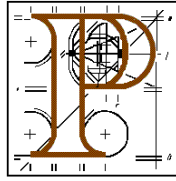


An Bord Pleanála



Inspector's Report

Board Reference: 07.HA0049 & 07.KA0034

Re: Galway County Council Compulsory Purchase Order (No. 1) – 2014, N59 Clifden to Maam Cross Road Improvement Scheme. Approval under Section 51 of the Roads Acts 1993-2007.

Location: Townlands of Tulaigh Bhoithín (Tullyvoheen), Corr an Bhacaill (Couravoughil), Coill Uí Mhongáin (Killymongaun), An Gabhlán Thiar (Gowlan West), Doire Liath (Derrylea), Leitir Seithe (Lettershea), Imleach Mór (Emlaghmore), Baile na hInse (Ballynahinch), Imleach Dhá Rú (Emlaghdaroe), Leitrí (Lettery), Doire na bhFlann (Derrynavglau), Gleann Chóchan (Glencoaghan), Béal an Átha Fada (Ballinafad), Atraí (Athry), An Gharmain (Garroman), Lios Uachtair (Lissoughter), An Chathair (Caher), Doire Fhinín (Derryneen), Ceapach Chuais (Cappagoosh), Both Íseal (Boheeshal), Seanadh Chaola (Shannakeela), Bun Scainimh (Bunscanniff), An Lorgain nó Sindile (Lurgan or Shindilla) and Ard Doire na gCléireach (Ardderrynagleragh), Co. Galway.

Observations to CPO:

- Ballinafad Commonage Shareholders
- Donal Joyce
- Kevin Joyce
- Patoommat Phanihana Mannion
- Peter Savage
- Representatives of Anna Lee
- Mark & Tommy Joyce
- John & Sarah Ross
- Ann Stanley and Terence Sutherland

Observations to Road Scheme - Department of Arts Heritage & Gaeltacht
- Fáilte Ireland
- Peter Sweetman
- Representatives of Anna Lee
- Mark & Tommy Joyce
- John & Sarah Ross
- Ann Stanley and Terence Sutherland

Local Authority: Galway County Council

Dates of Site Inspection: 23rd, 24th, 28th & 29th October 2014, and 10th & 13th November 2015.

Inspector: Michael Dillon

TABLE OF CONTENTS

- 1.0 NATURE AND SCOPE OF APPLICATION FOR APPROVAL AND FOR COMPULSORY PURCHASE ORDER**
- 2.0 SITE INSPECTIONS AND DESCRIPTION**
- 3.0 OBSERVATIONS FROM PRESCRIBED BODIES**
- 4.0 SUBMISSIONS ON COMPULSORY PURCHASE ORDER AND/OR ROAD SCHEME APPROVAL FROM INDIVIDUALS**
 - 4.1 Submissions on CPO
 - 4.2 Submissions on CPO and Road Scheme
 - 4.3 Submission on Road Scheme
- 5.0 BOARD SEEKS ADDITIONAL INFORMATION**
 - 5.1 Board appoints Consultant Ecologist
 - 5.2 Additional Information Request
 - 5.3 Submission of Galway County Council
- 6.0 RESPONSE SUBMISSIONS RECEIVED ON FOOT OF RE-ADVERTISEMENT**
 - 6.1 Request to Re-advertise Proposed Development.
 - 6.2 Re-advertisement
 - 6.3 Submissions Received in Relation to Re-advertisement
- 7.0 REPORT ON ORAL HEARING**
 - 7.1 General Comment
 - 7.2 Parties Represented
 - 7.3 Order of Hearing – Day 1
 - 7.4 Order of Hearing – Day 2
 - 7.5 Order of Hearing – Day 3
- 8.0 COMPULSORY PURCHASE ORDER**
 - 8.1 General Comment
 - 8.2 Community Need
 - 8.3 Suitability of Site
 - 8.4 The Need for All the Lands
 - 8.5 Compatibility with Development Plan Provisions
 - 8.6 Other Issues
 - 8.7 Conclusion in relation to CPO
- 9.0 SECTION 51 APPROVAL – ASSESSMENT**
 - 9.1 General Comment
 - 9.2 National Guidance
 - 9.3 Materials Balance

- 9.4 Signage & Lighting
- 9.5 Services

10.0 ENVIRONMENTAL IMPACT ASSESSMENT OF ROAD SCHEME

- 10.1 General Comment
- 10.2 Consultations
- 10.3 Alternatives Considered
- 10.4 Traffic & Safety
- 10.5 Material Assets
- 10.6 Air Quality & Climate
- 10.7 Noise & Vibration
- 10.8 Landscape & Visual Impact
- 10.9 Soils & Geology
- 10.10 Surface Water (Hydrology)
- 10.11 Groundwater (Hydrogeology)
- 10.12 Archaeological, Architectural and Cultural Heritage
- 10.13 Ecology
- 10.14 Inter-relationship between Environmental Aspects and Cumulative Impacts
- 10.15 Conclusion – Environmental Impact Assessment

11.0 APPROPRIATE ASSESSMENT

12.0 OVERALL CONCLUSION

13.0 RECOMMENDATION IN RELATION TO COMPULSORY PURCHASE ORDER

14.0 RECOMMENDATION IN RELATION TO SECTION 51 APPROVAL

1.0 NATURE AND SCOPE OF APPLICATION FOR APPROVAL AND FOR COMPULSORY PURCHASE ORDER

- 1.1 Galway County Council made an application to An Bord Pleanála (**Ref. 07.HD0023**) under Section 50(1)(b) of the Roads Act 1993, in relation to whether an Environmental Impact Statement (EIS) was needed for the N59 Clifden to Oughterard road project. By Order dated 10th October 2011, the Board directed the Road Authority to prepare an EIS. The road scheme was subsequently split into two parts – Clifden to Maam Cross (approx. 30km) and Maam Cross to Oughterard (approx. 15km). This latter part was the subject of a separate application to the Board under Section 51 of the Roads Act (**Ref. 07.HA0041**). By Order dated 20th December 2013, the Board approved the proposed road development. No work has commenced on foot of this approval. The Clifden to Maam Cross portion is the subject of this current application for approval to the Board.
- 1.2 The Compulsory Purchase Order (CPO) relates to the compulsory acquisition of lands by Galway County Council within the 24 no. townlands listed on the front page of this Report. The area of the scheme extends to some 105.4ha – much of which is contained within the existing N59 road alignment, and some 32.7ha of which is actually held in title by Galway County Council. The owners/lessees/occupants or reputed owners are listed in the First Schedule of the Notice (a separate bound volume). This Schedule was amended by way of submission to the Oral Hearing [**Document 30**] – marginally reducing the amount of land to be compulsorily purchased and making some changes to the list of land owners where new information had become available. It is stated in the Order that the local authority is authorised to acquire compulsorily the lands for the purposes of the improvement and construction of the realigned road. The Second Schedule of the Order refers to the extinguishment of 49 no. public rights-of-way. The Manager's Order for the CPO is dated 26th June 2014.
- 1.3 The CPO is made arising from an application by Galway County Council to the Board for approval of the Clifden to Maam Cross road scheme under section 51 of the Roads Acts 1993-2007. The scheme comprises the following principal elements-
- Construction of a Type-3 carriageway road (6.0m wide) with 0.5m wide hard shoulders, flanked by 3m wide verges in which there is a 2.3m cycleway/footpath along parts of scheme. The overall length is 29.4km (broken up into four sections). Some 4.1km of this length will involve no alterations to cross-section or alignment – simply resurfacing of the carriageway. [I estimate this figure to be 3.9km, based on figures contained in section 13.5.3 of Volume 2 and perusal of maps contained in Volume 4 of the EIS].

