a roundabout slows all traffic and help to indicate the change of cross section. The roundabout has been designed in accordance with the requirements of *TD 16*.

- 12.31 Where the local road network intersects with the PRD, provision is made via an under or over bridge save in one instance where road closure is proposed on L-1404-0 (at Cloongad and Sheerevagh Tds.) where alternative means of access both to Castlebaldwin and northwards to Riverstown is available.

Non- Motorised Users

- 12.32 In terms of non-motorised users TD10/07, which sets out the requirements in terms of road link design for Type 2 and Type 3 Dual Carriageways states that facilities for same shall be provided in accordance with *TD27* and should be encouraged by signage to use alternative parallel routes, for example, the old road. The document states that it is essential that Design Organisations integrate facilities for non-motorised users (NMUs) in the design at an early stage and that there is a requirement to provide proper and sufficient footways for pedestrians, cycle facilities and adequate margins for ridden horses and driven livestock where it is considered necessary, or desirable, for the safety or accommodation of these road users. In general, this will be the case for on-line improvements of national roads where no safer alternative route is available. However the document states that NMUs should be discouraged from using new off-line high-speed roads where the existing route remains available and provides a safer alternative.
- 12.33 In terms of the non-motorised user, whilst they are not prohibited from using a Type 2 Dual Carriageway, which is an all purpose road, the absence of any material hard shoulder would not present either a safe or amenable means of travel. The applicant, in acknowledging, this makes the case that the significant reduction in traffic volumes along the existing N4 that would arise as a consequence of the PRD would make the said route more attractive to both cyclists and pedestrians with signage proposed to encourage same. In addition the downgrading of the road will result in a reduction in the speed limit from 100kph to 80kph. Whilst it could be countered that the existing N4 by reason of its geometry and alignment is questionable in terms of safety and that reduced traffic volumes could result in greater speeds, I would submit that

the proposal would provide for a more advantageous situation than would occur with no development being undertaken.

12.34 Whilst specific segregated cycle lane provision is proposed along the proposed eastern parallel link road which will tie into the roundabout at Collooney, I note that there is no current provision along the existing dual carriageway northwards to Sligo with no specific proposals to date for retrofitting such provision although I note that it is an objective (O-CW-2) in the Sligo County Development Plan to develop a cycle route from Collooney to Sligo. Whether such provision would be alongside the dual carriageway is unclear. I also note that there is no specific objective to provide for dedicated facilities along the old N4. I would advise the Board that the corridor is not included in either Failte Ireland's 2007 Strategy for the Development of Irish Cycle Tourism or the National Cycle Network produced by way of a scoping study in 2010 by the Department of Transport and the NRA. In addition there are no signposted cycling routes in the vicinity of the PRD.

12.35 The PRD will intersect the Bear Briefne way-marked walking route north of Castlebaldwin and the route will be required to negotiate the proposed roundabout. As it stands the route crosses the existing N4 in Castlebaldwin, albeit where the 50 kph speed limit applies. Amendments to the proposed arrangement are delineated on Figures 4.1.8 and 4.10 of the EIS Addenda No.1 presented to the oral hearing where the path is to be re-linked to provide the crossing on the single carriageway section rather than on the Type 2 Dual Carriageway, thereby shortening the time to cross the national road. This provides for an improved arrangement over that originally proposed.

Conclusions – Justification for Proposed Road Development

12.36 I consider that the need for the proposed development in terms of the significant deficiencies of the existing N4 with regard to both capacity and safety, has been justified and that on-line improvement is not a feasible alternative in view of the multitude of accesses and properties along same which would present material difficulties. A greenfield option is therefore accepted. The assessment of alternatives is considered to be robust and the conclusions reached reasonable. In terms of the traffic forecasting it is unfortunate that the additional traffic data collected in 2012 was not provided so as to fully support the assertion that the traffic levels along the N4 remain comparable and reflective of 2008 traffic conditions with the detail provided for 2014 somewhat contradictory in this regard. On balance however, I submit that the information provided is adequate to support the conclusions made.

In terms of the proposed cross-section whilst the forecast AADT figures for the design year of 2032 would average in the region of 9,500 which is materially below the capacity (AADT) for LOS D of 20,000, it is considered appropriate taking into consideration the strategic importance of the N4 connecting Dublin and the designated gateway of Sligo and the future development of the north-west region as identified in the NSS. I also consider that the applicant has presented a robust justification of the cross section by way of incremental analysis. In this regard I note that the Board made reference to comparable issues in its adjudication of the Baile Bhuirne to Macroom PRD under reference 04.HA0025 in April 2011 when it was noted that the forecast AADT figures may not reach the level normally required to justify a Type 2 Dual Carriageway.

12.37 I submit that the junction strategy and design are consistent with DMRB and are appropriate to the existing road network and settlement pattern and the applicant has submitted a clear rationale for its approach. I also submit that the consideration of non-motorised users accords with the NRA recommendations for such type projects. Therefore, it is my opinion that the applicant as Roads Authority, has fulfilled its statutory responsibilities under section 13(5) of the Roads Act 1993, as amended, in that in formulating the road scheme it has considered the needs of all road users.

13.0 ENVIRONMENTAL IMPACT ASSESSMENT OF PROPOSED ROAD DEVELOPMENT

Introduction

13.1 Sligo County Council is also seeking EIS approval for the proposed road development. A NIS has been submitted to facilitate the Appropriate Assessment of the works on Natura 2000 sites in the vicinity of the development which will be dealt with in section 14 below.

13.2 This section of the report provides an assessment of various environmental topics correlating with the various sections of the EIS. I submit that this assessment is informed by the contents and conclusions of the EIS, and also by information provided at the various stages of the process in relation to the likely effects of this development on the environment and its possible consequences for proper planning and sustainable development in the area in which it is proposed to be situated. The assessment also has regard to potential mitigation measures, including those indicated in the EIS, those

proposed at the hearing and any others which might appropriately be incorporated into a decision to approve the development through the attachment of conditions. There is an element of overlap with the NIS which informs the Appropriate Assessment which is reflected in the report.

13.3 The issues arising can be addressed under the following headings:

- Human Beings
- Ecology
- Soils & Geology
- Water
- Air & Climate
- Landscape and Visual Impact
- Material Assets
- Cultural Heritage
- Interaction of the above

General Issues relating to the EIS

13.4 Reference is made in a number of the written submissions/objections to the PRD and CPO to the issue of levels and the degree of variation that may be permitted in any approved scheme and the implications of such changes in terms of environmental impacts and impacts on specific properties. Mr. Rea in his submission to the hearing recommends that the scheme, as designed, should only be allowed to be varied in vertical alignment by +/- 0.25 metres, and that in exceptional circumstances where the contractor may make a significant change in the design, that all parties impacted by the development be consulted and that those affected are independently advised, the cost of which would be covered and that all parties would be required to agree to the change.

13.5 Section 7.6 of the NRA Guidelines for EIA on National Road Schemes gives guidance regarding the issue of design changes post approval. Concurrently the scheme is obviously limited by the CPO corridor set out and cannot go outside this corridor. The scheme, post consent, is also limited by the fact it requires an EIS and EIA and, therefore, any modification to the scheme as approved would have to be under the provisions of Class 13 Annex II, or alternatively, that such changes could only be undertaken if it shown that the amendments would not lead to significant environmental effects. In the subject case any changes to the final design would have to satisfy the requirement that they would not result in significant environmental effects and

this determination would be supported by a screening process where appropriate. Therefore I would not consider it appropriate to accede to the above recommendation by way of condition.

13.6 Mr O'Donnell on behalf of Ms. P. Cooper contends that the absence of adequate assessment of the PRD on the Markree Castle gate lodge and the access road serving same, in addition to the failure to identify the fact that the lodge is used as a permanent private residence is a substantive flaw in the EIS document. Certainly it is somewhat unfortunate that the occupied status of the lodge was not identified and was acknowledged as an oversight by Mr. Meehan and Mr. Walter at the oral hearing, however I would not accept that such an omission is fatal to the adequacy of the document. Whilst the EIS should be able to inform the public of the impacts of a proposed development, as is clearly stated in the relevant legislation, it is not obliged to identify all effects. It is obliged only to identify the *significant effects*. I consider that the subsequent consideration of the impact on the gate lodge in terms of landscape and visual impact assessment as set out in Figure 10.1.2 of Addenda No. 1 of the EIS and Figure 15.2.2 of the Errata No. 1 presented to the oral hearing, the contents of the brief of evidence on Archaeology, Architecture and Cultural Heritage as presented to the hearing by Mr. Halpin and the subsequent discussion and questioning on same, allows for a proper and full assessment. The specific CPO issues raised by Mr. O'Donnell will be addressed in section 15 below and I shall make further reference to same in the cultural heritage section of this environmental impact assessment.

13.7 I am satisfied that the level of information provided in the EIS is such as to enable an assessment of the likely significant effects on the environment arising from the proposed scheme and that the information presented is such that it is in compliance with the requirements of the EIA Directive and Irish legislation, notably Section 50 (2) of the Roads Act. Whilst the EIS is an essential part of the process, I would comment that the acceptance of its adequacy does not necessarily oblige the Inspector or the Board to accept any or all of the assessments of effects in it or the conclusions reached in relation to the development in question.

Human Beings

13.8 As would be expected the likely effects of the PRD on human beings are addressed under several of the headings of this environmental impact assessment and, as such, should be considered as a whole. Of particular relevance, in my opinion, are issues arising from noise, material assets

including socio-economic impacts and visual impact. The latter headings are addressed under separate sections below.

- 13.9 With regard to noise and vibration Section 8 of the EIS and the brief of evidence by Ms. J. Harmon to the oral hearing are pertinent.
- 13.10 The PRD follows the standard practice of adopting the traffic noise design goal contained in the NRA document *Guidelines for the Treatment of Noise and Vibration in National Road Schemes*. The design goal is day-evening-night 60dB L_{den} (free field residential façade criterion). This is a well established standard which has been considered to be reasonable in previous road development projects, including those which have come before the Board. Mr. Harmon advised the hearing that WHO guidelines are not applicable for road schemes in Ireland and have not formed part of any noise criteria or conditions nor have they been transposed into Irish law.
- 13.11 Ms. Harmon also confirmed that a review of the guidelines has been undertaken with a draft document having just completed consultation stage. Whilst there are a number of alterations proposed none would affect the outcome of the assessment undertaken with the design goal of 60dB L_{den} remaining.
- 13.12 The EIS includes details of the existing noise climate along both the route of the existing N4 and the route of the PRD and, as would be expected in terms of the off-line section, are indicative of a rural environment. The survey methodology used followed that as detailed in the above guidelines with measurements taken at over 24 locations along the length of the PRD. I consider that the location of survey points are acceptable and adequately cover the study area.
- 13.13 Noise predictions were conducted using an acoustic modelling package which generates predicted noise levels for selected receiver points. The prediction methodology is based on the calculation of road traffic noise (CRTN) method which is the approved calculation method set by the NRA and which is also prescribed in the *Irish Environmental Noise Regulations 2006* and is considered reasonable. Traffic noise levels have been predicted at a total of 86 receiver locations both along the existing and proposed road and are as detailed in Figures 8.1.1 to 8.1.8 in Volume 3 of the EIS. A worst case assessment was undertaken ie. using the high growth traffic forecast for the design year 2032. Ms. Harmon advised the hearing that subsequent to the EIS additional assessments were carried out at a further c.31 locations,

largely following on from the content of the objections received to the CPO (none exceeded the stated parameter).

13.14 Noise mitigation measures are deemed necessary whenever all of the following 3 conditions are satisfied:

- (a) The combined expected maximum traffic noise level ie. the relevant noise levels from the proposed scheme, together with other traffic in the vicinity, is greater than the design goal,
- (b) The relevant noise level is at least 1dB more than the expected traffic noise level without the proposed road scheme in place,
- (c) The contribution to the increase in the relevant noise levels from the proposed road scheme is at least 1dB.

13.15 Taking into consideration the Errata to the EIS submitted to the hearing six locations (refs. R009, R010, R016, R119, R227 and R254) are identified from the modelling that require mitigation where the *Do Something* noise level is higher than the Do Minimum level and is in excess of the Design Goal for the Design Year 2032. The first three consist of two dwellings and a temporary halting site on the on-line section of the PRD at Ardcurley/Toberscanavan and Cloonamahon, with the remaining three on the off-line section at Knocknagroagh, Springfield and Drumderry. Noise barriers are proposed at each of these locations, details of which are given in section 8.5 of the EIS as amended by the Errata submitted to the hearing. The barriers range in height from 1.5 to 4 metres and from 45 metres to 200 metres in length.

13.16 It is acknowledged that it is possible that the vertical alignment may change during the final construction design which, in turn, could reduce or increase the requirements for noise mitigation. Should there be any changes to the development design that would result in increase in noise at any noise sensitive receptor an updated noise assessment would be required to ensure that the NRA design goals for noise are complied with.

13.17 It is inevitable that due to the rural nature of the existing environment along the majority of the PRD there will be an increase in noise levels arising with the EIS also acknowledging that there would be a reduction in noise levels along the existing N4 due to the diversion of traffic onto the new road. I consider that the information and analysis of the likely impact of noise contained in the EIS is robust and that the stated conclusion that the operation of the road subject to the stated mitigation measures would result in

the noise level being below the traffic noise design goal of 60dB L_{den} or below/equal to the *Do Minimum* noise level is accepted.

- 13.18 In terms of construction noise it is not possible to conduct detailed prediction calculations as the programme for the construction works has not been established in detail, although a number of scenarios have been considered including the processing of spoil at identified repository sites, the excavation of material from borrow pits within the confines of the CPO, in addition to the potential associated activities outside the CPO. The information provided in Section 8 of the EIS is further supplemented by the Noise and Vibration Assessments carried out for the spoil repository/borrow pits and potential treatment of spoil material outside the CPO as set out in Appendices 8.1 & 8.2 of Volume 4.
- 13.19 There is no published Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase. NRA guidance suggests a range of recommendations and maximum noise levels for road schemes covering activity during the daytime, evening, Saturdays and weekends (Sundays/Bank holidays). The NRA recommends daytime noise limit of 70 dB $L_{Aeq(1hr)}$, at 1m from the façade of any potentially affected sensitive properties. Whilst no specific requirements have been identified a number of generic mitigation measures are recommended for reducing the potential noise, vibration and blasting nuisances. The contract documents will specify the obligation to take specific noise abatement measures and comply with the recommendations of *BS 5228 Code of Practice for Noise and Vibration Control on Construction and Open sites, Part 1: and Noise and the European Communities (Noise Emission by Equipment for Use Outdoors) Regulations, 2001* and, in terms of the borrow pits, the noise limits set out in the guidance document *Environmental Management in the Extractive Industry, EPA 2004 and Quarries and Ancillary Activities – Guidelines for Planning Authorities – DoEHLG, April 2004*.
- 13.20 In conclusion I accept that an increase in noise levels is an evitable consequence of the construction activity, which has the potential to impact on the residential amenity of properties in close vicinity. This being said, the construction phase is temporary and due to the linear nature of the works, noise related impacts will be transient, which will limit the duration of exposure to individual properties. The restriction of noisy activity to daytime periods, only, together with standard mitigation methods for construction activity and noise control monitoring to ensure levels are not exceeded, will mitigate the potential for adverse impacts on sensitive receptors.

Ecology

- 13.21 Section 12 of the EIS accompanied by a number of appendices, in addition the briefs of evidence by both Dr. W. O'Connor and Dr. E. Moorkens refer with the sections on soils and geology and hydrology and hydrogeology also providing supporting information. Dr. J. Denyer also answered questions at the oral hearing. As the PRD is not located within an area designated for nature conservation there will be no direct impacts on any such site as a result of the construction and operation. However the PRD is located within close proximity to a number of designated areas giving rise to the potential for indirect impacts. This is addressed in further detail in the Appropriate Assessment in section 14 below.
- 13.22 As noted in the location description above the general landscape of the study area is characterised by low drumlin hills and for most of its length the PRD traverses improved and semi-improved agricultural pasture; habitats of low or insignificant ecological value.
- 13.23 During the field survey work within the zone of influence of the PRD six habitat areas were identified as containing Annex 1 habitats or a complex of Annex 1 habitats evaluated as being of County Importance (or greater). These locations are as follows:
- 13.24 *Toberscanavan Lough Complex* (National Importance) is a Mesotrophic lake with priority Annex 1 Alluvial woodland and Annex 1 Alkaline Fen habitat. Whilst a strip of alder/ash woodland at the eastern margin of the complex is to be removed this does not correspond to Annex 1 habitat.
- 13.25 The culvert that was installed at the time of the road improvement works in the 1980's at Toberscanavan Td. to which Messrs. Robert and Thomas Craig had specific regard in their submission to the oral hearing (submission no. 17) is of material relevance in this instance. As detailed in their submission the inadequacy of the culvert installed at that time and resultant increased flooding on the lands surrounding the Lough Complex has resulted in the effective creation of the Annex 1 Habitat, which has had a material negative impact on the agricultural quality of the lands in the vicinity. Their submission sets out in detail the correspondence with the County Council seeking to have the matter addressed.
- 13.26 As per Section 4.8.5.1.4 of the EIS the applicant proposed to replace the existing culvert with a moveable weir which would be adjustable to a minimum

elevation of 28.96m aOD, which was stated as being in cognisance of local opinion that the historical low water lake levels were lower preceding the said works in the 1980's. Any lowering of the weir plate level was to be done in stages in consultation with the NPWS. The effect of these drops were to be assessed on an examination of continuous lake level water monitoring over a minimum of two years, an examination of the effects on the riparian habitats based on the baseline habitat results and any associated resulting flood risk occurring downstream.

- 13.27 As noted in the Errata No.1 of the EIS presented to the hearing by Mr. Meehan the movable weir proposal has been deleted. A permanent weir designed to replicate the existing invert level (29.26m aOD) of the current upstream invert of the 1200mm diameter pipe culvert is now proposed. The reason given for this modification is so there is no uncertainty about future low and mean water levels within the Lough and the effects this could potentially have on riparian Annex 1 Priority habitats including alluvial forests with alder and ash. Dr. Denyer informed the hearing that alluvial woodland requires seasonal flooding and that any decrease in water levels may result in a decrease in the range and quality of the woodland. She stated that such changes are very difficult to monitor with changes occurring over long periods of time. She informed the hearing that the alluvial woodland is a good quality example of the priority habitat over a substantial area.
- 13.28 Whilst I empathise with Messrs Craig and the farmers they represent, there is a balance to be struck between what can sometimes be conflicting requirements, in this instance human activity and agricultural practices and environmental constraints. The fact that the priority habitat is a relatively new phenomenon does not negate the need to ensure its protection. The modification as proposed in the Errata removes any uncertainty as to the impact of the PRD in terms of indirect impacts and effectively the proposed arrangement will not result in a deterioration in the prevailing situation, albeit a situation considered to be artificially created and unsatisfactory by farmers in the locality.
- 13.29 The second habitat identified by the study is located within the *Lackagh Fen Complex* (National Importance) which contains Annex 1 Alkaline fen and transition mire habitats, priority Annex 1 Tufa-forming springs and high diversity marsh habitats. The route has been amended to minimise landtake within the complex. It predominately follows the line of improved agricultural grassland and wet grassland to the west. A small area of wet grassland/marsh habitat within the southern portion of the complex is to be

removed but this does not correspond to Annex 1 habitat. Transition mire habitat lies directly adjacent, but not within the footprint. Three areas of Tufa forming springs are located at a distance of 86m, 110m, and 160m from the PRD and would not be subject to direct impacts. There is the potential for indirect impacts affecting the hydrology and hydrogeology of the Lackagh Fen complex with particular cognisance of the presence of calcareous springs within the transition mire and fen habitat, corresponding to the priority Annex I habitat Tufa forming springs. As noted in the section of this EIA dealing with hydrology and hydrogeology specific design solutions are proposed in terms of embankment construction at this location

13.30 *Boathole Lough and Lough Corran* (County Importance) is the third habitat area which are Mesotrophic lakes with Annex 1 Alkaline fen and peatland /transitions mire habitat mosaic within cutover raised bog. A small area at the south-eastern corner is to be removed which corresponds, in part, to an intimate mosaic of Annex I habitats regenerating on cutover bog. The lakes are not directly affected by the PRD however it would pass within 50 metres of the wetland complex. This would make this sub-catchment susceptible to pollution in the absence of mitigation measures.

13.31 The fourth is the *Ardloy & Aghalenane Loughs* (National/International Importance) which are Mesotrophic lakes with Annex 1 Alkaline fen and Transition mire habitats and priority Annex 1 Tufa- forming springs. These loughs are connected to the Unshin River by a small stream that goes underground. The loughs and their efferent stream would not be directly affected by the PRD however the road passes in close proximity of these wetland habitats. The realignment has been selected and further amended to avoid landtake within this wetland complex to the greatest degree possible. An area of transition mire extends to the west of Aghalenane Lough and lies adjacent to but outside the boundary of the PRD. Tufa forming springs within the complex are calculated as being at a distance of 80-90 m due north of the proposed road line and will not be directly affected. No priority habitat is to be removed.

13.32 In response to a query from Mr. Sweetman Dr. Quinlan presented a conceptual cross section (submission no.24) running west-east through the tufa spring location in the vicinity of this complex and the proposed borrow pit area north of the proposed road alignment (for location see Figure 13.4.6 between Ch.10,000 and 10,500 m). Also of relevance in this regard are the groundwater levels as set out Section 14.3.2.6 and Table 14-16 of the EIS, specifically that recorded at borehole RC112 at Ch. 10,400m. With regard to

the latter the Board is advised that there is a typographical error in the figure given under the heading Average maOD and it should read 70.26. Mr. Meehan confirmed that the invert levels of the borrow pit have been set and shall be no lower than the level of the adjacent cut. As per the Addenda to the EIS presented to the hearing the invert at this location is 71.5m aOD.

- 13.33 As can be extrapolated from the information above the water level is 1 metre below the maximum cut/excavation. Dr. Quinlan stated that there will be no dewatering requirements and that this conclusion is based on survey work at the deepest point of cut over a number of years. Therefore there will be no change in groundwater flow in the catchment and no change in piezometric pressure. Consequently there will be no impact on the tufa springs during the construction phase. In terms of the operational phase the catchment area of the Ardloy-Aghalenane Lough complex is c.534,000m³. The area of cut and road surface that would drain into the Tawnagh catchment is c. 7,500 m³ which is less than 2% of the catchment area and that it can be concluded with a degree of certainty that there would be no impact on the tufa springs.
- 13.34 Dr. O'Connor informed the hearing that the tufa springs in question are very small, being effectively weak seepages on the floor of the bog. Dr. Denyer stated there are approx. 19 SAC's in the country where tufa springs would be listed as a feature of interest. They are very variable in size. In terms of Annex III of the Habitats Directive a priority habitat can be considered for designation depending on factors such as size, naturalness and representativeness. In her opinion the tufa springs at this location are considered to be a low quality example of same and would not be considered of merit to be considered for designation.
- 13.35 The Annex II Marsh Fritillary butterfly occurs within the Alkaline Fen and marsh habitat within the lake complex, whilst the Whorl snail species including *Vertigo geyeri*, an Annex II species, were recorded. Dr. E. Moorkens in her brief of evidence to the hearing on the vertigo snail stated that the Ardloy and Aghalenane Loughs site was the only area of the PRD with the potential to impact on the species. She concluded that the realignment of the road, in addition to robust hydrogeological investigations have resulted in the conclusion that the PRD has mitigated by avoidance any potential for negative impact on the said species. As per the environmental commitments post construction recording is to be carried out which will be used to inform design measures on road construction projects.

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- 13.36 The fifth habitat area identified in the study is the *Cuilleencroobagh Lough* (County Importance) which contains Annex 1 transition mire within a complex of cutover raised bog. The PRD development does not impact directly on this site.
- 13.37 The sixth is the *Swallow Hole Complex* (National Importance) which is a groundwater connected wetland corresponding to priority Annex 1 Turlough Habitat. The turlough habitat will not be directly affected as they are located at a distance. There is potential for indirect construction phase impacts arising due to the required crossing of the Loughmeenaghan outflow stream which is hydrologically connected to the turlough complex.
- 13.38 Effectively direct impacts on the Annex 1 priority habitats at the above locations and consequently the identified Annex I species they support, were avoided by modification of the PRD alignment. However it is acknowledged that fragmentation of the landscape is a cumulative impact of increases in linear infrastructure such as roads. The separation of semi-natural habitats from the wider countryside can reduce their viability as wildlife habitats as their connectivity to the surrounding landscape is reduced. In this way Lackagh Fen, Aghalenane and Ardloy Loughs and Cuilleencroobagh Lough will become isolated between the existing N4 and the proposed route.
- 13.39 A material level of detail is provided in terms of drainage design to counter the potential for indirect effects arising from the PRD. The drainage design includes the provision of an effective drainage design system corresponding to SuDS principles which will serve to protect water quality and maintain existing baseline drainage to these wetland systems during the operation of the PRD. Specific design stage mitigations have been developed to include drainage layers and perforated drainage pipes below the road embankment, in addition to hydraulic barriers to prevent hydrological or hydrogeological changes to these wetland habitats. Mitigation measures to protect water quality as detailed in the hydrological and hydrogeological assessment will also protect these habitats. In addition the implementation of the attenuation and SuDS treatment of surface water run-off during the operational phase will ensure that impacts arising with regard to water quality and aquatic ecology are limited to the local context and will not be significant.
- 13.40 There are 4 crossings which are considered to be aquatically sensitive watercourses, namely Markree Demense Stream (Toberscanavan Lough Outflow), *Turnalaydan Stream (Lough Corran Outflow)*, *Drumfin River* and *Drumderry Stream*. All are currently crossed by the existing N4. In terms of

protecting fish population and aquatic ecology the mitigation measures have been designed to follow the NRA *Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes* and the manual *Maintenance and Protection of the Inland Fisheries Resource during Road Construction and Improvement Works* by Kilfeather. I note that Inland Fisheries Ireland in their written submission to the Board did not raise any material concerns that could not be readily addressed by way of condition.

13.41 In terms of fauna, badger densities were evaluated as being of local importance whilst bat surveys confirmed that the corridor of the proposed N4 Collooney to Castlebaldwin Realignment is not a particularly important area for bats. The proposed realignment, in the main, does not significantly impact on commuting, foraging or roosting sites for bats. No hibernation roosts were recorded but a number of buildings affected by the PRD are locally important summer/night roosts for bats. Other terrestrial mammal species recorded include otter, Irish hare, fox, rabbit and hedgehog. No active otter holts were recorded in the study area. Standard mitigation measures are proposed for both construction and operational stages.

13.42 I submit that sufficient consideration and assessment has been given to the issue of ecology with measures proposed to be incorporated into the development and mitigation measures set out in some detail. I therefore accept the conclusions that the PRD would not have a significant negative impact on same.

Soils and Geology

13.43 Section 13 of the EIS with accompanying appendices, in addition to the brief of evidence by Dr. Quinlan at the oral hearing refer to soil and geology.

13.44 A considerable amount of geotechnical information is available for the site including 2 no. Ground Investigation Factual Reports, 2 no. Geophysical Reports and a Preliminary Geotechnical Interpretive Report. In terms of karst features the results of the geophysical survey between Ch 4000 and Ch 13800 following the karst feature survey identified no large faults, fracture zones or cavities. The geophysical survey identified subsurface, clay filled solutional features to the east of c.ch 8500. The site investigation drilling also encountered cavities, possibly solutional karst cavities, generally within the top 6-8m of bedrock. No other evidence of karst was noted during the site investigation drilling. The potential collapse of identified and unidentified karst features is a possible direct impact on the karst features during the

construction phase. The key mitigation measures are the avoidance of lowering the water table below rock head in areas where there is exposed rock at surface or where multiple karst features have been identified and the provision of closed drainage systems within known karst areas.

- 13.45 In addition it has been identified that there are areas along the route where soft ground conditions will be encountered which are unsuitable to support the weight of the road embankment with the locations set out in Table 4.2 of the Outline Erosion and Sediment Control Plan (Appendix 4.5 of the EIS) and delineated on Figures 4.11.1 to 4.11.8 of Volume 3 of the EIS. Although it is ultimately for the contractor to determine the appropriate construction techniques to be employed in order to allow for an assessment of worst case scenario the potentially environmentally significant method of dealing with same has been assessed, namely the removal of the soft material and its replacement with suitable fill material.
- 13.46 The earthworks balance has been largely determined by (a) poor ground conditions, (b) the requirement to accommodate over bridges and under bridges, (c) mitigation by avoidance and reduction which has been applied to the design primarily as a result of hydrological and hydrogeological impacts and the influence this has on the vertical alignment and (d) the requirement to provide suitable cover for drainage culverts. As a consequence there will be a significant deficit of fill material and significant surplus of spoil material generated. The spoil material to be generated (following any use in the project) is estimated to be 647,000m³. The fill requirements are estimated to be 1,240,000m³. The earthwork analytical calculations for the PRD are set out in Appendix 1 of Spoil Management Plan (Appendix 4.3) of the EIS.
- 13.47 The PRD specifically provides within the land acquisition boundary for:
- 4 no. land infill sites (ref. - SR-LI-01 to 04). In general these lands are sites which are flat or basin shaped and which lend themselves to grading down and blending of road construction embankments and are located in the townlands of Drumfin and Cloonlurg.
 - 4 no. Type 1 Spoil Repository/Borrow Pit sites (in general these are the extension of the road cuts and are located along the southern section of the PRD in the townlands of Ardloy, Tawnagh, Cloonymeenaghan and Drumderry (ref.- SR/BP Type 01. Nos. 1-4).

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- 3 no. Type 2 Spoil Repository/Borrow Pit sites which are generally to be contained below ground. Any protrusion above ground shall be to maintain existing topography. They are proposed to be located at Drumfin and Cloonmeenaghan (ref. - SR/BP – Type 2 – No.1-3)

In this regard type 1 spoil repositories/borrow pits were selected for backfilling predominately with glacial till material excavated during construction considered to be unsuitable for the construction of road embankments. Type 2 pits were selected for backfilling predominately with peat or alluvial or organic clays.

Their location is detailed in Table 4-14 of the EIS and delineated in Figures 4.11.1 – 4.11.8.

13.48 In terms of mitigation the design includes options for the appropriate re-use of suitable soil and subsoil material. Procedures are to be implemented for soil handling, in particular for peat material with regards to structure and potential for reduction to surface water quality. Appropriate fuel and equipment storage is to be implemented for the protection of soil chemistry and runoff to receiving watercourses. Any further collapse to identified or unidentified karst features is to be excavated and in-filled with graded inert material. As no impacts on the geological environment are anticipated as a result of the road operation phase no mitigation measures are therefore required during this phase.