- Division of road improvements into two sections – Clifden to Gowlan West townland (2.8km) and Derrylea townland to Maam Cross (26.6km).
- 2km of associated local road improvements.
- Predominantly on-line improvement (80%) with 25 no. discrete off-line sections (20%).
- 11.9km of cycleway/footpath – to tie in with the recently approved Connemara Greenway proposal.
- Provision/improvement of 22 no. road junctions (three of which are with Regional Roads – R341 to Roundstone, R340 to Cashel/Carna, and R344 to Letterfrack). The junctions are numbered JN-001 to JN-022 on drawings submitted.
- Provision/improvement of 89 no. accommodation access points – numbered AC-001 to AC-089 on drawings submitted.
- Widening/replacement of 9 no. existing bridges and provision of 1 no. new cycleway/foot bridge of 18.25m span and 3.125m deck width at Weir Bridge. [All described in section 4.7 of the EIS].
- Provision of or improvement to 42 no. piped/culverted watercourses with diameter varying from 0.9m to 1.5m. [A further 14 watercourse crossings will require no widening work].
- 760m length of retaining walls at 9 no. locations. [Listed at Table 3.9 of the EIS].
- 2 no. agricultural underpasses at ch.233+640 and ch.247+740.
- Construction of 8 no. amenity/tourist lay-bys with information boards (AA01-AA08).
- Provision of 7 no. informal pull-in areas (PIA01-PIA07).
- Construction of 4 no. bus stops.
- 2 no. material deposit areas for an estimated 395,300m³ of spoil (mostly peat) – one at either end of the scheme (MDA01-MDA02).
- 5 no. material claim areas (MCA01-MCA05) for rock/gravel (estimated 225,000m³) – to also function as deposit areas for spoil. The total area involved is 4.27ha. Pits will be excavated to a depth of 5m.
- 32 no. wetland treatment areas for surface water run-off. [Listed at Table 4.10 of the EIS].
- Associated earthworks, drainage, landscaping, diversion of services and ancillary works.

- 1.4 The application for approval is for the road scheme, as outlined above, and is accompanied by an Environmental Impact Statement (EIS)-
- Volume 1 – Non-Technical Summary. There is an Irish language version of this volume. [Tá leagan Gaeilge den Imleabhar seo].
 - Volume 2 – Main Text.
 - Volume 3 – Drawings.
 - Volume 4 – Appendices.

The application is accompanied by a separate Natura Impact Statement (NIS) volume.

2.0 SITE INSPECTIONS AND DESCRIPTION

- 2.1 The lands, the subject of the Compulsory Purchase Order and Road Scheme Approval, are located within a total of 24 no. townlands, strung along the N59 National Secondary Route linking Clifden with Maam Cross, via the dispersed settlement of Sraith Salach (Recess). The N59 is a single carriageway road with limited passing areas. The 100kph speed restriction applies along most of the length of this road – except in the environs of Clifden, and for a short stretch at Recess, near Joyce’s commercial centre (ch.242+050 to ch.242+250) – where 60kph speed restrictions are in place. There is no speed restriction in place at Maam Cross. There are no public footpaths and there is no public lighting within the scheme area. Some stretches of the road have been realigned in the past, and boundaries set back. In particular, the carriageway was rerouted to the south side of Derrynreen Lough between junctions JN-018 and JN-019 – a distance of 3.2km onto the bed of the old Galway to Clifden railway line. In other places too, the road runs along the line of the former railway.
- 2.2 The Connemara Greenway is a proposed 52km cycleway/footpath linking Clifden with Oughterard, along the line of the old Galway to Clifden railway line (where possible). This scheme was approved by the Board (**Ref. PL 07.JA0033**) on 3rd March 2013. The scheme did not contain a CPO element – the route to be on a permissive basis, where it crossed private land. The first section of the Greenway from Clifden to Gowlan West townland (approximately 3.5km) has been recently completed. Realignments of the N59 in the past have encroached on the railway line, which was closed in 1935. The track has been lifted. At the Clifden end of the scheme, the N59 and the old railway line intermingle. Between Weir Bridge and Bunscanniff townland, the N59 and the Greenway run parallel, and in places intermingle. The old railway line crosses the N59 at a number of discrete locations – ch.237+900 (derelict railway cottage) and ch.240+950 (AC-045 and AC-046) just beside Weir Bridge at Recess. A number of railway buildings, bridges and embankments are still in existence. Some railway buildings have been adapted to other uses – as in the case of Recess railway station (now two houses). Yet other railway buildings are in a state of dereliction. In some places, bridges have been removed and spoil deposited along the original line of the track.
- 2.3 There are a number of sharp bends on the N59 roadway – particularly at Lettery, Derrynavglan, Garroman, Bunscanniff and Ardderrynagleragh townlands, as the road threads its way amongst lakes and across rivers. Clifden lies at 17m OD, whilst Maam Cross is at 42m OD. In between, the

existing road reaches a maximum height of 61m OD at ch.230+400 and a minimum of 12-13m OD at ch.234+400. The road traverses a number of older stone bridges (some widened in recent times) and some newer concrete structures erected with stone-faced parapet walls. The EIS indicates that Annual Average Daily Traffic (AADT) in 2010 varied between 1,810 and 2,835 vehicles over different stretches of the road. The percentage of HGVs is stated to be approximately 8%. New road signage has been erected at all junctions. The road is busier in summer months with tourist traffic.

- 2.4 The existing N59 is bounded primarily by the Twelve Bens and Maumturk Mountains to the north and by a low-lying mosaic of bog, wetland, and lakes to the south. The road threads its way amongst a number of lakes – principally located on the southern side, and across a large number of watercourses. The area is characterised by generally low-intensity agriculture, limited forestry and peat harvesting for domestic use. There are a number of one-off houses along the route, together with access for agriculture and farmhouses. Some houses are derelict or unoccupied. There are an additional 10 no. commercial access points. There are two commercial stone quarries on the north side of the route – one at Lettershea townland and the other at Lissoughter townland (the former open and the latter closed on the dates of site inspection). The former is not particularly visible from the N59, whilst the latter is considerably more visible. There are a substantial number of casual borrow pits flanking the road – some still in use for extraction of rock. Other quarries and pits have become overgrown with vegetation – some of which were used for construction of the now abandoned railway line. There is a marble works at Lissoughter townland (to the east of the aforementioned quarry in the townland of the same name). Recess is a dispersed settlement along the N59 (mostly to the north of the road) with a former national school – now in use as a childcare facility/community centre (no. 106), Garda station (no. 102a), public house, post office, convenience shop, petrol filling station, craft shops, hardware shop (all at no. 97), and health centre (no. 95). There is a large, informal pull-in area opposite the row of commercial buildings (Joyce's, no. 97) which abuts Garroman Lough. There are communications masts at two locations on the north side of the N59 – at ch.233+900 and ch.243+450 (in Recess). There are electricity sub-stations located at two locations on the north side of the N59 at ch.223+450 in Clifden, and ch.239+550 in Garroman townland.
- 2.5 The proposed sites for the 5 no. Material Claim Areas (MCAs) can be described as follows-
- MCA01 is located at ch.229+550 – on the north side of the N59 – and immediately to the west of an existing quarry at Lettershea townland. The area is currently rough pasture.