13.49 I submit that sufficient consideration and assessment has been given to the issue of geology and soils with the measures proposed to be incorporated into the development and that any potential impacts can be adequately mitigated with mitigation proposals given in some detail.

Water

13.50 Section 14 of the EIS supported by appendices in addition to Dr. Quinlan's brief of evidence to the hearing refer.

13.51 The proposal is located wholly within the Unshin River catchment with surface drainage flows predominantly in a north-north easterly direction. The proposal involves c. 70 watercourse crossings, including the construction of 61 minor watercourse culverts and 9 main watercourses. The Office of Public Works (OPW) estimates the Unshin River catchment area to be 202km², inclusive of Lough Arrow and the Unshin River. Many of the

watercourses to be crossed were subject to OPW Arterial Drainage works as part of the Owenmore Drainage Scheme. Large extents of the lands adjoining and crossed by the proposed road are designated as benefitting lands of the said drainage scheme.

- 13.52 Water quality in the Unshin River is rated as 'Good Status' (Q4) throughout the study area with the exception of the most upstream section at the Lough Arrow outflow which was rated 'Moderate Status' (Q3-4) by the EPA during the 2012 monitoring survey. The downstream stations on the Unshin below the study area of the PRD and the lower reaches of the Ballysadare River were rated 'High Status' (Q4-5) during the 2012 monitoring survey. The Drumfin River was rated as 'Good Status' (Q4) during the 2012 EPA monitoring at Closkeybeg Bridge (St. 0800), this site is approximately 1.5 kilometres downstream of Behy Bridge, where biological sampling was undertaken for the current report. The upstream monitoring station on the Drumfin River at Kilmorgan Bridge was most recently surveyed by the EPA in 2006 and was found to be 'Moderate Status' (Q3-4).
- 13.53 Baseline surface water quality monitoring was carried out downstream of all drainage outfalls and at the inflow and outflow points of all lakes or wetlands with the potential to be impacted by the PRD in the summer and winter sampling of 2011. The majority of outfalls are discharging to waters classified as having good or moderate status. In addition baseline flow measurements were taken at previously ungauged watercourses where it is proposed to discharge road runoff.
- 13.54 Invariably there is the possible risk of surface water quality deterioration during both the construction and operational stages of the PRD with consequent downstream impacts on conservation areas and wetland habitats, though this is countered by the fact that under existing conditions runoff from the existing N4, save at the recently improved section at Ardloy, flows unattenuated into the Unshin River via its tributaries. As the new road would not directly lead to an increase in traffic volumes the increase in pollutants generated along the new road corridor will be mirrored by a similar reduction in pollutant load along the existing road.
- 13.55 In terms of the construction stage an Outline Erosion and Sediment Control Plan (Appendix 4.5 of the EIS) has been prepared as a method of water quality mitigation to offset potential construction stage pollution impacts to adjacent watercourses including the Unshin River cSAC/NHA and Lough Arrow cSAC/pNHA/SPA and their respective tributaries /inflow streams. The

main body of the report is guided by the technical guidance document *Control of Water Pollution from Linear Road Projects* published by CIRIA (C648) with other plans prepared for similar projects reviewed and considered.

13.56 The PRD development will require the re-section or re-aligning of stream channels at road crossings. There are 10 no. proposed stream/river crossings. Due to the meandering nature of the Lough Corran Outflow (or Turnalaydan Stream) as it passes under the alignment the stream is to be diverted. Additional measures, including habitat creation and improvement of the fisheries characteristics of the length of channel, are set out as mitigation measures. Following a submission from Inland Fisheries Ireland the Outline Erosion and Sediment Control Plan is to be amended so that crossing of minor watercourses in 'wet watercourses' will not be permitted.

13.57 As noted in the section of this EIA dealing with ecology the drainage system for the operational stage is detailed in scope. The drainage system will incorporate a system of grassed channels to be used in cut sections and on embankments and where these are not permissible concrete surface water channels are proposed. The conveyance system of side roads will also adopt this system where practicable. However there are instances where kerb and gully and over the edge drainage is considered more appropriate. The water conveyed in the grass and concrete channels will discharge to constructed wetlands and will provide for containment of accidental spillages at each outfall and petrol/oil interceptors. The design principle is to limit the runoff for events of equivalent frequency of occurrence to the same peak rate of runoff as that which would take place from greenfield sites. The constructed wetlands are, as far as reasonably practicable, designed for a residential time of c.24 hours (for a design storm of 1 in 100 years) in accordance with the advice given in HA 103/06. As per the EIS Addenda No.1 presented to the hearing the construction wetland/attenuation facilities at 12 identified locations are to be sealed within known karst areas. I am satisfied that the ponds are sized to provide sufficient storage to allow the road surface water runoff from all rainfall events up to and including the 1 in 100 year event to be attenuated to greenfield runoff rates and that treatment prior to discharge prevent pollution arising from accidental spillages occurring. The lining of the grassed surface water channels and ponds where necessary would protect any discharge of contaminants to groundwater aquifers.

13.58 In terms of groundwater levels the monitored water levels indicate that the water table is generally less than 3 metres below the surface, that regional groundwater flow is to the north and the Bricklieve Limestone Lower is

confined. The sensitivity of the water levels lies in the fact that excavation of road cuts has the potential to impact on water levels, particularly in the karstified bedrock.

- 13.59 There is the potential for localised lowering of the water table for the construction of road cuts, of which there are 12, and at the borrow pit sites. The impacts are considered with reference to the highest water levels recorded in the monitoring boreholes between 2006 and 2013 and based on the conceptual model of the Unshin River including its tributaries. Impacts of proposed road cuts on groundwater levels are set out in Table 14-28 of the EIS. The proposed road cuts 3, 5, 7, 11 & 12 are likely to intercept the water table. The magnitude of the impact is rated as negligible in that the impact on groundwater levels would be of insufficient magnitude to affect its use.
- 13.60 A well survey was conducted within 500 metres of proposed road cuts to take account of the typical zone of influence for a domestic supply well. The survey identified five wells including the artesian Carrownagark spring well. In terms of the latter the well is located c. 100 metres from the proposed road and has an approx. abstraction rate of 23m³/day or 8395m³/year. As per section 14.4.3.6.1 of the EIS and Dr. Quinlan's submission to the hearing the PRD is unlikely to pass through the water table within the zone of contribution or groundwater catchment area to the group water scheme based on assessment of the local topography and rockhead. Monitoring is proposed during the construction phase. Should the well be impacted the replacement or access to an equivalent water supply is to be dealt with as part of the accommodation works.
- 13.61 Mitigation measures to monitor and minimise the impact on groundwater levels during construction are detailed in sections 14.5.2.3.4 & 14.5.2.3.5 of the EIS including monitoring requirements where proposed road cut extends to bedrock by a karst expert with additional drainage measures to be incorporated into the road design.
- 13.62 As noted above specific design solutions in the vicinity of Lackagh Fen and Ardloy and Aghalenane Lough in terms of embankment construction are proposed aimed at reducing the hydrogeological impacts of the PRD.

Flooding

- 13.63 According to the flood mapping compiled by the OPW, there are several locations within the study area prone to recurring flooding. The locations are

delineated in Figure 14.1 Volume 3 of the EIS with the majority along the existing N4 road. Computer-based flood risk modelling has identified two areas where the proposed road crosses through extensive flood plains. One area is located at the outflow of Lough Corran (Turnalaydan Stream) and the other is located around Carrowkeel Wet Woodland at the point where the road alignment crosses the Drumfin River. The issue of the stream to Toberscanavan Loughs is dealt with in the section of this EIA dealing with ecology above. As per the EIA Addenda no.1 presented to the hearing sediment control mats are to be applied on the road embankments as they pass through the flood plains associated with the watercourses and which shall extend as a minimum from the embankment toe to the predicted 1:100 flood level. The flood risk to the road associated with the existing crossings of Springfield Stream, Lissycoyne Stream and the tributary of the Drumderry Stream will be alleviated following the replacement of the culverts as part of the PRD. In all instances culverts/bridges are to be sufficiently sized to accommodate the 1 in 100 year flood event with a 20% allowance for climate change.

- 13.64 In conclusion, I consider that the assessment of the impacts on hydrology and hydrogeology are robust and that the measures proposed incorporating well established engineering controls and monitoring are comprehensive and would ensure that the potential for contamination of surface waters, ground waters and private water supplies is minimised during both the construction and operational phases of the proposed scheme.

Air Quality and Climate

- 13.65 Section 9 of the EIS and the brief of evidence by Dr. E. Porter presented to the oral hearing pertain to air quality and climate change. The assessment in terms of air quality was carried out in accordance with NRA guidance document *Guidelines for the Treatment of Air Quality during the Planning and Construction of National Road Schemes*. The baseline air quality along the route was assessed by means of air quality measurements at sensitive locations close to the PRD, by an analysis of representative EPA monitoring data for the region, and by air dispersion modelling of the existing road infrastructure.

- 13.66 The results of the baseline air quality survey in the area show that the recordings for Nitrogen Dioxide and particulate matter (PM₁₀ and PM_{2.5}) are materially below the limit values set out in the relevant air quality standards under Directive 2008/50/EC and SI.180 of 2011. In terms of the

characterisation of the existing environment the baseline assessment concludes that the area in the vicinity experiences good air quality. This is consistent with its largely rural location where the predominant land use is agriculture and where there is an absence of industry of any significant pollutant generating activity. Baseline conditions for nitrogen dioxide (NO₂) and fine particulate matter (PM₁₀ and PM_{2.5}) were established in accordance with NRA guidance. NO_x is identified as of concern in relation to sensitive ecosystems. The results of the baseline air quality monitoring indicates that each of the pollutants was well below annual limits for the protection of human health and for protection of vegetation.

- 13.67 The main impacts associated with the construction period relate to dust emissions. There are numerous activities that have the potential to generate dust and these include normal road building operations, movement of material, rock breaking, blasting and deposition of material in desposition/restoration areas. The location of the construction compounds have not been established but it likely that there will be a number located along the route.
- 13.68 It is expected that construction of the PRD could potentially generate the movement (transport volume) of c. 735,000m³ of soft geological material (including c. 307,000m³ of peat and 234,000m³ of organic clay) to identified locations predominately within the CPO which may give rise to dust and particulate emissions. Peat deposition would also be expected to be the dominant source of greenhouse gas emissions. The emission from the spoil repository processes lead to an annual average dust deposition level including background of 89.5mg/(m²*day) at the worst-case receptor which is 26% of the TA Luft Limit Value of 350 mg/(m²*day). PM₁₀ and PM_{2.5} concentrations are also significantly lower than the ambient air quality standards at the nearest residential receptors to the repository/recovery sites. In addition an air quality assessment was undertaken in order to consider potential spoil management activities which may be required off site. The results for dust and PM₁₀ and PM_{2.5} are also significantly lower than the requisite standards.
- 13.69 An Environmental Management Plan (EMP) is to be formulated for the construction phase of the project and will address the issue of dust emissions. In this regard section 2.5.1 in the Addenda to the EIS presented to the oral hearing proposes limiting the speeds of vehicles using site roads at identified locations along the route, the reason for same being an additional

commitment in order to reduce the potential for dust arising during construction.

- 13.70 Road traffic is expected to be the dominant source of emissions during the operational phase. Assessment was undertaken using the UK DMRB air dispersion model performed at 23 worst case receptors along the existing and proposed route. CO, Benzene, PM₁₀ and PM_{2.5} modelled results for both the design years 2017 and 2032 are all well below the relevant ambient standards. In terms of NO₂ the modelled results would be below the relevant limit value.
- 13.71 With regard to climate EPA guidance states that a development may have an influence on global climate where it represents 'a significant proportion of the national contribution to greenhouse gases'. The EIS concludes that based on an analysis of the increase in traffic resulting from the PRD CO₂ emissions resulting from the development would be 0.002% of Ireland's Kyoto target in 2017 and 0.0025% of the relevant target for 2032. Consideration has also been had to the carbon losses arising from peat disturbance through site clearance works. I would therefore accept the conclusion that the impact of the PRD on national greenhouse gas emissions will be negligible in terms of Ireland's obligations under the Kyoto Protocol.
- 13.72 I am satisfied that the impacts on air and climate arising from the construction and operational phases of the development have been adequately assessed in the EIS. I consider that it has been effectively established that pollutant levels will remain below statutory limits and that dust levels will be controlled to ensure that there will be no impacts on public health. I therefore accept the conclusions that the impact of the PRD would not be significant.

Landscape and Visual Impact

- 13.73 Section 10 of the EIS and the accompanying appendices in addition to the brief of evidence presented to the hearing by Mr. C. Walter refer.
- 13.74 The proposed road development passes through the margins of a drumlin zone, comprising a series of low interlocking hills aligned in a northwest to southeast direction. The area is relatively low lying, ranging in elevation from about 40m ASL to 100m ASL. The higher lying areas are largely covered by open pasture land delineated by a network of hedgerows with the lowlands mainly comprising wet marginal farmland and boglands with occasional blocks

of coniferous plantation. Several small lakes are found throughout the area. The area is generally lightly populated with dispersed housing throughout.

- 13.75 As per the current Sligo County Development Plan the landscape surrounding and adjacent to the PRD is principally classified as 'Normal Rural Landscape' with the exception of a small number of relatively confined 'Sensitive Rural Landscape' areas in the vicinity. These are located to the west of Doorly Hill, Lough Corran and Boathole Loughs at Drumfin, the Toberscanavan Loughs and the Markree Estate. To the south of the study area are Lough Arrow (not visible from proposed route) and the Bricklieve Mountains.
- 13.76 Normal rural landscapes are defined as areas with natural enclosing features (eg. topography, vegetation) which have the capacity to absorb a wide range of new development forms with sensitive rural landscapes described as areas that tend to be open in character, with intrinsic scenic quality and a low capacity to absorb new development.
- 13.77 In addition the landscape characterisation Map 7.D also contains two classifications with particular reference to visual impacts. These categories are 'Visually Vulnerable Areas' and 'Scenic Routes'. The only designated visually vulnerable area in the vicinity of the PRD comprises the Toberscanavan Loughs and their surrounds which already abut the existing N4 at Ardcurley. There are no designated scenic routes in the vicinity of the PRD.
- 13.78 The widespread impact of the PRD on the landscape is acknowledged in the EIS and is described in some detail. By reason of the majority of the alignment being off-line it will inevitably alter the character of the receiving environment. The greatest adverse landscape impact will arise in the areas where cut and fill are proposed. Of particular note in this regard are:-
- section between Ch.10250m -11,900m at Ardloy/Springfield, Tawnagh and Cloonmeenaghan where the impact pre-mitigation is considered to be significant adverse due to the permanent alteration of the drumlin topography in this area, the proposed major cut through Ardloy/Springfield hill and the enclosure of Cloonmeenaghan Hill from both sides by the existing and proposed N4 routes.
 - Drumderry Hill and Castlebaldwin (Ch. 12,600m – 14,500m) due to the permanent alteration of eastern hill slopes of Drumderry Hill and the extensive ground disturbances and level changes across the eastern and

southern vicinity of the hill in close proximity to Castlebaldwin and Bellarush.