- MCA02 is located at ch.230+300 in Lettershea townland. It will be formed by an off-line realignment of the N59. The area is used for rough grazing and small-scale extraction of rock. This MCA will be divided in two by the new road alignment.
- MCA03 is located at ch.235+000 on the north side of the N59, at a location where there are already extraction pits for rock. This MCA is located opposite PIA01.
- MCA04 is located at ch.238+700 on the northern side of the road in the townland of Athry. There are extensive rock outcrops within this slightly elevated area of rough grazing.
- MCA05 is located at ch.252+400 – forming a long narrow triangular area between an old railway cutting in rock to the north and the existing line of the N59 to the south. It is covered in scrub vegetation. The old railway cutting was waterlogged on the dates of site inspection.

2.6 The proposed sites for the 2 no. Material Deposit Areas (MDAs) at either end of the scheme can be described briefly as follows-

- MDA01 (at the Clifden end) is located in the townland of Gowlan West, and runs to some 3.84ha. It is approximately 430m to the south of the N59, and to the southeast of Clifden. Access is via a narrow cul de sac county road (L51311), where the 80kph speed restriction applies. It is not possible to pass two cars along most of the length of this road. The road has recently been resurfaced. It is proposed to construct two passing places to facilitate construction traffic. The boundaries of the site are formed by the dismantled Galway-Clifden railway line to the north (boundary with which is a post & wire fence), the county road to the east and undefined boundaries to the south and west. The level of the site is slightly below the level of the adjoining road. The area comprises cut-over bog with rock outcrops. It is proposed to provide a surface water drainage connection to a bog-drain approximately 300m to the west – ultimately discharging to Derrywaking Lough, onwards to Lough Salt and into Ardbear Bay. The site is largely flat with some minor undulations. There are electricity lines traversing the site (parallel to the road). Sight distance at any entrance to the site is good – owing to the lack of hedgerows or obstructions. There are three houses on the L51311 between the MDA and the N59 – one of which (an old railway cottage) appears to be unoccupied. There is just one further house at the head of this cul de sac. Lands to the west of this area are in use for harvesting of peat at present.
- MDA02 (at the Maam Cross end) is located in the townland of Ardderrynagleragh, and runs to some 7.22ha. It is approximately 750m to the south of Maam Cross, on the west side of the R336 road to Casla. The road is wide enough for two vehicles to pass, and has recently been resurfaced. The 80kph speed restriction

applies on this road. There is no defined boundary to the site – other than the R336 on one side. The area forms part of a larger area which contains semi-mature coniferous plantation. It was not possible to penetrate this plantation on the date of site inspection. The area is largely flat – falling slightly towards the southern end. There are three small lakes to the north and west of the site. The site drains to the Screeb River catchment. Sight distance is good in either direction at most of the roadside boundary – owing to the setback of planting from the edge of the carriageway and to the straight section of road in this area. There is a broken white line in the centre of the R336 in this area. There are two houses between MDA01 and Maam Cross. There is a working rock quarry to the south of this area – on the opposite side of the R336.

2.7 There are a substantial number of informal pull-in areas of various sizes strung along the route – some of which are located on old stretches of road, where the N59 has been realigned in the past. It is proposed to formalise these to some extent. The proposed sites to be retained for informal pull-in areas PIA01-PIA07, can be described as follows-

- PIA01 is located at ch.235+000 – at Ballynahinch Lough. It is large, and used for casual storage of road repair stone.
- PIA02 is located at ch.236+650 – to the east of Glencoaghan Bridge. It is small.
- PIA03 is located at ch.237+050 – adjacent to Canal Bridge. It is extensive.
- PIA04 is located at ch.239+100 – on the shores of the western basin of Loch na Cúige Rua. It is large, and is used for casual storage of road repair stone. Some of this aggregate is slipping into the lake. There are informal quarry pits for stone on the opposite side of the N59 at this location.
- PIA05 is located at ch.239+450 – just to the east of the junction with the R340 road to Carna (JN-011). It is small.
- PIA06 is located at ch.246+100 – at Lough Tawnagh. It is large.
- PIA07 is located at ch.247+350 – at Boheeshal townland. It is small.

2.8 In addition to the informal pull-in areas referred to above, it is proposed to construct Amenity Areas (AA01-AA08) with limited facilities and signage at locations as follows-

- AA01 is located at ch.224+900 at Gowlan West townland – immediately to the west of JN-004. It will be formed when the existing road junction is realigned.
- AA02 is located at ch.232+650 at an existing informal pull-in area near Ballynahinch Lake – at a popular viewing point of the O’Flaherty island castle (currently undergoing restoration) within the lake.

- AA03 is located at ch.234+450 at an existing old stretch of road at Benlettery Bridge.
- AA04 is located at ch.237+700 at an existing old stretch of road on the southern shore of Derryclare Lough.
- AA05 is located on the east side of the R344 junction with the N59 (JN-013). It will be formed when the existing junction is realigned.
- AA06 is located at ch.245+500 in Caher townland, at a small existing informal pull-in area with views over Lough Tawnagh.
- AA07 is located at ch.250+050 on the north side of the carriageway – to provide views over Lough Oorid to the south. There is rough grazing here at present.
- AA08 is located at ch.251+200 on the south side of the carriageway – to provide views over Lough Oorid to the south. There is rough grazing here at present.

2.9 It is proposed to demolish a number of structures to facilitate the road scheme – principally sheds, but also some houses – as follows-

- Farm shed (no. 36) at ch.225+500 on south side of road. The shed is in good condition.
- Tumbledown house (no. 37) at ch.225+550 on north side of road. The structure is situated approximately 2m below the level of the road, within an overgrown garden.
- Farm shed/garage (no. 39) at ch.225+550 on south side of road. The shed is in good condition.
- Farm shed (no. 40) part of a group of farm buildings on the north side of the road. The shed is in good condition.
- Farm shed (no. 77b) at ch.235+850 on south side of road. The shed is in good condition.
- Two-storey farmhouse and shed (no. 111b) at ch.244+800 on south side of the road. The house is semi-derelict.
- Two-storey house/shop (no. 115a) – Caher House – at ch.245+150 on the south side of the road. The building is semi-derelict, and is for sale.
- Single-storey sheds (no. 117a) at ch.246+150 on north side of the road. The structures would appear to have formerly been a house, and are in reasonable condition.
- Two-storey house (no. 137) and sheds at ch.252+750 on the south side of the road. The house is unoccupied and in poor condition. It is on a site elevated above the road.
- Dilapidated sheds (no. 139a) at ch.253+200 on the south side of the road. The sheds are part of the property of a two-storey house on the opposite side of the road.
- Two-storey house (no. 141) at ch.254+700 on the south side of the road. The house appears to be unoccupied.