- the designated scenic route along L1403-0/1404-0 south of Drumderry Hill from Castlebaldwin to Bellarush.
- Aghalenane and Ardloy Lough Complex which will effectively form an island with the existing N4 to the east and the PRD to the west

13.79 The visual impact for 154 occupied properties or property groups were assessed, the locations of which are detailed on Figures 10.1.1 to 10.1.8 of Volume 3. The anticipated significant visual impacts arising are dispersed along the proposed road development and are typically experienced where the PRD runs at elevated levels in close proximity to properties resulting in potential restrictions of views or overlooking. Such situations arise at Carrownagark where the PRD crosses the L-5402 and at Aghalenane where it would be viewed from the L-5403.

13.80 The proposed mitigation measures and planting proposals are based on the NRA publication *A Guide to Landscape Treatments for National Road Schemes in Ireland* (2006). Landscape and visual mitigation measures are predominantly in the form of roadside screen planting, the assimilation of embankments within the land take boundary of the proposed road and the incorporation of measures for wildlife. A suitable grassland treatment is proposed for all areas of open ground within the CPO where no screen or feature planting is proposed. Mitigation measures for specific properties are also detailed with proposals providing for additional hedgerow planting along the majority of the CPO boundary to which the Addenda to the EIS specifically refers (see section 2.3.1 of same). These measures will reduce but will not eliminate the impact of the road on the rural landscape.

13.81 In terms of cumulative effects the proposal will result in a second major transport corridor being introduced into the landscape but I consider that the spatial separation between the existing and proposed N4 alignments, the undulating farmland and peatland setting of both alignments and the extensive screening by established roadside vegetation along many parts of the existing N4 will provide a visual separation between both road corridors. The by-passed N4 alignment sections are also expected to evolve into a quieter country road which will be clearly subordinate to the much broader proposed new road corridor. For this reason both will appear as largely insulated, stand alone route corridors throughout the majority of the offline sections of the PRD. An increased combined massing of both alignments will be largely limited to the tie-in locations of both alignments at Doorly to the

north and Castlebaldwin to the south and at the proposed overpass at Ardloy/Springfield Hill. In addition there will be a clear visual hierarchy between the dual carriageway corridor functioning as the main transportation link within this wider rural setting and the existing single carriageway which is anticipated to become a much less frequented local access road. For these reasons cumulative visual impacts resulting from additional changes caused by the *Proposed Road Development* in conjunction with the existing N4 alignment are not considered to be critical.

13.82 The issue of the visual impact on the Markree Demense with specific regard to the access road and gate lodge at Ardcurley were raised by Mr. O'Donnell on behalf of Ms. P. Cooper and C. & M. Cooper at the oral hearing. I propose to address this matter in detail under cultural heritage below.

13.83 In conclusion, notwithstanding the robust nature and generally low sensitivity of the surrounding landscape the PRD will have a material and permanent impact on the landscape of the area but I submit that the impact has to be balanced against the wider benefits that will accrue from the project and the exigencies of the common good.

Material Assets

13.84 Sections 7 and 11 of the EIS (and their respective appendices), in addition to the briefs of evidence by Freda Salley to the hearing refer to agricultural and non-agricultural property. Section 6 of the EIS and the brief of evidence by Mr. Craig Bullock refer to the socio-economic impact.

13.85 As outlined above, with which I fully concur, the PRD will have significant benefits for the wider community by substantially reducing traffic hazard and improving access to Sligo. The proposal will, however, have a direct impact on a total of 41 non-agricultural properties. 26 residential properties are directly impacted upon of which 15 are to be acquired of which 8 are currently inhabited. The significant proportion of these dwellings are located along the on-line section of the proposal in the townlands of Toberbride, Mullaghnabreena, Cloonamahan and Doorly. The status of the uninhabited property on CPO No. 154, which is currently in a ruinous condition, is addressed in section 15 below. Of the 15 properties 12 will be demolished with 3 to be retained for possible resale. Of the remaining residential properties land take will consist of acquisition of part of the entrance, garden or boundary wall.

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- 13.86 In terms of non-residential land there are 13 miscellaneous properties which would not be classified as agricultural, residential, commercial or recreational. These consist of the acquisition of the ruins of a shed and land on one property and with land and part of the public road on the remaining properties. In terms of the 2 commercial properties directly impacted, the first consists of the acquisition of part of the car parking area and access road to one of the units in the Toberbride Business Park at Collooney and the second involves a portion of public road and set back area to the front of a former public house at Lackagh.
- 13.87 Mr. Barry Walsh made a submission with respect to the PRD in the context of the proximity of the property he has recently acquired at Kingsbrook. The line of the road would be approx. 125 metres to the rear of the dwelling and will be higher than same arising from proposed fill of between 4-6 metres between Ch. 9300 and 9500. An attenuation pond is also to be constructed. In terms of visual impact I note that specific consideration has been given to the property in question and as extrapolated from Figure 10.1.6 the post mitigation visual impact assessment at same (No. 208) would be imperceptible. In terms of noise section 8 of the EIS and particularly Table 8.13 and Figure 8.1.6 are relevant. As can be seen from both no noise mitigation is required with predicted noise levels in 2017 and 2032 in the *Do Something* scenario stated as being 54 L_{den} and 55 L_{den} respectively and are below the 60 L_{den} applicable parameter.
- 13.88 Sydney and Olive Taylor also made a submission on the PRD with specific reference to the sign advertising their driving school and the impact the proposal will have on their business. In accordance with Part 5 (Advertising and Commercial Signage) of the NRA's Policy Document 'Tourist and Leisure Signage on National Roads' advertising, commercial or retail signage will not be erected along the route of the PRD. I would also consider that there is merit in the supposition but forward by the applicant at the oral hearing that the patrons availing of their motoring school would more likely be local to the area who may still use the existing N4 rather than intra-urban traffic on the new National Primary Road. I would therefore conclude that there is no justification for a relaxation in terms of the approach to advertising on national roads.
- 13.89 Due to the extent of the off-line development the PRD will undoubtedly have a material impact on established farm enterprises. The alignment is predominantly through drumlin hills with extensive wetland and small lakes dispersed throughout the area. The land consists of moderate agricultural

range and usage. The main enterprises are beef, dairying and mixed livestock.

- 13.90 The area to be removed from agricultural production is approx. 170 ha. It will directly impact on 92 farms either by sub-dividing them or reducing the area of the farm. Additional assessment was carried out on two of the farms by an equine specialist, whilst Mr. Sadlier presented a brief of evidence to the hearing on the equestrian business located at Toberbride.
- 13.91 There are 22 farms which would have a major degree of impact which represents 23.9% of all farms with 39% experiencing a moderate impact. No farm is identified as having a severe impact. Without mitigation measures these farm enterprises cannot be continued due to the combination of the level of sub-division created, the type of enterprise, farm size, land take and the effects on farm buildings and facilities. Following mitigation 8.7% of farms would continue to have a major impact. The impacts on individual farms are assessed on the basis of significance criteria and are detailed in Appendix 11.2 of the EIS.
- 13.92 The severance of these properties will undoubtedly result in increased inconvenience. Severance of land is an unavoidable consequence of the off-line development and alterations to individual properties will occur. Whilst not wishing to undermine or underestimate the concerns expressed regarding the inconvenience and disruption that will be generated, I consider that the improvements will benefit the community at large. Whilst I accept that all of the impacts cannot be completely eliminated this has to be balanced against the identified need to provide a national primary road to an acceptable standard and, provided the land take is reasonable and proportional, these impacts are considered acceptable. Increased management input and/or operational changes due to be land take are effectively matters for compensation should the CPO be confirmed by the Board.
- 13.93 The issues arising with regard to the outstanding CPO objections have been addressed in full in section 16 below.
- 13.94 The largest community in the road corridor is Castlebaldwin, the core of which is represented by c.20 properties. Riverstown is a larger community situated 3km east of the existing road. Along the routes there are small concentrations of houses at Drumfin and Lackagh with scattered housing along its length and the surrounding countryside. There has been considerable new development to the east of the existing N4 eg. in and around Riverstown and in surrounding

townlands such as Coolbock. In comparison there has been relative little new development west of the existing N4 except some single house construction along the local road between Castlebaldwin and Ballymote (L1404-0). In part this is because much of the land is low lying and wet.

13.95 There are no community facilities directly along the length of the existing N4 between the northern and southern tie-ins with the exception of the facilities in Castlebaldwin thus severance is restricted mainly to crossings of the road and to interaction between individual householders living along the road. There are schools and other facilities located a short distance from the N4 as noted above, including facilities in Riverstown and the school at nearby Coolbock. Traffic will be able to continue to access these facilities using the existing road or via overbridges forming part of the PRD. There are scattered single dwellings throughout the study area, but most individual properties are located on the existing N4 or to the east of the new alignment north of Ardloy. The PRD presents no new severance impact on dwellings within the corridor, but the improvement in safety for pedestrians and cyclists due to the transference of most traffic from the N4 will lead to moderate positive relief from neighbourhood severance, i.e. interaction between individual households. The L-54041 at Cloongad and Sheerevagh Td. is to be closed but alternative routes to both Riverstown and Castlebaldwin are available.

13.96 Certainly the PRD which will bypass Castlebaldwin will have a material impact on the commercial activities in the village, notably a public house and filling station with attached fast food restaurant. In addition there is an art gallery at Tawnagh and the Bed and Breakfast at Lackagh, both of which benefit from signage along the existing route. It is accepted that all benefit from passing trade which will be removed by the new road cannot be resolved through mitigation although advance signage is proposed for Castlebaldwin. However, again, this has to be balanced against the identified need to improve the road and the wider positive net economic impact.

Cultural Heritage

13.97 Section 15 of the EIS and accompanying appendices and the brief of evidence presented to the hearing by Mr. Halpin refer.

13.98 In accordance with the relevant NRA Code of Practice the applicant stated that every effort has been made to avoid direct impacts on archaeological and architectural heritage features. There are 9 recorded monuments located within 100 metres of the proposed road development. The closest are the

possible enclosure in Toberbride (CHC 4/SL025 -164) on route, the site of an enclosure in Cloonamahan (CHC 21/SL026-76) on route, a ringfort in Cloghoge Upper (CHC 100/SL034-191) 9 metres from the route and a ringfort in Castlebaldwin (CHC 98/SL034-184) 11 metres from the route. One possible enclosure was identified on aerial photographs in Doorly townland. If confirmed during archaeological test trenching it is proposed that the site be preserved by record in agreement with the Department of Arts, Heritage and the Gaeltacht.

13.99 Specific mitigation measures are to include targeted archaeological test excavations, building surveys, townland boundary survey, wade surveys, screen planting and geophysical surveys and are detailed in Table 5-16 of the EIS. In addition to the targeted site specific test trenching, a general testing strategy will be applied to all lands. Subsequent mitigation will involve either preservation in situ or preservation by record through full archaeological excavation. By way of response to the submission from the Department of Arts, Heritage and the Gaeltacht the applicant confirmed that the works would be overseen by a project archaeologist who will liaise with the National Monuments Service for all archaeological aspects of the PRD (see submission 20).

13.100 Castlebaldwin House is a 17th century fortified house visible c.240 metres to the east of the existing N4 south of Castlebaldwin. Its setting is currently characterised by marginal/wet land with housing to the background and certainly cannot be considered to be of a particular high quality. Whilst the structure is a National Monument there does not appear to be a clearly designated access to it although a plaque detailing information is erected on local road 1403-0 to the east. The PRD, which is to be in fill and at a closer position than the existing N4 (c.128 metres to the west) coupled with the proposed roundabout, will have a greater visual impact on the setting of the house than already exists. The corollary is that it is anticipated that better views of the house will be available from the proposed alignment.

13.101 A landscape infill area between the existing and new road alignment at this point providing for a viewing point is proposed with modified details provided in Figure 10.1.8 in the EIS Addenda No.1 presented to the hearing. Whilst the proposed landscaping will assist I am of the opinion that the PRD will have an impact on the National Monument's setting. However I would submit that the impact would not be of a degree or severity as to compromise the PRD at this location. In this regard I note that the Department of Arts, Heritage and

the Gaeltacht, in its written submission on the PRD has no objection subject to conditions, none of which specifically relate to the national monument.

13.102 The issue as to whether due consideration was given in the EIS to the impact of the PRD on the Markree Castle Demense was raised by Mr. O'Donnell on behalf of C. & M. Cooper and Ms. P. Cooper who resides in the gate lodge, that is accessed via a private access road off the existing N4 at Ardcurley. As noted in Section 10.4.1.3.1 of the EIS the impact of the PRD on the Markree Demense which is designated as a sensitive rural landscape will not be directly affected. Indeed in this regard I note that the said demesne formed one of the substantive constraints in terms of route selection and, as such, mitigation by avoidance was the approach adopted.

13.103 As noted the entirety of the estate and the gate lodge are listed for protection in the current Sligo County Development. As per the NIAH it is considered to be of national importance with the gate lodge itself considered to be a '*gothic tour de force, being one of the more impressive Irish gate lodges*'. It is certainly of a design intended to draw the eye. It was erected to the designs of architect Francis Goodwin between 1830 and 1835. At the time of compilation of the NIAH (2005-2006) the accompanying photographs show that the gate lodge was not occupied and was not in a habitable condition. Refurbishment works have subsequently been undertaken and, as noted above, is now occupied as a private residence by Ms. P. Cooper.

13.104 The gate lodge is accessed via a private access road capable of accommodating single vehicle traffic, only, with a gate erected at the lodge precluding public access to the demesne. The said access road is straight in alignment and approx. 240 metres long. As noted on inspection views of the gate lodge are available for a short distance when travelling in a northerly direction along the N4 with views largely obscured when travelling in a southerly direction due to the topography and to existing planting both along the roadside boundary and that providing its backdrop.

13.105 Reference is made in section 15.3.2.7 of the EIS to the fact that the northernmost part of the proposed road is located c. 250 metres to the south-west of the historic boundary of the Markree Demense and that the PRD does not encroach into the demesne grounds nor does it impact on any part of the demesne boundary or the associated features and it will not be visible from the main house, Markree Castle. Reference is made to several protected structures associated with the Demense including the gate lodges. It is also the first entry in the RPS within 1km of the proposed development listed in

Appendix 15.4, with the Demense in general given CHC Number 8 with no predicted impact cited. Figure 15.2.2 of Volume 3 delineates the gate lodge as a protected structure and delineates the Demense as marked by the estate walls as a cultural heritage constraint site.

13.106 Section 5.2 of the NRA's *Guidelines for Assessment of Architectural Heritage Impacts on National Roads Schemes* states that an architectural heritage consultant should define the width of the preferred route study corridor in a manner that would allow detailed assessment of any impacts on architectural heritage of merit arising from the construction and operation of the new national road. This would as a rule, be 50 metres either side of the centre line of the new road. The guidelines recommend that the consultant should use professional judgment in deciding where the study corridor should be extended in respect of the chosen route to take into account structures, demesnes and the settings of architectural heritage beyond the proposed study area. The relationship of structures or features to one another may also be of importance and should be considered and evaluated, where appropriate. As noted in Mr. Halpin's brief of evidence to the hearing the 50 metre corridor was applied and thus, any structure beyond same was not subject of specific impact assessment on the basis that it is generally deemed that any impacts beyond 50 metres from the CPO line are indirect and slight to imperceptible. Whether the discretion as allowed for in the guidelines should have been used at this location during the preparation of the EIS is a moot point. Notwithstanding, consideration was given to the matter in Mr. Halpin's brief of evidence to the hearing.

13.107 As confirmed by Mr. Scott to the hearing the nature of the works at this location entail the extinguishment of the right of way along the access for a distance of approx. 80 metres from its junction with the N4 to allow for the necessary road improvement works, including the provision of the eastern parallel link with a new access to be provided from the link road and improvement of the access before its tie-in with the existing access before the boundary of the CPO line. As a consequence of the works the private road will be shortened by approx. 10 metres.

13.108 The access road in question is perfectly straight in alignment from its junction from the N4 to the gate lodge. As can be extrapolated from the map dated 1819 presented to the hearing (submission 29) the access is not delineated on same and was, most likely, developed at the same time as the gate lodge between 1830-1835. The castle itself dates from around 1802.

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- 13.109 The issue of the curtilage of the gate lodge in its own right was raised by Mr. O'Donnell and whether consideration was given to the impact of the proposal in that context. Mr. Halpin was of the view that the curtilage extended to where the gate posts are. Notwithstanding the fact that the posts evident on site are of recent origin they do appear to coincide with the 'V' shape in the hedgerow and which appears in all the historic maps for the area and I would consider the said conclusion to be reasonable. This also appears to mark the current private amenity space associated with the lodge. The extent of the CPO line is set back 70 metres from this 'V'.
- 13.110 It was also suggested that the private road being a structure in its own right is afforded protection as a consequence of its location within the attendant grounds of the gate lodge. Mr. O'Donnell contended that the removal of part of the road as part of the PRD would therefore constitute the removal of part of a protected structure and is therefore contrary to the provision of the Sligo County Development. I would not necessarily concur with this view. I would submit that the extent of the attendant grounds of the gate lodge would reasonably be demarcated by the said 'V' and that works beyond same would not entail works to a protected structure.
- 13.111 However should Mr. O'Donnell's supposition be accepted it is my opinion that the removal and shortening of the access road by approx. 10 metres, in its own right would not constitute an impact as to materially compromise the proposal. The impact must also be countered by the purpose of the proposal which is fully supported by an objective of the Sligo County Development Plan and the exigencies of the common good. I would also submit that the works would not detrimentally affect the setting and character of the gate lodge with the improved works tying into the existing within the CPO line. As such, the impact is not considered to be material. In my opinion the impact will also be countered by the improved access junction which will allow for safer turning movements.
- 13.112 A constructed wetland is also proposed to be provided to the south of the existing access. Mr. Meehan informed the hearing that the attenuation pond would not require lining and would not be raised more than 1 metre with landscaping around same to assist in its screening. In this regard Figure 10.1.2 indicates a riparian woodland mix. I submit on the basis of the information available, that the conclusions reached that there will be slight indirect adverse impacts on the setting and visual impacts on the gate lodge and its curtilage which are moderately significant due to the 'National' rating given by the NIAH to be reasonable, but that the proposed landscaping and

mitigation measures will assist in ameliorating the impact whilst aiming to retain the intermittent views of the gate lodge. The fact that the attenuation pond is downslope of the gate lodge and is low in construction I consider that the impact of the feature, itself, on any views of the gate lodge would not be to an extent over that currently available as to warrant a material concern. Views from the gate lodge westward will inevitably be altered and the road network will feature more prominently in front garden views. Screening of the attenuation pond will assist in ameliorating its impact when viewed from same. Again it is my opinion that the the residual impact must be balanced against the overall gain that will be achieved by the provision of the upgraded road and improved road safety in the interests of the common good.

13.113 I note that the relevant prescribed bodies who have a remit in terms of the built heritage were notified of the proposed development and were invited to submit any observations/comments on same. No such submissions were received.

13.114 In conclusion I consider that there is sufficient information before the Board to allow for an appropriate assessment in terms of cultural heritage and that it is not considered that the PRD would have a significant adverse impact on same including the character or setting of the Markree Estate and associated protected structures or that the impact arising in this regard would be contrary to the provisions of the Sligo County Development Plan.

Interaction of the foregoing

13.115 The interaction of impacts assessed above are extensive. The main interactions would include water and flora and fauna, air and human beings and flora, material assets and human beings and landscape and human beings. I consider that interactions are fully assessed and therefore is considered acceptable.

14.0 APPROPRIATE ASSESSMENT

14.1 Whilst the NIS has been embedded within the Ecology Chapter of the EIS, accompanied by a series of technical appendices and provides useful information for the purposes of EIA, it is also a self-contained document for the purposes of appropriate assessment. Essentially the NIS assesses whether the proposed project, alone or in combination with other projects or plans, will not, beyond reasonable scientific doubt, have adverse effects on the integrity of a Natura 2000 site. It includes any mitigation measures

necessary to avoid, reduce or offset negative effects. The integrity of a site relates to its conservation objectives with regard to the conservation status of the qualifying interests and conservation interests for which the site is designated.

- 14.2 The desktop study identified the designated Natura 2000 sites within a 15km radius of the study area, the conclusions of which are set out in Table 1. There are no designated sites within the footprint of the PRD. However, there are hydrological connections between the watercourses the PRD crosses and designated Natura 2000 conservation sites, the Unshin River cSAC and the Lough Arrow cSAC and SPA. There would, therefore, be a risk from pollution via contaminated run-off/accidental spills. As such the NIS has been carried out with particular reference to same as all the watercourses within the proposed route drain into these designated sites.
- 14.3 The Unshin River cSAC (site code: 001898) runs parallel and to the east of the existing N4, from Lough Arrow to Ballysadare Bay with the nearest points being at Lackagh where the Unshin River is crossed and at Drumfin where the designated site immediately abuts the alignment (Figures 12.2.1 to 12.2.8). In terms of the PRD the landtake line is closest to the designated site in the townland of Knocknrgroagh where it is approx. 45 metres to the north-west. This part of the cSAC contains the Turnalaydan Stream (Lough Corran outflow stream). Also it is approx. 70 metres south west of the cSAC at Drumfin. This part of the cSAC contains the Drumfin River, a tributary of the Unshin River. As noted the existing N4 forms part of the boundary of the cSAC at this location. The lower reaches of the Markree Demense Stream are also located within the Unshin River cSAC. The PRD runs online at the stream crossing approx. 630 metres upstream of the cSAC boundary.
- 14.4 The Unshin River cSAC is notable as an example of a pristine river corridor that has not been drained and retains natural habitats along its margins. The Unshin River cSAC is designated for its Annex I habitats - water courses of plain to montane levels with the *Ranunculus fluitans* and *Callitriche-Batrachion* vegetation and Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*). The site is also selected for the Annex II species Salmon and Otter.
- 14.5 Lough Arrow cSAC (site code: 001673) is located approximately 350m south-east from the proposed route at its closest point, due south of Castlebaldwin Village. The site is a spring-fed lake designated for the Annex I habitat Hard

oligo-mesotrophic waters with benthic vegetation of *Chara* spp. The site synopsis and the NIS note the presence of otter within the designated site.

- 14.6 Lough Arrow SPA (site code: 004050) is located approximately 700m to the south of the PRD, is for the conservation of Little grebe, Tufted duck and wetlands & waterbirds. The Whooper swan which is also listed on Annex I of the EU Birds Directive (2009) occurs on the lake and is listed in the Natura 2000 Standard Data Form for this site.
- 14.7 To date generic conservation objectives, only, apply to the designated sites, namely to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or Annex II species for which the sites have been selected.
- 14.8 The habitats listed as qualifying interests do not occur within the current proposed realignment. The potential for indirect impacts affecting the Unshin River cSAC and Lough Arrow cSA and Lough Arrow SPA has been identified with particular reference to the water dependant qualifying interests of these sites which occur directly downstream. Water quality has been identified as a key indicator of conservation value for these Natura 2000 sites.
- 14.9 In order to test the overall conclusions in respect of significant impacts I submit that it is appropriate to apply the 'source-pathway-target' concept to the proposed project. The source clearly relates to the construction and operation of the PRD. The pathway leading the threats to the target is relatively immediate in this case as the site lies in close proximity to the Unshin River cSAC in a number of locations. The target consists of the qualifying interests for the SAC, which are listed in the NIS submitted and set out above.
- 14.10 The crossing of watercourses within the surface water catchments of the designated sites, in addition to the proximity of the Unshin River cSAC, gives rise to the potential for indirect impacts:
- Potential adverse effects on the aquatic environment arising from suspended solid laden runoff or release of other polluting substances during the construction phase;
 - Potential adverse effects arising from the introduction, spread, or acceleration of spread of invasive, non-native species into the designated sites via the affected watercourse during the construction phase. The requirement for fill material or machinery employed within the site during

construction phase may potentially result in the importation of non-native species.

- Potential adverse affects on the aquatic environment arising from watercourses receiving untreated road runoff or be at risk from any accidental spills on the new road during the operational phase in the absence of an effective drainage design system.

14.11 A detailed drainage design and Erosion and Sediment Control Plan accompany the application and are so proposed to ensure that there will be no impact on the qualifying interests of the designated sites. The Board will note that the document which is contained in Appendix 4 of the EIS sets out a comprehensive range of mitigation measures to cover each stage of the construction process from site preparation, earthworks, excavation, transportation of material etc. The mitigation measures, which are repeated in the NIS, include well established and recognised protective measures which are standard practice to control erosion, drainage and sediment release and will carry through all phases of development.

14.12 The latter plan details the construction elements of the project with regard to instream works, concrete works and drainage works. The plan includes monitoring of water quality within the affected watercourses and supervision of works with an Environmental Assurance Officer to be appointed with a 'stop works' authority in the event of breaches of environmental/water quality measures. The officer is to liaise with the NPWS and Inlands Fisheries Ireland with regard to the implementation of mitigation measures. In addition good site management practices are to be implemented. The timing of instream works will be subject to seasonal restrictions to avoid Salmon spawning season (October to March) with further restrictions proposed to the end of May in order to limit the potential for suspended solids and siltation impacts on salmonid ova. Taking account of the presence of Annex II listed Brook lamprey within the watercourses affected by the proposed works (with reference to Article 10 of the EU Habitats Directive) it is proposed that the timing restrictions include the lamprey spawning season. The window for instream works would be between July to September.

14.13 It is proposed that any plant or equipment that may have worked in environments where invasive species are present shall be suitably cleaned and water used to be intercepted and prevented from draining back into watercourses. The source of any soil or fill material is also to be checked in advance.

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- 14.14 In terms of the operational phase a drainage system in accordance with the principle of SUDS is proposed. Petrol interceptors, grit traps and containment facilities are to be constructed at each outfall to mitigate for the risk of pollution from road runoff and accidental spillages. As noted in section 13 above all drainage outfalls are designed to be served by suitably sized constructed wetlands/interceptor ponds to reduce run off rates to greenfield rates. The proposed attenuation ponds are designed to accommodate a 100 year return period flow and are designed to have adequate storage to allow a permissible outlet flow similar to maximum existing flow from the catchment.
- 14.15 In terms of protected species of birds there is the potential for increased collision risk for swans commuting between feeding and roosting sites. In addition there is a potential for displacement of this species from roosting or daytime feeding sites if such sites were located near the proposed road. The wintering bird survey determined that the species would not be adversely affected with no important feeding habitats or flightlines occurring within the proposed road alignment. Based on bird survey work carried out during October 2011 to March 2012 the study area (route corridor to 500 metres each side) is rated as being sub-optimal and insignificant for wintering birds in terms of roosting and daytime feeding. Significant numbers of wintering birds were not recorded using Lough Corran and Boathole Loughs, the main focus of the study.
- 14.16 The new road and the existing road are equidistant from the Lough Arrow SPA and it is concluded that the proposed realignment will not have any significant impact on wintering birds such as Whooper Swans. There are no breeding sites for Kingfisher on the watercourses affected by the proposed road
- 14.17 As per section 9 of the EIS dealing with air quality, consideration was given to the potential impact on sensitive sites and ecosystems in the vicinity notably the Unshin River cSAC the closet point being at Knocknagroagh (40 metres) from the PRD. Due regard is had to the existing N4 in terms of the *Do Minimum* scenario. In terms of NO_x the screening model prediction at the cSAC is 50% of the 30ug/m³ limit in 2017 and is calculated to decrease to 35% of the limit in the design year of 2032 due to improvements in vehicle engine technology. Thus it is estimated that the PRD would lead to increase in NO_x concentrations of less than 2ug/m³ in both 2017 and 2032.
- 14.18 The road contribution to the NO₂ dry deposition rate along a 200 m transect within the cSAC has also been calculated. The maximum NO₂ dry deposition

rate will increase by no more than 0.0002 Kg(N)/ha/yr in 2017 and 0.003Kg(n)/ha/yr in 2032 relative to the *Do Minimum* scenario. It is concluded that the impact of the road scheme will be to increase the NO₂ dry deposition rate by no more than 0.06% of the critical load for inland and surface water habitats of 5-10 Kg(n)/ha/yr.

14.19 There are no known proposals which would have the potential to give rise to incombination impacts affecting the designated Natura 200 sites within the study area. A separate screening assessment has been undertaken for the County Development Plan 2011-2017.

14.20 I note that whilst notified of the application, the Department of the Arts, Heritage and the Gaeltacht did not express an opinion on the NIS and the conclusions expressed therein. Given the potential impact of the development on fisheries in the Unshin River the comments from Inland Fisheries Ireland are noted which expressed no objection to the proposal subject to certain conditions similar to the mitigation measures proposed by the applicant.

14.21 Mr. Sweetman in his submission to the hearing contended that unless impact on a species protected under the Habitats Directive from the project can be excluded, a lacuna exists in the information before the Board so that the AA cannot conclude that the project will not have an adverse impact. In this case Mr. Sweetman contended there is no evidence that the tufa spring habitat at the Ardloy – Aghalenane complex which is an Annex I habitat species had been assessed by the NPWS as to merit consideration as a Site of Community Importance and thus, working on the precautionary principle, should be accorded the same protection until a decision is made as to whether or not to designate the site. He contended that there is a likelihood that the PRD could have an effect on the habitat. He also contended that as AA is a stand alone process all information relevant to same should be included within the NIS.

14.22 Mr. Sweetman referenced two judicial review cases before the High Court to which the above matter is a central issue. I note that the judgement in one of the cases – Maura Harrington v. An Bord Pleanala with regard to permission for a sports facility and community hall at Invert, Ballina, Co.Mayo was delivered on the 9th May 2014. Judge J. O'Neill concluded that the duty of the competent authority to make appropriate enquiries does not go so far as to require them to respond to assertions unsupported by any credible evidence. The making of an assertion without any evidence to support it could not be

said to give rise to a 'scientific doubt' which would require, in the case of a site potentially qualifying as a priority habitat, the competent authority to do, by way of enquiry, whatever was necessary to eliminate that doubt.

14.23 As noted the PRD is located outside of any identified or designated cSAC/SAC. I also note that Dr. Denyer, the consultant engaged to assess this matter, was unambiguous in her opinion that the tufa spring habitat in question would not be of sufficient quality as to be considered for designation. Even if the tufa spring habitat was to accorded the same protection I note that full consideration of the impacts of the PRD on same was given by the applicant and, in my opinion, there is a level of confidence such that there is no reasonable scientific doubt as to the effects of the works proposed on the habitat in question. I also note that the NPWS, the relevant authority in terms of site designation, did not make a submission to the Board on the matter.

14.24 As to the requirement that all information on habitats is required to be included in the NIS, the fact that the site is not designated as a European Site there is no obligation for the document to have addressed same. Notwithstanding I would contend that similar to EIA, AA is a process informed by the contents and conclusions of the NIS, and also by information provided in the various stages of the process in relation to the likely effects of this development including information provided in the EIS and at the oral hearing.