- 2.10 Upgrading works have already been carried out a 6 no. bridge structures on the route – all with similar high limestone parapet walls, and capped-
- Lettery Bridge (WC6.0) at ch.234+450.
 - Glencoaghan Bridge (WC7.0) at ch.236+500.
 - Derryneen Bridge (WC12.0) at ch.246+500.
 - Cloonloppeen Bridge (WC13.0) at ch.248+500.
 - Shannakeela Bridge No. 2 (WC15.0) at ch.249+700.
 - Shannakeela Bridge No. 3 (WC15.1) at ch.250+500.

In addition minor repair works have recently been carried out to a number of bridges along the route.

- 2.11 The N59 scheme has three principal junctions with Regional Routes (all within a 4km stretch of road)-

- R341 road to Roundstone (JN-009), just to the south of Canal Bridge. Sight distance is good in either direction owing to the absence of roadside boundary obstructions. The R341 approaches the N59 from a slightly lower level.
- R340 road to Cashel (JN-011) at Loch na Cúige Rua. Sight distance is good in either direction owing to the absence of roadside boundaries.
- R344 road to Letterfrack (JN-013) to the east of Weir Bridge. The junction is broad and wide and sight distance is good to the east and poorer to the west. However, from the west, traffic is travelling at lower speeds owing to the sharp bend at Weir Bridge and the narrow nature of the bridge itself.

- 2.12 The Derrylea section of the N59 (a 3.5km stretch to the east of Clifden) has been excluded from the proposed road scheme. Works were carried out on the upgrading of this stretch of road in 2009/2010 under Part 8. Metal crash barriers have been erected, as required, along its length. A cycleway/footpath has been created along the south (lake) side of this upgraded stretch, crossing over to the northern side of the road at its eastern end. Amenity areas have been created. A substantial amount of rock was excavated to facilitate the road construction. Exposed cliffs have been covered in wire mesh to prevent rock-falls onto the carriageway. The new road is flanked by timber post & rail fencing with plastic-coated chainlink mesh.

3.0 OBSERVATIONS FROM PRESCRIBED BODIES

- 3.1 Galway County Council circulated the following prescribed bodies with details of the proposed scheme-

- Department of Arts, Heritage & The Gaeltacht (DoAH&G).
- Inland Fisheries Ireland (IFI).
- Environmental Protection Agency (EPA).
- An Chomhairle Ealaíon.

- An Taisce.
- Fáilte Ireland.
- Department of Environment, Community & Local Government (DoEC&LG).
- Department of Communications, Energy & Natural Resources.
- National Roads Authority (Now Transport Infrastructure Ireland - TII).
- Commissioners for Public Works in Ireland.
- Údarás na Gaeltachta.
- The Heritage Council.

There are observations received from D0AH&G and from Fáilte Ireland, which are summarised below.

3.2 The submission from DoAH&G, received by the Board on 8th October 2014, can be divided into two parts – (i) nature conservation, and (ii) archaeology.

3.2.1 The submission in relation to nature conservation can be summarised in bullet point format as follows-

- The area is of exceptional importance for nature conservation at both landscape and catchment levels – much of it consisting of designated European sites. The SACs have been in existence since 1997 and the SPA since 2011. The obligations to maintain or restore the favourable conservation status of the qualifying interests of the SACs and special conservation interests of SPAs of these sites, and to implement the relevant requirements of Article 6 of the Habitats Directive, have been in effect since those dates.
- It is acknowledged that significant efforts have been made to avoid or minimise negative ecological effects through careful project planning and design. However, it has not been possible to avoid interactions with European sites. Some 17.55ha of the total land acquisition boundary of 105.4ha, is within these European sites.
- Construction of fencing and linkages with the Connemara Greenway may have implications for the conservation objectives of European sites outside the land-take area.
- There are deficiencies and gaps in the project description, in the details of mitigation measures that will apply, and in the assessment of the likely significant effects of the project on its own and in combination with other plans and projects, on European sites in view of their conservation objectives, as well as on the environment.
- Further information is required in respect of the following.
 1. Whether there is a need for detailed site investigation or ground testing.
 2. Whether there is a need for archaeological testing.

3. Locations of proposed fencing and means of construction and access.
 4. MCAs and MDAs – site preparation, overburden stripping and storage, drainage (including locations of cut-off drains), water management, emissions and reinstatement or after-use plans.
 5. Construction, use and management of MDAs, including access, ground clearance, tree-felling (and any replanting requirements imposed by the Forest Service), drainage (including cut-off drains), drain-blocking, water management, and reinstatement or after-use plans.
 6. Details of planned diversion, relocation and demolition of utilities and services, which are referred to, but not mapped.
 7. Details of bridge and culvert construction and/or widening, including agricultural underpasses.
 8. Details of method of construction of retaining walls in close proximity to 9 no. extremely sensitive water bodies.
 9. Specific details of cycle-ways, and where they interlink with other existing and permitted cycle-ways. Whether parts of the permitted Greenway are being modified by the current project.
 10. Construction of settlement ponds and drainage features.
 11. Effects of reuse of limestone from railway embankment should be given more consideration, owing to changes in vegetation composition that result.
 12. No locations are identified for temporary construction compounds.
 13. Details of the invasive non-native species controls to be put in place.
- No details indicated of mitigation measures to apply during any advance contract works.
 - Locations where general mitigation measures will be used, and whether they will be effective e.g. silt fencing installation and removal.
 - Mitigation measures for construction of retaining walls.
 - Mitigation for construction of fences and cut-off drains.
 - It is noted that an Environmental Operating Plan and method statements are to be produced at construction stage. The Board must consider the risks to European sites of allowing aspects of the project or its mitigation to be designed or finalised at construction stage.
 - The difficulty of providing mitigation measures for two or more nearby and interconnected projects, where at least parts will be constructed in tandem.
 - In-combination effects of projects such as the Derrylea section of the N59 and associated cycle-ways (carried out under Part 8 – ref.

10/05). The Department is not aware of an EIS or NIS submitted for that project.

- In-combination effects of 'Eirspan' bridge project whereby bridges on the N59 were widened and repaired (carried out under Part 8 – ref. 06/11). This project was accompanied by an Appropriate Assessment report.
- In-combination effects of replacement of Tawnaghmore Bridge (Section 177AE) currently with the Board – ref. JP0030.
- In-combination effects of Maam Cross to Oughterard Road – particularly at tie-in point.
- In-combination effects of Connemara Greenway which interlinks with aspects of the current road proposal.
- In-combination effects of the 110kV South Connemara electricity line (ref. VA0004).
- In-combination effects of proposed wind farm at Ardderrynagleragh (ref. 14/963).
- In-combination effects of quarries, forestry, agriculture, peat extraction.
- In-combination effects of statutory land-use plans for the area.
- The NIS is deficient in content and scientific conclusions in the following areas-
 1. No map of zone of influence of the scheme has been included. Risks associated with MDA01 are not identified, where it is upstream of, and hydrologically connected with Derrywaking Lough, an Annex I lake habitat which supports the Annex I species Slender Naiad, and also Lough Salt – all of which are within an SAC.
 2. The NIS includes only a generalised description of the receiving environment in terms of sites, habitats and species. Examination of the potential effects of the project in the context of the conservation objectives of the European sites is generally lacking.
- The following are among the scientific information and analyses required to inform the AA-
 1. Detailed and spatially specific description of habitats, vegetation communities, association with other habitats, existing condition and environmental baseline and the structure and function necessary for their long-term maintenance.
 2. Detailed and spatially specific description of the habitat and environmental requirements of Annex II species, such as Slender naiad.
 3. Detailed consideration of impact on species of birds within the SPA.
 4. Generic conservation objectives are to maintain or restore the favourable conservation condition of the habitats and

species for which European sites have been designated. Full consideration of the likely significant effects of all parts of the project on the European sites is needed.