14.25 Having regard to the information contained in the NIS, the EIS and supporting technical appendices and the qualifying interests of the Unshin River cSAC and Lough Arrow cSAC and SPA, I conclude that the proposed development would not be likely to have significant effects on these Natura 2000 sites. It is submitted in the NIS that there are no other plans or projects, which could realistically contribute to 'in-combination' effects, and I am not aware of any. As such, I conclude that the proposed development, either individually or in combination with other plans or projects, would not adversely affect the integrity of identified Natura 2000 sites in view of the sites' conservation objectives.

15.0 COMPULSORY PURCHASE ORDER

- 15.1 The statutory powers of the local authority to acquire land are contained in section 213 (2)(a) of the Planning and Development Act 2000- 2010. Under its provisions the planning authority *may acquire land compulsorily for the purpose of performing any of its functions including giving effect to, or facilitating the implementation of its development plan.*
- 15.2 An Erratum to the CPO Schedule was presented to the oral hearing and provides for amendments and/or additions to the owners or reputed owners and occupiers. The amendments reflect information that the applicant obtained after the submission to the Board. No changes were made to plot boundaries, plot identifications, plot descriptions, plot areas, plot location townlands or plot location DEDs. Confirmation of notification of parties was also presented which allowed for objections to be made. I consider that the proposed amendments to be reasonable and would not be likely to prejudice the position of any person.
- 15.3 As noted above 81 written objections to the order were received by the Board. At the time of the writing of this report 4 objections remain which have not been formally withdrawn.
- 15.4 It is accepted that there are four criteria that should be applied where it is proposed to use powers of compulsory purchase to acquire land or property namely:-
- There is a community need, which is met by the acquisition of the property, in question,
 - The works to be carried out accord with the Development Plan,
 - Alternative methods of meeting the community need have been considered but are not available,
 - The suitability of the land to meet the community need.

Community Need

- 15.5 The stated purpose of the CPO is to facilitate the realignment and replacement of approximately 14.71km. of the N4 National Primary Road between the townlands of Toberbride (south of Collooney) and Cloghoge Lower (south of Castlebaldwin).

15.6 As set out in the report to the Director of Services (Infrastructure) that accompanied the CPO the PRD would:

- Improve the N4 route to modern day standards including the provision of safe overtaking and appropriate road width;
- Provide a high quality road with reserve capacity for future demand;
- Assist in improving the competitiveness and efficiency of the economy both locally and nationally;
- Reduce travel times and improve access to the north-west region;
- Improve transport infrastructure for local traffic;
- Improve safety along the existing roads and at junctions/accesses;
- Reduce environmental and social impacts on the local residents and communities along the existing N4.

15.7 Following the assessment under sections 11 and 12 above I would concur with same and that the improvements to the alignment will contribute towards improved access in line with national, regional and local planning policy, will improve journey times and provide a positive economic return on investment with improvements of safety being of particular importance. The improvement will result in a roadway that satisfies the standards and safety requirements for a national primary road established by the NRA.

15.8 I submit that the improved standard of the carriageway will benefit all road users and the CPO can therefore be justified by the exigencies of the common good. I therefore consider that the community need for the scheme has been established.

Compliance with Development Plan

15.9 As detailed in section 11 of this assessment the PRD accords with national and regional policy. In light of same it is contended that the N4 route plays a central and significant role in the context of the development of Sligo Gateway and the county as a whole. This in turn has the potential to contribute to balanced regional development as envisaged in the NSS.

15.10 At county level the current Sligo County Development Plan has been informed by both national and regional policy and notes the importance of a high quality link between Sligo and Dublin. The fact that the Collooney to Castlebaldwin section remains substandard is specifically noted and that it is an objective under O-R-1 to bring national roads up to appropriate standards, as resources

become available, with the N4 Collooney to Castlebaldwin specifically referenced.

Alternatives

- 15.11 I refer to the consideration of alternatives in chapter 3 of the EIS and section 12 of this assessment above. The process dates back to the route selection report of 2002 where feasible route options were drawn up and were then vetted based on environmental, economic and operational assessments. The said report was further reviewed in 2012/2013 providing an overview of the alternatives and how they compare to the PRD from a current day perspective. On-line improvement works are not considered feasible in view of the number of properties that would be required to be acquired and the fact that the route would still pass through the village of Castlebaldwin with a speed limit of 50kph. This conclusion is considered to be acceptable. As detailed above public transport options in terms of the bus and train are not sufficient to provide a viable alternative to provide for a material modal shift. The decision making process and selection criteria in this context are considered to be comprehensive and robust with a largely off-line development being the only feasible option.
- 15.12 In addition the provision of the proposed cross-section as against a Type 1 Single Carriageway is assessed in section 12 of this assessment.
- 15.13 I am of the opinion that the applicant has submitted sufficient detail in terms of the alternative route options considered and the reasons for the choice of the alignment proposed in the scheme and that the level of detail provided in the EIS meets the requirements of section 50(2)(d) of the Roads Act, 1993 (as amended) and the EIA Directive. I would conclude that at this stage of the assessment the chosen option appears to be the most reasonable solution, while at the same time minimising the impacts on the ecological, visual and residential sensitivities of the area.
- 15.14 Objections submitted by landowners focus on the scheme having an adverse impact on property and lands. Such an impact is likely to arise no matter what route is selected. It is acknowledged that the preferred route present burdens in relation to residential owners and agricultural operations. These impacts will, in many cases, be permanent impacts notwithstanding the mitigation measures proposed. Issues relating to severance and loss of lands arising are matters to be addressed by way of compensation.

Suitability of lands to meet community need

15.15 I refer to section 12 of this assessment and the conclusion that the proposed cross section and junction strategy are appropriate. The extent of the land that would be acquired under the order is determined by the specifications for same. Two of the objections contend that the proposed acquisition are excessive. Each will be considered below.

Site Specific CPO Issues

15.16 81 written objections to the CPO were received by the Board. As noted above a significant number of the objections to the CPO were withdrawn prior to, during and after the oral hearing. The list set out in Appendix 3 sets out the position with regard to the written CPO objections received by the Board. 4 objections remain at the time of the writing of this report. As noted the written submissions from Martin and Rea and Rea Agri Environmental Consultants Ltd. who represent two of the four contained a number of general objections. The applicant's response to same as read to the hearing at the end of 2nd day (submission 22) are noted. I propose to address the matters arising common to the first two prior to addressing the site specific issues arising.

No consideration given to possible unauthorised parking and dumping of rubbish on proposed accommodation roads.

Response: The accommodation roads are to form part of the Local Authority road network and shall be maintained by same. The widths of the proposed accommodation road do not provide sufficient room for possible unauthorised parking.

Noise mitigation is required to ensure that the road design complies with WHO standards and noise monitoring proposals are inadequate.

Response: As noted by Mr. Harmon for the applicant the WHO guidelines are not applicable for road schemes. The most relevant guidelines for road development in question are the NRA Guidelines for the Treatment of Noise and Vibration in National Road Schemes (2004). Noise impact is considered in section 13 of this report with the EIS setting out clear noise limits relating to the construction and operational phase of the scheme. The analysis of noise undertaken indicates that specific noise mitigation measures are required at 6

locations. The use of noise monitoring will be employed during the construction phase to ensure the noise criteria are not exceeded.

Dust mitigation and monitoring proposals during construction phase are inadequate

Response: Section 13 of this report deals with dust with mitigation and monitoring proposals set out in section 9.5.1 of the EIS. In addition the speed of construction traffic within the limits of the works area are to be restricted.

Details of landscaping proposed are required. Planting design is inadequate.

Response: Landscaping proposals for the PRD are set out in Chapter 10 and Figures 10.1.1 to 10.1.8 with further additional hedgerow planting along the majority of the CPO boundary proposed which would provide additional screening.

The location of the construction compounds should be clearly identified so that the environmental impact of same can be addressed by the property owners in terms of noise, dust, drainage and other factors.

Response: The location of the compounds will be a matter for the contractor. The Outline Erosion and Sediment Control Plan included in Appendix 4.5 of the EIS outline the controls which are to be implemented in the siting of such compounds including their preclusion within 75 metres of an occupied dwelling.

Suitably designed safety barriers to be provided where either the national road, secondary/regional road, accommodation roads and private roads are in cut.

Response: Safety barriers are to be provided in accordance with NRA DMRB TD19.

The EIS is deficit in certain areas and is lacking in legal commitment and is not legally binding in relation to the final levels.

Response: The scheme is likely to be constructed under a design and build form of contract and some variation in the road level may arise. The scheme post consent, is limited by the fact it requires an EIS and EIA and, therefore, any modification to the scheme as approved would have to be under the

provisions of Class 13 Annex II, or alternatively, that such changes could only be undertaken if it is shown that the amendments would not lead to significant environmental effects. In the subject case any changes to the final design would have to satisfy the requirement that they would not result in a significant environmental effect and this determination would have to be supported by a screening process where appropriate.

As the proposal will be design and build the LA has been previously requested to facilitate land owners by discussing and agreeing accommodation works so as to mitigate the impact on the property.

Response: Discussions between the applicant and objectors/property owners along the route relating to accommodation works is an issue that is between the parties and is not something for detailed consideration by the Board.

The final design should be the same as at the EIS level. Should there be a change, the affected property owners need to be advised and their professional costs in relation to such changes to be paid for. Any change should be agreed in writing.

Response: As noted above the scheme is likely to be constructed under a design and build form of contract and some variation in the road level and design may arise. The comments regarding the EIS and the potential screening of proposed amendments above pertain.

Objection of Eugene Brehony (CPO No. 153)

15.17 It is proposed to acquire 1.08 hectares of land in Mr. Brehony's ownership in the townland of Doorly which will allow for the provision of the western parallel road and a roundabout facilitating local access with access to his dwelling and property to be from the said roundabout.

15.18 Mr. Brehony's holding at this location is a residential farm with the dwelling setback from the existing N4 served by a private drive. The lands between the house and the roadside boundary are used for grazing. The dwelling is clearly visible from the road.

15.19 In the written objection it is considered that the extent of proposed land take is uncertain although Mr. Rea on his behalf, informed the hearing that the acquisition of the land was not at issue at that juncture. Notwithstanding I

consider that it is apparent from the submitted drawings the extent of take proposed.

- 15.20 At the oral hearing Mr. P. O'Donnell Chartered Engineer on behalf of the objector in response to questions from Mr. Rea, stated that the front boundary of Mr. Brehony's property comprises of a 1.2-1.3 metre retaining wall which is not visible from the N4 (photographs of same were provided by Mr. Rea (see submission 25). The proposal in the current scheme is to replace it with a post and rail fence save at the bell mouth entrance. Replacement like for like is sought and that in terms of containment of cattle the post and rail fence is considered inadequate although it is acknowledged that the fence is onto the western parallel access road and not onto the new N4 alignment. In response to questions from Mr. Keane Mr. O'Donnell repeated his view that the 90 metre wall provision in the vicinity of the bell mouth entrance is not considered as replacing like with like.
- 15.21 Mr. Rea informed the hearing that replacement of the boundary wall is entirely reasonable stating that there are precedents where replacement of like with like have occurred. He gave a specific example on a road proposal between Cuilehill-Cashel (submission 28) which he considered to be directly comparable to Mr. Brehony's property.
- 15.22 The extent of land acquisition at this location and thereby the removal of the existing wall, is considered appropriate and necessary for the works as proposed and therefore is justified.
- 15.23 It would appear that the basis for the applicant's proposals in this instance is based on the fact that the lands immediately adjacent to the roadside boundary are in agricultural use without reference to the fact that the dwelling and driveway to same are fully visible from the road. As such I consider that it could be equally argued that the boundary serves a residential property and that in accordance with the policy applied elsewhere along the length of the project should be replaced like with like. Notwithstanding in view of the failure to secure agreement between the parties this is now a matter for consideration in the context of compensation.

Objection of Reps of Anthony Molloy c/o May Molloy (CPO No. 154)

- 15.24 The plot in question is in the townland of Doorly and marks the location where the proposed alignment deviates from the current N4 alignment with access to the western parallel road proposed via a roundabout to the north (that as

detailed above). The plot in question includes a dwelling which is not in a habitable condition which is to be acquired as part of the CPO. Mr. Rea informed the hearing that the dwelling suffered from a fire about 10 years ago and due to personal and medical circumstances the owner was not in a position to seek to rebuild the dwelling which was always the intention to do. The holding also has a haggard.

- 15.25 Mr. P. O'Donnell on behalf of the objector in response to questions from Mr. Rea stated that the front boundary of the property comprises a block wall along part in the vicinity of the haggard which forms part of the farmyard complex, with a stone wall averaging 12-16 inches in width along the remaining section in the vicinity of the dwelling. The replacement of like with like is sought. A wall that meets NRA standard RCD 2400-4 would be acceptable which would be lower than what is currently there ie. existing wall is 1.6 metres whereas the standard is 1.3 metres.
- 15.26 The extent of land acquisition at this location and thereby the demolition of the dwelling and removal of the existing wall is considered appropriate and necessary for the works as proposed and therefore is justified.
- 15.27 As the situation prevails the dwelling on the lands in question is in a derelict condition and has not been habitable for some period of time. Whilst I accept that the personal circumstances may have precluded the advancement of its replacement there is no evidence that a planning application, was at least lodged for same. Notwithstanding the dwelling is being acquired and thus any proposal for a dwelling and, indeed, its location on the landholding is now a matter for separate planning consent.
- 15.28 At this juncture I would tend to accept Mr. Keane's assertion that the removal of the dwelling will leave a haggard and a farm behind for which a post and rail fence would be appropriate. In view of the failure to secure agreement the issues remaining are considered matters for compensation.

Objection of Richard & Dorothy Taylor (CPO N0.238)

- 15.29 Michael McElhinney of Rea McElhinney made two written submissions on behalf of the above, in addition to making a submission to the oral hearing.
- 15.30 The plots in question entail an area of land 2.4928 hectares in area in the townland of Ardloy and are considered by the applicant as necessary to accommodate both the lands required for the road alignment in addition to an

area for spoil repository/borrow pit type 01. The basis for the objection relates to the fact that lands have already been acquired from them to facilitate the previous improvement works on the N4 at this location and that there are alternative sites for fill from landowners willing to facilitate the Council. They consider that the use of CPO powers to acquire material for construction and to provide fill area for surplus is inappropriate. The lands are essential for silage and represent the best quality land on the farm. No alternative source is available or convenient to the existing farm. It is considered that the CPO represents a significant land loss to the farm and impacts on its management. It would isolate and render useless another portion of ground. It is requested that Plot 238d.101, which is the portion of their lands on which the repository is proposed, be omitted. It is considered that it represents only a small portion of the proposed repository site. The plot has a stated area of 0.634 hectares.

- 15.31 The Board is advised that the Taylor's extended an invitation to me as the Inspector to visits their lands with the area to be acquired pegged out by the Council. The lands in question were quite visible from the adjoining road network (both the N4 and L-5403-0) on days of inspection prior to the oral hearing and as is evident from photos 33 & 34 attached to this report as to allow for a proper assessment.
- 15.32 The applicant in response, both by way of written response to the objections and by Mr. Meehan in response to questions at the oral hearing, stated that a very considered approach was taken as set out in the Spoil Management Report to the issue of material requirements with over 60 options examined and 4 suitable locations in drumlin hills identified. The overall aim was to reduce the likelihood of significant effects arising from the amount of spoil arising from the PRD and should be treated where land take can be kept to a minimum with no risk to floodplains or stability risks and where the existing landscape can be replicated as far as is practicable. The provisions as detailed in the PRD are considered to represent the best options from an environmental perspective with land take being kept to a minimum. The plot in question is required for the provision of such infrastructure with cognisance of the significant surplus of spoil material comprising, in the main, subsoil material and the significant deficit of suitable fill material for road embankment construction with the typical material requirement for such material being subsoil material (glacial till). Mr. Meehan informed the hearing that the material on the site in question is glacial till with the sub-soil to be used in the backfill. No peat will be used in backfill. The pit has been sized with careful consideration given to geometry and is constrained by inverts set at certain

levels having regard to hydrogeological conditions and site slopes. Whilst the omission of the plot from the spoil repository would result in a small proportion of material being lost to the project; in the region of 5,000 – 10,000 m³ which could be which could be accommodated elsewhere in the overall development, there would be no control over the material used by the contractor in backfill. There would also be knock-on effects in terms of the topography and access to the remainder of the proposed repository site.

15.33 It is noted that whilst Sligo County Council would wish to return the plot to the owners on completion it is not in their power to guarantee this and as such it is being regarded as a permanent loss to the farm. Mr. Keane informed the hearing that it is practice in such situations that the landowners would be offered the first opportunity to re-acquire the lands and that it is a function of the elected representatives. Obviously there is no cast iron guarantee on the issue.

15.34 I consider that the applicant has put forward a sound basis for the need to acquire the lands in question and, as such, are considered necessary and appropriate. The substantive part of the Taylor's farmholding is to the west of the site in question. The overall impact on the farming system is described in Appendix 11.2 - Farm Assessment and is described as moderate and it is considered that the overall enterprise can continue post construction. The issues of additional management or operational procedures are matters for compensation.

Objection of Patricia, Charles and Mary Cooper (CPO Nos. 149 and 307)

15.35 The written submission by Mullaney's Solicitors to the CPO was received by the Board with Mr. Michael O'Donnell barrister representing them at the oral hearing.

15.36 The impact of the proposed scheme including the proposed attenuation pond on protected structures and the curtilage of protected structures with specific reference to the access to the gate lodge are considered in detail in the cultural section of the EIA in section 13 above.

15.37 The existing access to the gate lodge is in the region of 240 metres in length from its junction with the N4. It is narrow with a poor surface and cannot accommodate two way traffic. It provides access to the gate lodge which is a private residence. A gate is erected at the lodge precluding public access to the Markree Demense. In this regard I note the reference made to plans to

develop a public access to the estate and commercial enterprise at this location however this has not been realised at this juncture.

- 15.38 As confirmed by Mr. Scott to the hearing the nature of the works at this location entails the extinguishment of the right of way along the access for a distance of approx. 80 metres from its junction with the N4 to allow for the necessary road improvement works including the provision of the eastern parallel link with a new access to be provided from the link road and improvement of the access before its tie-in with the existing access before the boundary of the CPO line. As a consequence of the works the private road will be shortened by approx. 10 metres. The status of the road will be a private road on Council land. Whilst the access may be used on an occasional basis for certain commercial vehicles accessing the Markree Estate (although it is noted that a commercial access is available from the R290 Collooney-Ballygawley Road and that the access assists in the traffic management when the Farm Fair is held on the estate (the last event held in 2009) the proposed works will not result in any deterioration in the circumstances as prevailing, albeit access would be onto the proposed eastern parallel road rather than the N4. Concurrently I would not concur with the view that the proposed junction onto the parallel road would constitute a substandard arrangement over that as existing and I therefore consider the proposed CPO to be reasonable and necessary.
- 15.39 Mr O'Donnell raised a number of issues at the oral hearing which related to environmental issues and the adequacy of the EIS. These issues are addressed in section 13 of this report.

16.0 CONCLUSIONS AND RECOMMENDATION – COMPULSORY PURCHASE ORDER (reference number 21.KA0030)

I consider that the land take is reasonable and proportional to the stated purpose to improve this section of the N4 National Primary Road. I am satisfied that the process and procedures undertaken by Sligo County Council have been fair and reasonable and it has demonstrated the need for the lands and that all the lands being acquired are both necessary and suitable. I consider that the proposed acquisition of the lands would be in the public interest and the common good and would be consistent with the policies and objectives of the Sligo County Development Plan. I therefore recommend the CPO be confirmed.

DECISION

CONFIRM the compulsory purchase order for the reasons and considerations set out in Schedule 1 subject to the modifications set out in Schedule 2.

SCHEDULE 1

REASONS AND CONSIDERATIONS

Having considered the objections made to the compulsory purchase order, and not withdrawn, the report of the person who conducted the oral hearing into the objections, the purpose of the compulsory acquisition as set out in the form of the compulsory purchase order and also having regard to:

- (a) the National Spatial Strategy for Ireland 2002-2020 and Implementing the National Spatial Strategy: 2010 Update and Outlook, and the Regional Planning Guidelines for the Border Region which seek to achieve good quality transportation and communication links to the gateway city of Sligo
- (b) the provisions of the Sligo County Development Plan and the policies and objectives stated therein,
- (c) the present seriously substandard nature of the existing road network in relation to alignment, width and cross section and the resultant improvement arising from the proposed road scheme and in the interests of traffic safety,

(d) the community need, public interest served and overall benefits to be achieved from use of the acquired lands for the purpose identified in the order, and

(e) the proportionate design response to the identified need,

it is considered that, subject to the modifications to the Order as set out in the Schedule below, the acquisition by the local authority of the lands in question, and the extinguishment of public and private rights of way, as set out in the order and on the deposited maps, are necessary for the purpose stated, and that the objections cannot be sustained having regard to the said necessity.

SCHEDULE 2

The compulsory purchase order shall be modified as described in the proposed changes to the schedule submitted to An Bord Pleanála at the oral hearing on the 28th day of April 2014.

Reason: To take account of updated information in respect of land ownership and other matters.

17.0 CONCLUSIONS AND RECOMMENDATION PROPOSED ROAD DEVELOPMENT (reference no. 21.HA0044)

I consider that the need for the proposed development has been adequately demonstrated and that the applicant has provided sufficient justification for the cross section proposed. The EIS and NIS, supplemented by the information provided at the oral hearing are sufficient to allow for a full environmental impact assessment and appropriate assessment and, in conclusion, I submit that the proposed development would accord with the national, regional and local planning policy, would not, subject to the identified mitigation and environmental commitments, have a significant impact on the environment. I therefore recommend that the proposed development be approved for the reasons and considerations set out in Schedule 1 subject to conditions set out in Schedule 2.

SCHEDULE 1

REASONS AND CONSIDERATIONS

Having regard to:

- (a) the provisions of the European Communities (Environmental Impact Assessment) Regulations 1989 – 1999 (as amended), and the European Communities (Birds and Natural Habitats) Regulations, 2011,
- (b) the provisions of the National Spatial Strategy for Ireland 2002 - 2020, and Implementing the National Spatial Strategy: 2010 Update and Outlook, which seek to achieve good quality transportation and communication links to the gateway city of Sligo,
- (c) the policies of the Government as set out in the document Smarter Travel – A Sustainable Transport Future 2009-2020,
- (d) the provisions of the Regional Planning Guidelines for the Border Region 2010-2022, including Roads Policy INFP2 which seeks to facilitate the improvement of the substandard section of the N4 strategic radial corridor between Castlebaldwin and Collooney,
- (e) the policies and objectives of the Sligo County Development Plan 2011-2017 including objective O-R-1 which seeks to bring national roads up to

appropriate standards, including the N4 Collooney to Castlebaldwin realignment and upgrading.

- (f) the seriously substandard condition of the existing road network in relation to alignment, width and cross section and the resultant improvement arising from the proposed road scheme and in the interests of traffic safety,
- (g) the extensive route selection undertaken by the road authority and the adjustments incorporated into the proposed road development constituting a design response that is proportionate to the identified need, and which minimise the environmental impact of the development,
- (h) the submissions on file, including the environmental impact statement, natura impact statement and associated documentation and the submissions made in connection with the application at the oral hearing and the range of mitigation measures set out in the documentation received.

It is considered that, subject to compliance with the conditions set out below, the proposed road development would not have significant negative effects on the community in the vicinity, would not give rise to a risk of pollution, would not have a significant effect on the environment of any designated Natura 2000 site or site of ecological interest, would not have a significant impact on any protected species, would not have a detrimental impact on archaeological and architectural heritage, would not give rise to detrimental visual or landscape impacts, and would not seriously injure the amenities of the area or of property in the vicinity. It is considered that the proposed road development, which would constitute an improvement in terms of road safety and convenience, would be in the interests of the common good and would be in accordance with the proper planning and sustainable development of the area.

SCHEDULE 2

CONDITIONS

1. The proposed development shall be carried out in accordance with the plans, drawings and documentation submitted with the application, as amended by the information submitted to An Bord Pleanála at the oral hearing on April 28th, 28 and 30th 2014, including the environmental impact

statement and the Natura impact Statement and supporting documentation, except as may be otherwise required in order to comply with the condition set out below.

Reason: In the interest of clarity.

2. All mitigation measures and commitments set out in the environmental impact statement and the amended 'Schedule of Commitments' submitted to the oral hearing on the 30th day of April shall be implemented as part of the proposed road development.

Reason: In the interest of clarity and to mitigate the environmental effects of the proposed road development and to protect the amenities of the area and of property in the vicinity.

Pauline Fitzpatrick
Inspectorate

June, 2014

Appendix 1 - Outline Report of the Oral Hearing

Venue: Castle Dargan Hotel, Ballygawly, Co. Sligo

Dates: 28-30th April

Applicant - Sligo County Council

Mr. E. Keane	- Senior Counsel
Mr. Bernard Scott	- A/Senior Executive Engineer, Sligo Co. Co.
Mr. Fergus Meehan	- A/Executive Engineer, Sligo Co. Co.
Mr. Declan Keenan	- Engineer Aecom
Mr. Stephen Ward	- Planner, Sligo Co.Co
Dr. Conor Quinlan	- Project Manager, Minerex Environmental
Ms. Jennifer Harmon	- AWN Consulting
Dr. Edward Porter	- AWN Consulting
Dr. William O'Connor	- ECOFACT Environmental Consultants
Mr. Christoph Walter	- Mos ART Ltd. Architecture Landscape
Ms. Freda Salley	- Philip Farrelly & Co.
Mr. Michael Sadlier	-
Mr. Eoin Halpin	- ADS Ltd.
Dr. Craig Bullock	- Optimize
Dr. Evelyn Moorkens	
Dr. Joanne Denyer	

Objectors to CPO/Proposed Road Development

Mr. Richard Rea and Mr. Patrick O'Donnell Chartered Engineer on behalf of:

1. Eugene Brehony
2. Reps. Of Anthony Molloy c/o Mary Molloy

Mr. Michael McElhinney on behalf of

3. Richard & Dorothy Taylor

Shay McDermott, Mullaneys Solicitors and Mr. Michael O'Donnell Barrister on behalf of:

4. Charles, Mary & Patricia Cooper

Observers to Proposed Road Development

1. Mr. Peter Sweetman
2. Mr. Robert Craig & Mr. Thomas Craig on behalf of group of affected farmers

Note 1: All of the proceedings of the oral hearing have been recorded and the recording accompanies this report. What follows is a brief outline of the proceedings proposed to function as an aid in following the recording.

Note 2: The assessment in my report makes reference to details submitted at the oral hearing.

Note 3: The list of prepared texts submitted to the hearing are detailed in Appendix 2 attached to the report.

Day 1 – 28/04/14

Opening of Hearing:

At the outset of the hearing I outlined the details of the proposal and the objections and observations received by the Board.

Applicant's Submissions

Mr. Esmonde Keane gave an opening statement.

Mr. Bernard Scott (*submissions 2a & 2b*) gave an overview of the project. His brief of evidence sets out the need for the PRD, the deficiencies of the existing road network, how the project complies with road development policy, justification for cross section and junction strategy accompanied by a description of the alignment. Treatment of the local road network is also detailed. His submission also details the infrastructural provision and environmental design features and construction.

Mr. Fergus Meehan (*submissions 2a, 2c & 2d*) presented the Errata and Addenda to the EIS outlining the salient alterations. He also presented the Erratum to the CPO Schedule (*submission 16*).

Mr. Declan Keenan (*submission 3*) set out the traffic modelling and traffic forecasting in addition to the incremental analysis undertaken. The predicted impacts including safety and public transport impacts are also detailed.

Mr. Stephen Ward (*submission 4*) set out the national, regional and local policy context of the PRD. His submission also detailed planning trends and issues and the impact of the proposal on the landscape.

Dr. Conor Quinlan (*submissions 5 & 6*) presented two submissions, the first dealing with soils and geology and the second on hydrology and hydrogeology.

Day 2 – 29/04/14

Ms. Jennifer Harmon (*submission 7*) addressed the issues of noise and vibration during the construction and operational phases and responded to relevant issues arising in the written submissions to the Board.

Dr. Edward Porter (*submission 8*) dealt with air quality during the construction and operational phases of the PRD and responded to issues relating to air quality in the written submissions to the Board.

Dr. William O'Connor (*submission 9*) addressed ecology.

Mr. Christoph Walter (*submission 10*) dealt with landscape and visual impact assessment.

Ms. Freda Salley (*submissions 11a & 11b*) addressed the impact of the PRD on agriculture with responses made to specific issues that arose in the written submissions received. Her second submission addressed non-agricultural property, again responding to specific issues that arose in the written submissions received.

Mr. Michael Sadlier (*submission 12*) gave a brief of evidence regarding equine assessment with specific regard to the equestrian enterprise operated by Francis, Noleen and Paddy Kerins at Toberbride, Colloney.

Mr. Eoin Halpin (*submission 13*) dealt with archaeology, architecture and cultural heritage and included a specific response to the objection to the CPO by Charles, Mary & Patricia Cooper and assessment with respect to the Markree Estate gate lodge.

Dr. Craig Bullock (*submission 14*) addressed the socio-economic impacts of the PRD and responded to specific issues raised in the written objections to the CPO and the PRD.

Dr. Evelyn Moorkens (*submission 15*) gave a brief of evidence on the Vertigo Snail.

Mr. Keane and Mr. Meehan (*submission 16*) detailed the confirmation of notification of persons arising from the Erratum to the CPO Schedule.

Messrs. Robert and Thomas Craig (*submission 17*) made a submission on the PRD on behalf of a group of concerned farmers with specific regard to the culvert at Tuberscanavan. Their submission detailed the history of the culvert prior to and post its installation in the 1980's. The culvert has resulted in alterations in flooding patterns which has subsequently resulted in a change in vegetation around the Cloonamahon lakes. It is contended that the alluvial wetland that has arisen is as a consequence of incompetence. The original proposal included in the EIS, namely a moveable weir, is considered an acceptable compromise. The proposed Errata to the EIS removing this proposal and thus not reinstating the culvert in any way to that prior to the original upgrading in the 1980's is not.

Mr. Keane for the applicant in response stated there was a balance to be struck between human and environmental constraints. The vegetation around the lake, albeit of recent origin, is alluvial wetland which is an Annex 1 Habitat. The flooding that would arise would not be any worse than that prevailing.