5. Further assessment is needed to demonstrate the likely effectiveness of the mitigation measures.

6. Any in-combination effects of this road with other plans and projects needs to be demonstrated.

- Further consideration should be given to the likely effects on habitats including the full extent of Annex I habitat loss, in particular outside European sites.
- The use of wetland/peatland sites near sensitive water bodies as MDAs is questioned in general.
- Further detailed consideration is needed of Freshwater pearl mussel and globally threatened species.
- The Department advises that further information is required to address the issues outlined above, but notes that other issues may arise in relation to AA and EIA that have yet to be carried out by the Board. Based on information and assessments currently available, it is considered that the implications for the conservation objectives of four European sites are not fully known, and the possibility that the project will have adverse effects on the integrity of a European site cannot be excluded with confidence at this stage.

3.2.2 The submission in relation to archaeology can be summarised in bullet point format as follows-

- All major mitigation measures detailed in Section 16.7 of the EIS should be carried out in full, in advance of the commencement of any construction works.
- The archaeological component of the scheme should be overseen by a Project Archaeologist.

3.3 The submission from Fáilte Ireland, received by the Board on 9th October 2014, indicates broad support for the proposed development. The 5.5km section of pedestrian/cycle facilities along the N59 (to integrate with the Connemara Greenway) is welcomed. The provision of amenity areas at 8 no. locations and 'pull-in' areas at 7 no. locations is welcomed. The amenity area at Lettery Bridge and the footbridge at Weir Bridge are welcomed.

4.0 SUBMISSIONS ON COMPULSORY PURCHASE ORDER AND/OR ROAD SCHEME APPROVAL FROM INDIVIDUALS

There are objections lodged to the CPO and to the road scheme itself. They can largely be split into issues relating to principally one or the other, or both. I propose to divide the objections into those relating principally to

CPO issues and those relating to the scheme and its impact on the environment and European sites.

4.1 Submissions on Compulsory Purchase Order

Some objections, made to the Board in relation to the CPO, were withdrawn during the course of consideration by the Board.

4.1.1 Objection [No. 1] from An Óige, received by the Board on 8th October 2014, was withdrawn at the Hearing.

4.1.2 Objection [No. 2] from Gaynor Miller, Chartered Surveyors, agents on behalf of Ballinafad Commonage Shareholders, received by the Board on 7th October 2014, can be summarised in bullet point format as follows [Plot no.s 1765 & 1770]-

- There is a lack of fencing provision. The Council is providing post & wire fencing, as standard, including other commonages.
- Other matters may arise when detailed drawings are available.

[Site inspection revealed that this commonage is not currently fenced].

4.1.3 Objection [No. 3] from Shane Joyce, agent on behalf of Donal Joyce, received by the Board on 8th October 2014, can be summarised in bullet point format as follows [Plot no. 2910a.201]. The lands are at Lissoughter townland, at ch.243+225 (map included).

- In anticipation of the Connemara Greenway, the objector and his nephew planned to create a sculpture and stopping point for cyclists and walkers.
- The sculpture was intended to be loosely modelled on King Edward VII, who stayed at the Recess Hotel in July 1907.
- In light of the CPO for the road, the situation has changed. It is requested that the NRA fund the sculpture.
- The hotel platform should be preserved and restored as part of the interpretation.
- That the platform land be included in the CPO.
- Donal Joyce should be compensated for his contribution.

[Site inspection revealed that this area is currently overgrown with mixed woodland species at ch.243+200. Spoil has been deposited in this area, on top of where the platform once stood].

4.1.4 Objection [No. 4] from Shane Joyce, agent on behalf of Kevin Joyce, received by the Board on 8th October 2014, can be summarised in bullet point format as follows [Plot no. 2780a.201]-

- Relates to lands at Lissoughter townland on the north side of the road line.

- There are concerns regarding the siting of third party septic tank(s) on the lands in question.
- The Council wishes to site a septic tank on 213m² of land, for the Mannions. There is a site available for a septic tank on the Mannions own property. The Council dug a trial hole on this land and found it to be waterlogged. The lands to be compulsorily purchased for a septic tank are similarly waterlogged, and not suitable for the stated purpose.
- There is a suitable site available for a septic tank – indicated on a map provided with the objection.
- The Council should consider a proprietary effluent treatment plant, as this would require a smaller percolation area.
- A magenta-coloured strip of land, added to the CPO, should be removed.
- The alignment of the carriageway is from the 1950's/1960's. An existing entrance to the Recess Hotel, which itself pre-dated the construction of the MGWR hotel, which appears on the 1898 6" maps, was demolished and a new blockwork wall and gate was provided for the Joyces at the time. It is required that this access be moved once again to an equivalent location in a new wall, and an access provided onto the new carriageway.
- Adequate surface water drainage and conduits to the property should be provided.

[Site inspection revealed that this is an area of land overgrown with deciduous shrubs and trees at ch.243+100. It would appear to form part of the Connemara marble factory to the rear of a bungalow (house no. 101) surrounded on three sides by Joyce property. The roadside boundary is a concrete block wall surmounted by some strands of bull wire. There is an agricultural entrance gate within the wall – which has not been used by vehicular traffic in some time. There is a pair of semi-detached cottages immediately to the northwest. The map submitted would not appear to tally with the CPO map submitted].

4.1.5 Objection [No. 5] from Joyce, Mackie & Loughheed, Auctioneers & Valuers, agents on behalf of Pamela P. M. Kenworthy of Bedford, England, received by the Board on 25th August 2014, was withdrawn.

4.1.6 The objection [No. 6] from Gaynor Miller, Chartered Surveyors, agents on behalf of Patoommat Phanihana Mannion, received by the Board on 7th October 2014, can be summarised in bullet point format as follows [Plot no. 2805a.201 & 2806a.201]-

- The owner objects to the acquisition of the house and gardens. The majority of the property is surplus to the requirements of the road project. The owner will be left homeless as a result of the acquisition – as she has only a one third share in it.

[Site inspection revealed a pair of single-storey, semi-detached cottages (no. 100) at ch.243+000. The houses (formerly a post office) are occupied. The objector lives in the westernmost of the two cottages. The drawings submitted indicate two separate pieces of property. There is no indication in drawings that these houses are to be demolished. To the rear of the houses is a steep embankment which is covered with deciduous trees and shrubs. This embankment immediately abuts the quarry at Lissoughter to the northwest.

4.1.7 Objection [No. 7] from Joyce, Mackie & Lougheed, Auctioneers & Valuers, agents on behalf of John Thomas & Mary Bridget Savage of Birmingham, England, received by the Board on 29th August 2014, was withdrawn.