Dr. Joanne Denyer stated that any decrease in water levels to the alluvial wetland could have an impact. Flooding is required to maintain the vegetation. It is very difficult to monitor in the long term.

Mr. Michael McElhinney on behalf of *Richard and Dorothy Taylor* made a submission (no.19). The grounds of objection relate to the area being acquired for the spoil repository/borrow pit. The request to omit plot no. 238d.101 would result in only a small portion of the repository site being removed.

Mr. Meehan in response stated that a very considered and detailed approach was taken to the identification of the spoil repository/borrow pits. There are to be very stringent measures in terms of filling of the site .

Mr. Keane stated that on completion of the works were the lands to be disposed of the previous owner's would be given first option to repurchase the lands.

Mr. McElhinney noted that the Council representatives cannot guarantee same and that it is a function of the elected representatives.

Mr. Meehan (submission 22) read out the applicant's responses to the written submissions and objections that had not been withdrawn by that time including responses to submissions from prescribed bodies.

Wednesday 30th April

Mr. O'Donnell represented *Patricia Cooper* of the gate lodge and *Charles and Mary Cooper* Markree Estate. He asked questions to Mr Scott, Mr. Meehan, Mr. Halpin and Mr. Walter on the impact on the access road, the ability of the road to be used by commercial vehicles, the safety of the new junction onto the eastern parallel road, consideration and analysis given of the impact of the proposed development including the proposed attenuation pond on the gate lodge, both as a protected structure and a private residence with some discussion had on the extent of the attendant grounds of the gate lodge and status of the access road and it being within the attendant grounds.

Mr. Scott detailed the existing and proposed access arrangement onto the eastern parallel road (*Submission 23*).

Mr. O' Donnell in his subsequent submission to the hearing referred to the statutory obligations in terms of EIS and the requirement of the Board to determine whether it is adequate and lawful. The Markree Demense and complex of buildings are of national importance and possibly of international importance. They are of historical, cultural and economic importance, none of which have been considered. The gate lodge has its own curtilage that should have been considered. The EIS should have given due consideration to same. Reference to same in the EIS is not equivalent to dealing with the impacts arising and a submission at the oral hearing cannot make up for the inadequacies of the EIS. The impacts on the 18th century access road arising from the proposed works and the construction of the attenuation pond, both on the gate lodge and access road, were not assessed. In terms of curtilage section 2 of the Planning and Development Act 2000, as amended, in the definition of a structure refers to any other thing constructed on in or under land whilst a protected structure includes any specified feature which is within the attendant grounds of the structure. The access road will be such an '*other thing*' and thus would be within the curtilage of the protected structure and therefore is a protected structure. The grubbing up and removal of part of the access road means that part of the protected structure is being removed. The Council cannot interfere with or adversely affect a protected structure which would be in contravention of the County Development Plan.

The fact that the gate lodge was not identified as a private residence and therefore a sensitive receptor is also noted. The absence of a Conservation Architect in the design team is noted. The provision of such assessment at the oral hearing is not acceptable as it does not allow the individual to participate fully and this is inconsistent with Irish and European Law.

The entrance at the gate lodge is used for access to the Markree Demense. The new access onto the eastern parallel road would hinder access by certain vehicles. These matters were not considered.

Mr. Sweetman asked questions of Dr. Quinlan and Dr. Denyer regarding the tufa spring priority habitat at the Ardloy-Aghalenane Lough and the potential impact of the borrow pit and road cut in terms of hydrogeology. Dr. Quinlan presented a cross-section drawing and explained same to the hearing. Mr. Sweetman also questioned the applicability of the Habitats Directive.

Mr. Sweetman in his submission to the hearing stated that AA is a stand alone process and assessment and that all relevant information, including information on tufa spring Annex 1 priority habitat, should be within the NIS. In terms of the said priority habitat the precautionary principle should be applied in that it should be afforded the same protection as a site designated as being of community importance until it has been ruled out by the relevant authority, namely the NPWS. The Board cannot rule it out. Reference is made to two cases before the High Court – Harrington v. An Bord Pleanala and Sweetman v. An Bord Pleanala. There is inadequate evidence that there would not be an effect. Reference is made to the Advocate General's decision in the Galway By-Pass case in terms of a project being capable of having an effect. There is no evidence in the NIS that there would not be dewatering of the borrow pit and cut. The proposal is capable of having an effect on the tufa spring priority habitat.

Mr. Richard Rea made a submission on behalf of Eugene Brehony (CPO 153) and Repts of Anthony Molloy (CPO 154) with specific regard to the existing boundaries walls to the said properties and the unacceptability of their proposed replacement with post and rail fence as part of the PRD (*submission 25*).

Mr. P. O'Donnell in response to questions from Mr. Rea stated that the front boundary of the Molloy property comprises a block wall in the vicinity of the haggard which forms part of the farmyard complex, with a stone wall averaging 12-16 inches in width along the remaining in the vicinity of the dwelling. Replacement should be like with like. In response to a question from Mr. Keane Mr. Rea stated that whilst the existing dwelling was burnt down about ten years ago and is proposed to be

acquired it was always the intention to replace same but personal circumstances prevented same.

Mr. Keane contended that on the removal of the dwelling the haggard and the farm behind would remain for which a timber post and rail fence would be appropriate. Mr. O'Donnell stated that a timber post and rail fence is not appropriate in front of the dwelling. A wall that meets NRA standard RCD 2400-4 on random rubble wall construction would be acceptable. A lower wall at 1.3 metres than what is currently there (1.6m.) would be acceptable.

Mr. P. O'Donnell in response to questions from Mr. Rea stated that the front boundary of Mr. Brehony's property comprises of a 1.2-1.3 metre retaining wall which is not visible from the N4. The proposal in the current scheme to replace it with a post and rail fence save at the bell mouth entrance. The property is a residential farm with the house set back from the road. It is considered that replacement should be like for like. It is considered that in terms of containment of cattle the post and rail fence is inadequate.

In response to questions from Mr. Keane Mr. O'Donnell stated that the 90 metre wall provision in the vicinity of the bell mouth entrance is not considered as replacing like with like. It is acknowledged that the fence is onto a parallel access road and then onto the new N4 alignment.

Mr. Rea stated that there are precedents where replacement of like with like have occurred and gave a specific example on a road proposal between Cuilehill-Cashel which he considered to be directly comparable to Mr. Brehony's property (submission 28).

Mr. Richard Rea made a submission to the hearing (submission 27).

Mr. Meehan and **Mr. Scott** answered questions regarding the provisions for non-motorised users as part of the PRD, compliance with DMRB, and on Ten-T European policy document. Mr. Meehan also responded to questions regarding the proposed respository/borrow pit on the Taylor's landholding.

Mr. Walter and **Mr. Halpin** in response to questions detailed the impact of the PRD on Castlebaldwin House.

Mr. Harmon in response to questions detailed the differences between the current and draft NRA Noise guidelines and the additional noise monitoring undertaken.

Mr. Keane responded to legal points made in the submissions of Mr. O'Donnell and Mr. Sweetman.

Mr. Scott presented a updated Schedule of Commitments (submission 31)

Mr Keane made a closing submission

The hearing was formally closed.

Appendix 2 - Documents Received at Oral Hearing 28th-30th April

Doc No.	Document Description	Submitted By	Date
1	Provisional Witness List	Sligo Co Council	28.04.2014
2a, 2b, 2c & 2d	Brief of Evidence including EIS Errata No. 1 & EIS Addenda No.1– Messrs Bernard Scott & Fergus Meehan	Sligo Co Council	28.04.2014
3	Traffic Analysis – Mr. Declan Keenan	Sligo Co Council	28.04.2014
4	Planning Brief – Mr. Stephen Ward	Sligo Co Council	28.04.2014
5	Hydrology & Hydrogeology – Dr. Conor Quinlan	Sligo Co Council	28.04.2014
6	Soils & Geology – Dr. Conor Quinlan	Sligo Co Council	28.04.2014
7	Noise & Vibration – Ms. Jennifer Harmon	Sligo Co Council	28.04.2014
8	Air Quality – Dr. Edward Porter	Sligo Co Council	29.04.2014
9	Ecology – Dr. William O'Connor	Sligo Co Council	29.04.2014
10	Landscape & Visual Impact	Sligo Co Council	29.04.2014
11 & 11a	Agriculture & Non-Agricultural Property Impact – Ms. Freda Salley	Sligo Co Council	29.04.2014
12	Equine Enterprise Assessment – Mr. Michael Sadlier	Sligo Co Council	29.04.2014
13	Archaeology, Architectural & Cultural Heritage – Mr. Eoin Halpin	Sligo Co Council	29.04.2014
14	Socio-Economics – Dr. Craig Bullock	Sligo Co Council	29.04.2014
15	Vertigo Snail Impact – Dr. Evelyn Moorkens	Sligo Co Council	29.04.2014
16	Revised CPO Schedule including documents verifying notice to affected Landowners	Sligo Co Council	29.04.2014

17(Parts A-P)	Submission - Tom & Robert Craig	Sligo Co Council	29.04.2014
18	Martin & Rea Withdrawal Notifications	Sligo Co Council	29.04.2014
19	Richard & Dorothy Taylor – Michael McElhinney	Sligo Co Council	29.04.2014
20	Sligo Co Council's Response to submissions from Statutory Bodies	Sligo Co Council	29.04.2014
21	Further Withdrawal Notifications	Sligo Co Council	29.04.2014
22	Sligo Co Co's responses to remaining objections	Sligo Co Council	29.04.2014
23	Drawing of road section chainage 1800-2100	Sligo Co Council	30.04.2014
24	Illustration of conceptual cross-section through tufa spring location – Dr. Conor Quinlan	Sligo Co Council	30.04.2014
25	Maps, Drawings and photographs of properties - Eugene Brehony CPO 153 & Repls.A. Molloy CPO 154	R Rea	30.04.2014
26	Notification of further withdrawals	Martin & Rea	30.04.2014
27	Submission – Mr. Richard Rea		
28	Extracts from M8/N8 Cullahill-Cashel EIS & Correspondence from Kilkenny Co Council	Martin & Rea	30.04.2014
29	1819 Map of Lough Gill & Markree Estate	Sligo Co Council	30.04.2014
30	Notification of further withdrawals	Martin & Rea	30.04.2014
31	Schedule of Environmental Commitments	Sligo Co Council	30.04.2014

Appendix 3 –**Status of submission/objections made**

Sub num	Name	Status
1	An Taisce	Not withdrawn
2	Department of Arts, Heritage and the Gaeltacht	Not withdrawn
3	Geographical Survey of Ireland	Not withdrawn
4	Health Service Executive	Not withdrawn
5	Inland Fisheries Ireland - Ballina	Not withdrawn
6	Aurivo Co-operative Society Ltd.	Not withdrawn
7	Barry Walsh	Not withdrawn
8	Cleveragh Park Management	Not withdrawn
9	Cllr. Gerard Mullaney	Not withdrawn
10	Cromleach Lodge	Not withdrawn
11	IDA Ireland	Not withdrawn
12	Peter Sweetman	Not withdrawn
13	Sligo Chamber	Not withdrawn
14	Sligo Tourism	Not withdrawn
15	Sydney and Olive Taylor	Not withdrawn
16	Carownagark Water Scheme	Withdrawn
17	Richard J. Rea & Others	Withdrawn
Sub num	Name	Status
18	Aaron Tonry	Withdrawn
19	Andrew Hannon	Withdrawn
20	Anthony and Barbara Brehony	Withdrawn
21	Anthony and Paula Willis	Withdrawn
22	Bernard Mulhern	Withdrawn
23	Brendan and Theresa Henry	Withdrawn

24	Brian Conboy	Withdrawn
25	Brian Mullan	Withdrawn
26	Bridget Feeney	Withdrawn
27	Cathal and Jacqueline Quigley	Withdrawn
28	Charles and Mary King	Withdrawn
29	Declan O'Connor	Withdrawn
30	Derek Lawson	Withdrawn
31	Dermot D'Arcy C/O Sean D'Arcy	Withdrawn
32	Edmond and Collette O'Carroll	Withdrawn
33	Enda and Fiona Candon	Withdrawn
34	Enda and Sheila O'Connell	Withdrawn
35	Eugene Brehony	Not withdrawn
36	Fergal Reynolds	Withdrawn
37	Fran Kerins	Withdrawn
38	Francis and Noleen Kerins	Withdrawn
39	Frank and Mary Jordan	Withdrawn
40	Gordon and Heather Craig	Withdrawn
41	Grainne and John Mulvaney	Withdrawn
42	Ivan Craig C/O Gordon Craig	Withdrawn
43	Jacqueline Keane	Withdrawn
44	James Davey (Alfie)	Withdrawn
45	John and Catherine Lyons	Withdrawn
46	John and Margaret Donaghy	Withdrawn
47	John Cawley	Withdrawn
48	John Gilligan	Withdrawn
49	John Joe Brennan	Withdrawn
50	John McDermott (Paddy)	Withdrawn
51	John Sweeney	Withdrawn
52	Joseph Candon	Withdrawn
53	Kathleen Flynn	Withdrawn
54	Killian Scanlon	Withdrawn
55	Leslie and Myrtle Maxwell	Withdrawn
56	Leslie Conboy	Withdrawn
57	Margaret McLoughlin	Withdrawn
58	Michael and Annie Clarke	Withdrawn
59	Michael and Mary McGovern	Withdrawn
60	Michael Breheny	Withdrawn
61	Nigel and Mary Bourke	Withdrawn
62	Noel and Rosaleen Wynne	Withdrawn
63	Norman Gardiner	Withdrawn
64	Oliver Cawley	Withdrawn
65	Padraig and Colette Noone	Withdrawn
66	Padraig Brehony	Withdrawn

67	Patrick Lynch	Withdrawn
68	Patrick and Sheila Kerins	Withdrawn
69	Patrick Kerins	Withdrawn
70	Patrick Lynch	Withdrawn
71	Peter and Mary Bartley	Withdrawn
72	Peter McGoldrick	Withdrawn
73	Receivership - Plot 133	Withdrawn
74	Reps of James McGarry (Deceased) C/O Brian Mullins	Withdrawn
75	Reps of Martin Quigley (Deceased) C/O Brian Kennedy	Withdrawn
76	Robert Craig	Withdrawn
77	Seamus Maye	Withdrawn
78	Sean and Freda D'Arcy	Withdrawn
79	Thomas and Muriel Ingram	Withdrawn
80	Thomas O'Connor	Withdrawn
81	Wilfred and Sheila Bourke	Withdrawn
82	Charles Cooper & Mary Cooper, Markree Castle Ltd & Patricia Cooper	Not withdrawn
83	Adrian Dodd	Withdrawn
84	Damien Trill	Withdrawn
85	Gearoid O'Connor	Not withdrawn
86	James Dodd C/O Kathleen Dodd	Withdrawn
87	John Conlon	Withdrawn
88	Mary White	Withdrawn
89	Michael O'Connor C/O Tom O'Connor	Withdrawn
90	Michael Walsh	Withdrawn
91	Patricia Burke O'Connor C/O Tom O'Connor	Withdrawn
92	Reps of Anthony Molloy (Deceased) C/O Mary Molloy	Not withdrawn
93	Sean and Sadie Canavan	Withdrawn
94	Thomas and Joan Kelly	Withdrawn
95	Tom and Ann O'Conner	Withdrawn
96	Yvonne Maguire	Withdrawn
97	Richard & Dorothy Taylor	Not withdrawn
98	Gerry Armstrong	Withdrawn