4.1.8 Objection [No. 8] from Rod Spencer, Auctioneer, agent on behalf of Peter Savage, received by the Board on 8th October 2014, can be summarised in bullet point format as follows [Plot no. 1410a.201 & 1410b.201]-

- The lands to be acquired amount to 0.106ha.
- The acquisition may invalidate a planning permission to erect a house and septic tank on the lands – affecting the percolation area for the proposed treatment system.
- The Council should remedy any deficiencies caused.

[Site inspection revealed a recently-constructed bungalow on this site (no. 32) – not quite finished – at ch.225+300. The vehicular access is in place – AC-013. To the east of the bungalow is a small field covered in rushes. The roadside boundary is a post & wire fence at this location. There is a bungalow on the adjoining site to the east again].

4.2 Submissions on CPO and Road Scheme

In addition to objecting to the CPO, the following 7 no. submissions make comment in relation to the approval of the road scheme.

4.2.1 Objection [No. 9] from BCDH Architects, agent on behalf of the Representatives of Anna Lee, received by the Board on 8th October 2014, can be summarised in bullet point format as follows [Plot nos. 2105a.201, 2105b.201, 2105g.201, 2105b.202, 2105p.201, 2105q.201]-

- The house (139) will be impacted by the road scheme. The house is within the Maumturk Mountains cSAC and the Connemara Bog Complex cSAC. The property is set back 45m from the N59, and is screened by a low stone wall and mature blackthorn/hawthorn hedge. The proposal for a new bridge (WC 17.1) with substantial solid side walls, metal safety barriers, and enforced reconstruction of the screening hedge will spoil the character of the area. The owners would like to see a less obtrusive solution.

- The Sruthán Mór is a source of drinking water for the house. The collecting filter is located under the road culvert. The Council should secure the supply and indicate proposals for alternatives in the event of damage or disruption.
- The proposed bridge will drastically change this feature. Although identified as a flood risk in the EIS, it has not been known to flood above the road. The stream is identified as salmonid, but this is not borne out by family experience of fishing.
- The owners would like the stone from the demolished roadside boundary wall set aside for re-use by the owners. Early planting of the replacement hedge would be of benefit.
- Relocation of the boundary wall 4-5m closer to the house and raising the level of the road 200-400mm will make the road more obtrusive, when viewed from the house.
- Planning permission will probably be required for the replacement of this roadside boundary wall, as the site is within an SAC.
- Replacement drainage for the lawn of the house will be required.
- Security proposals from the Council during construction works would be desirable.
- A bridge is to replace an existing road culvert. A bridge structure is required in order not to disturb the bed of a salmonid stream. The owners dispute that the stream is salmonid. The bridge structure is excessive considering the small size of the stream. Vegetation growth for some 200m at the southwestern inlet of Shindilla Lough, prevents passage of salmon.
- Containing walls for the bridge appear to be 1,100mm in height. This will block a view from the house. The wall is not necessary, or else should be reduced in height.
- The stone-clad wall construction is out of character with the area. The wall should be wide and constructed of local stone, laid on the flat and topped with a crenelated finish. There is abundant local stone.
- There is a significant setback from the road to the northern parapet wall of the bridge. This would appear to be to ensure sight lines from the driveway of the house (looking east). If parapet heights could be adjusted, the need for such a wide hard shoulder could be reviewed, and money saved perhaps.
- The pedestrian hardstanding on the bridge is not necessary, as there are few pedestrians in the area, and most will now use the proposed Greenway to the north of the house.
- Galvanised steel crash barriers between ch.253+200 and ch.253+300 would be unsightly in this highly scenic area. A timber-clad steel system should be used. These have been installed successfully on the shores of nearby Lough Shindilla.

- There is concern that roadside swales beside the property will turn into rubbish dumps. The shallow swales will need to be maintained by the Council.
- It is understood that lands to be acquired for drainage during construction will be returned to the owners on completion of the scheme.
- The proposal to erect fencing will necessitate the construction of gates, stiles, holding pens, cattle tracks at this location.
- Stone from demolished sheds at ch.235+200 is required by the owners for re-use elsewhere on site.
- The raising of the road at the entrance to the house may require alterations to the entrance and may require the pillars to be reconstructed to facilitate Part M access under the Building Regulations.
- There should be litter provisions at the Viewing Area planned for ch.253+800.

[Site inspection revealed a two-storey house (no. 139a) on the north side of the road, and at a slight angle to it, at ch.253+200. There is a deep recessed entrance serving the property. The house is located slightly above the level of the road. It is clearly visible from the road. The ground rises gently on the opposite side of the road. The roadside boundary is a low, dry-stone wall backed by a blackthorn/hawthorn hedge 2.0-2.5m high. There is a water abstraction point from the culvert beneath the Sruthán Mór watercourse which flows under the N59 at this location – there is a second culvert slightly further to the east. There are ruinous sheds on the opposite side of the N59. AC-084 is proposed to serve the house].

4.2.2 Objection [No. 10] from Gaynor Miller, Chartered Surveyors, agents on behalf of Colm & Mary Finnerty, received by the Board on 7th October 2014, was withdrawn.

4.2.3 Objection [No. 11] from Michael McDarby & Co. Solicitors, agent on behalf of Barbara & Edward Joyce, received by the Board on 9th October 2014, was withdrawn.

4.2.4 Objection [No. 12] from Gaynor Miller Chartered Surveyors, agents on behalf of Mark & Tommy Joyce, received by the Board on 7th October 2014, can be summarised in bullet point format as follows [Plot no. 2646a.201]-

- The owners object to the location of the proposed bus stop in Lissoughter townland. Another site has been suggested to the Council for consideration.
- There is a lack of commitment from the Council in the matter of restricting the hours of construction so as not to affect the business

interests of the property owners – particularly in the busy summer tourist season.

- The owners object to the lack of commitment to maintain temporarily, and reinstate permanently, any signage that is at present in place along the N59.
- The owners object to the lack of commitment from the Council in relation to restricting parking by construction staff at their business premises.

[Site inspection revealed a large car-park opposite this row of commercial buildings in Recess at ch.242+150. Access to this unmarked parking area is unrestricted – there being no defined entrance and exit points. There is a modern statue of the ‘Connemara Giant’ within the parking area. There is no bus-stop in this location at present. There is a considerable amount of signage in the area].

4.2.5 Objection [No. 13] from Gaynor Miller Chartered Surveyors, agent on behalf of John & Sarah Ross, ‘An Tinteán’, Shannakeela, Recess, received by the Board on 8th October 2014, can be summarised in bullet point format as follows [Plot no. 2030 & 2775a.201]-

- The Council has not clarified whether the pedestrian access steps and boundary timber fence in front of the dwelling-house are to remain in place.
- Owners object to acquisition of plot no. 277a.201 which is essential for car-parking for their B&B business located on the opposite side of the road. 3-4 spaces are needed.
- The owners wish the Council to carry out a structural survey of their house.
- It is not clear if the access road/entrance gate to the property will be affected by the road scheme.
- The road scheme will have an impact on the value and saleability of the property whilst construction is under way.
- It is noted that the Council has hired private contractors to remove Japanese/Himalayan knotweed (a noxious weed).
- There is concern that the road is to provide fast-track access from Dublin to Clifden, rather than to improve access to Connemara.
- The speed on this section of road should be reduced to 80kmph. Alternatively, there should be warning signage.
- The scheme will result in loss of hedgerows and wildlife habitat.
- Other services such as piped gas, broadband, piped water, piped sewerage and cable TV should be provided in association with this road work.
- Cycle-ways along main roads are less likely to be used by cyclists than off-road greenways.
- The objectors are concerned with proliferation of Galway and Clifden signs at every junction.

- Verges on the Derrylea section have not been properly attended to.

[Site inspection revealed a grassed parking area for 4-5 cars on the south side of the N59 at ch.249+150. There is a single-storey house (no. 132) on the north side of the road – situated above the level of the road, and accessed by a short flight of steps. Vehicular access to the house is from JN-019 to the east – along an old section of the N59. There was no signage at this B&B on the date of site inspection].

4.2.6 Objection [No. 14] from Gaynor Miller Chartered Surveyors, agents on behalf of Ann Stanley & Terence Sutherland, received by the Board on 9th October 2014, can be summarised in bullet point format as follows [Plot no.s 2780a.201 & 2646a.201]-

- The land take from the garden of the dwelling-house is excessive.

[Site inspection revealed a large bungalow (no. 101) adjacent to the Connemara marble factory in Recess at ch.243+150. The roadside boundary is a concrete block wall surmounted by a wire fence. There is dense shrub planting between the house and the road. Notwithstanding this, the house is visible from the road. AC-058 will provide a joint access with the marble factory – replacing the access arrangement as it exists].

4.2.7 Objection [No. 15] from Gaynor Miller Chartered Surveyors, agents on behalf of Martin & Nora Walsh, received by the Board on 7th October 2014, was withdrawn.

4.3 Submission on Road Scheme

There is one submission relating to the road scheme alone, from Peter Sweetman, received by the Board on 8th October 2014. The objection [No. 16] contends that the scheme is part of the Galway to Clifden road scheme, and is an example of ‘project slicing’.

5.0 BOARD SEEKS ADDITIONAL INFORMATION

5.1 Board Appoints Consultant Ecologist

The Board engaged a firm of Consultant Ecologists (Thomson Ecology Ltd. of Guildford, Surrey, UK) to assist the Inspector in assessment of this Roads Approval case ref. 07.HA0049.

5.2 Additional Information Request

Having reviewed the relevant sections of the EIS, the NIS and submissions made to the Board (in particular that received from the DoAH&G on 8th October 2014), it was recommended by the Consultant

Ecologist that additional information be sought from Galway County Council. The Board wrote to the Council on 17th February 2015, requesting submission of the relevant information on or before 31st July 2015. All parties to the appeal were informed that additional information had been sought. The information sought was as follows-

1. Confirmation that all the archaeological investigations lie within the land acquisition boundary.
2. Confirmation that all the utility diversions lie within the land acquisition boundary.
3. Confirmation that all the cycle-ways (including the off-road sections) lie within the land acquisition boundary.
4. Confirmation that all ground disturbance for the installation of all fencing (temporary or permanent) will be entirely within the land acquisition boundary.
5. Confirmation that the rock and material used in construction of the road will be the same as the bedrock type at that location, or inert.
6. Confirmation that (i) the method statements (CMP, ESCP, EOP, etc.) will only provide additional detail on the design, construction methods etc; (ii) that the extent of the project is described fully in the EIS; and (iii) the feasibility of the mitigation has been accounted for in the EIS and NIS (evidence/references needed).

Further Assessment (General):

7. Evidence is required to demonstrate that traffic will not significantly increase, taking into account other plans and projects, or further assessment of potential traffic increases and potential effects, e.g. from air pollution, on designated sites and habitats in proximity to the road.
8. For the temporary construction compounds: (i) demonstration that the commitments for the temporary construction compounds are achievable; (ii) confirmation of the size and number of compounds and whether or not these will be within the land acquisition boundary; and (iii) a specific assessment of any likely significant effects associated with the compounds, and the likely requirements for mitigation, or confirmation and rationale as to why such effects were not considered to be significant.
9. For the Material Deposition Areas: an explicit assessment of the potential effects of the MDAs (habitat loss, effect on species populations, effect on surrounding habitats, etc), plus a description of any required mitigation, or confirmation and rationale as to why such effects were not considered to be significant.

10. For the retaining walls: Assessment of the potential barrier effect on species (otter, common frog, smooth newt, etc) and the integrity of Natura 2000 sites, plus a description of any required mitigation, or confirmation and rationale as to why such effects were not considered to be significant. See also request 15 below.

Natura 2000 Sites:

11. If economic development, tourism and traffic are likely to increase, then further justification is required for the no 'likely significant effect' conclusion for the Natura 2000 sites excluded from the assessment i.e. sites 5 (or 7) to 27 in Section 2.3.1 of Volume 2.
12. Quadrat data (vegetation) for the habitats within Natura 2000 sites which will be directly affected by road construction, accompanied by a map showing sample locations. Minimum of one representative sample per habitat parcel (defined as a contiguous area of a single habitat type) and a comparison of the data with Annex 1 habitat types.
13. An assessment of the effects of bringing the route alignment closer to Ballynahinch Lake (chainage 233+600 to 233+900), within the Connemara Bog Complex SAC.
14. An assessment of the value of the habitats within the SACs which are not the reason for notification (and Annex 1 habitats outside the SACs) as supporting habitat for the habitats which are the reason for notification and the effect of the loss of non-notified habitat on the habitats that are retained. The assessment should consider the reason(s) that non-Annex 1 habitats within the SACs were included within the SAC when the site was designated.
15. An assessment of the effects on habitats which may arise from changes in groundwater flows under or over the road as a result of (i) the introduction of retaining walls; (ii) changes in the depth of construction material below ground level; (iii) changes of type of construction material with reference to permeability; and (iv) the introduction of ditches or confirmation and rationale as to why such effects were not considered to be significant.
16. An assessment of the effects on habitats within Natura 2000 sites which may arise from changes in groundwater flows as a result of route realignment or confirmation and rationale as to why such effects were not considered to be significant.
17. An assessment of the potential to create wet and dry heath within the soft estate, the material deposition and material claim areas and/or within sections of the existing N59 which will become disused. In addition, if these habitats will be created, then an

indication of the balance between habitat lost and habitat gained, and the net result.

18. Further assessment of the potential in combination effects is required. In particular, the following is requested:
 - a. Consideration of the Draft County Galway Development Plan 2015 – 2021, in addition to the Galway County Development Plan 2009 – 2015, and in particular the objectives and policies that relate to tourism and economic development, EDTs, in both Plans;
 - b. Consideration of the Connemara Infrastructure and Interpretation Plan 2012 and the Wild Atlantic Plan; and
 - c. An assessment of the effects of all of the plans and projects acting together including the plans mentioned above and all recently completed, consented and proposed improvements to the N59 west of Galway. The assessment should include consideration of tourism and recreation within the Natura 2000 sites.

Other Habitats:

19. Assessment of the value of scrub, acid grassland and wet grassland, description of the impacts, plus a description of any required mitigation, or confirmation and rationale as to why such habitats were not considered of sufficient value or the effects were not considered to be significant. Such assessment or rationale should include consideration of the potential supporting value of these habitat areas, and those identified as ERs, to Annex 1 habitats within Natura sites.
20. Assessment of the scope to create these habitats within the soft estate, the material deposition and material claim areas and/or within sections of the existing N59 which will become disused.

Bats:

21. Map showing the locations identified as being of likely interest for bats, the locations at which night time activity surveys were undertaken and the times and dates survey work was undertaken at each of these locations, plus a map showing the results of the activity survey(s).
22. Results of bat activity surveys during June, July or August at the locations identified as being of likely interest for bats, or, if only one activity survey was undertaken in October, an explanation of why this was considered sufficient.

23. Identification of locations where bats are likely to cross under or over the existing route and an assessment of the impacts on bats of widening/amending the road/structure at these locations.
24. Identification of specific trees, if any, with the potential to support a bat roost which are to be felled as a result of the development. Locations should be shown on a map and the results of an investigation to determine whether or not these trees are used by bats should be provided.
25. Classification of each of the buildings and structures listed in Table 12.25 as '1. Fully Accessed', '2. Partially Accessed' or '3. Not Accessed', referring to the degree to which these buildings/structures were accessed during the survey. For those buildings or structures (including occupied dwellings) with bat roost potential classified as either 2 or 3, results of an emergence survey or justification that such surveys are not necessary, noting that removal of vegetation in proximity to roosts can result in a significant impact, even when the roost is not directly affected.
26. Type of roost (maternity, etc), species of bat and numbers of bats using the roosts at the identified roosts, together with the rationale for concluding that replacement of these roosts with two bat boxes comprises sufficient mitigation to achieve 'no significant impact' or an enhanced proposal for the provision of replacement roosts for bats.

Otter:

27. Otter survey report setting out methods, date of visits, weather conditions and detailed survey results, including a map.
28. An assessment for each water crossing of compliance with the Guidelines for the Treatment of Otters prior to the Construction of National Road Schemes, with an indication of safe passage for otters, during high and low flow condition, through the crossings shown on Drawings 20731 to 204740 and at the locations of pipe culverts, during both high and low flow conditions.

Other Mammals:

29. Reason that 'other mammals' were excluded from the list of ecological receptors that are included in the impact assessment, with particular reference to the clearance of coniferous woodland in the location of MDA02, or an assessment of the effects of the scheme, in particular the provision of MDA02, on other mammals, especially pine marten and red squirrel. Additional surveys may be needed to support the assessment.

30. Submission of a mitigation strategy which sets out how compliance with legislation which protects mammals will be achieved during site clearance.

Birds:

31. Survey report for breeding and wintering birds setting out methods, date of visits, weather conditions, survey area and detailed survey results; or an updated survey which is compliant with the NRA's 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes' or justification as to why such surveys are unnecessary, with reference to the Connemara Bog Complex SPA and the loss of woodland and scrub habitats.
32. Further assessment of the effects of the scheme on BOCCI resulting from habitat loss, in particular, the loss of approximately 21ha broadleaved woodland & scrub and 11ha of conifer plantation. The assessment would need to take into account the relative scarcity of these habitat types in the locality. The bird species included in the assessment may need to be extended to include other widespread amber listed species (the list has been updated recently) such as robin, greenfinch and goldcrest. If such effects are subsequently found to be significant, a mitigation strategy is required setting out how such effects will be mitigated.
33. Submission of a mitigation strategy which sets out how compliance with legislation which protects breeding birds will be achieved during site clearance and material deposition.

Reptiles:

34. Reptile survey report setting out methods, date of visits, weather conditions and detailed survey results; or an updated survey which is compliant with the NRA's 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes'.
35. Clarification as to whether significant impacts on reptiles are expected, plus rationale, taking into account the suitability of habitat affected at on-line and off-line sections and the likelihood of reptile presence in these locations.
36. If significant impacts are expected or there is a risk of non-compliance with legislation, submission of a reptile mitigation strategy which sets out how the impacts on this species will be mitigated and compliance with legislation will be achieved, including

consideration of the drainage system (as a potential trap) and habitat enhancements within the soft estate.

Amphibians:

37. Amphibian survey report setting out methods, date of visits, weather conditions and detailed survey results; or an updated survey which is compliant with the NRA's 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes'.
38. Clarification on the need for mitigating the loss of amphibian habitat, with rationale, taking into account the effect on areas that are suitable for foraging and hibernating amphibians and close to water.
39. If significant impacts are expected or there is a risk of non-compliance with legislation, submission of an amphibian mitigation strategy which sets out how the impacts on these species associated with habitat loss will be mitigated and compliance with legislation will be achieved, including consideration of the drainage system (as a potential trap) and habitat enhancements within the soft estate.

Freshwater Pearl Mussel:

40. Confirmation that direct loss of habitat will be minimised by ensuring that the natural bed level will be maintained above the base of all culverts and that natural river substrates will be reinstated within all new culverts and water crossings, especially those catchments and watercourses supporting FWPM.

Difficulties in compiling the information:

41. An assessment of the survey methods setting out any deviations from the best practice guidelines set out in the NRA's 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes' and whether or not any such deviations are likely to have impeded the assessment in any way.

5.3 Submission of Galway County Council

- 5.3.1 The response of Galway County Council, received by the Board on 31st July 2015, can be summarised in bullet point format as follows-

Item 1

All archaeological investigations lie within the land acquisition boundary.

Item 2

All utility diversions lie within the land acquisition boundary.

- Eircom cables which currently run along the roadside will be undergrounded.
- Some overhead electricity cables will have to be raised in height where they cross the road.
- Existing water pipes beneath the road will have to be protected during construction.

Item 3

All cycle-ways lie within the land acquisition boundary. The development facilitates a proposed pedestrian/cycle loop between Clifden and Ballynahinch.

Item 4

All ground disturbance for fencing work will be located within the land acquisition boundary. Locations are indicated on drawings submitted as part of Appendix 1.

Item 5

Rock used will be same as the bedrock or else inert (non-limestone).

Item 6

The suite of construction management documents included in the EIS (Construction Management Plan, Erosion and Sediment Control Plan, Peat Restoration and Material Deposition Proposals, Construction Sequence Plan, Design Process Temporary Traffic Management Plan, and Waste Management Plan) are comprehensive and detailed.

- The provision of a Construction Sequence Plan at this stage in the project life-cycle is unprecedented and represents the development of the project to a level of detail which is in excess of the requirements of any of the best practice guidelines reviewed. An Environmental Assurance Officer will be on site for the duration of the project.
- The Environmental Operating Plan will ensure the delivery of the environmental mitigation measures during the construction phase. The EOP will be prepared by the contractor.
- A Method Statement is not a mitigation measure in itself, but rather describes the method by which a contractor will carry out a specific work activity.
- Standard best practice procedures are included in the EIS and NIS for erosion, drainage and sediment release though all phases of the development.
- There are no aspects of the project or its mitigation to be designed at construction stage. Cumulative impacts with other developments in the area have been assessed.

- The first of a series of twelve meetings between the project team and senior NPWS Regional staff took place in June 2010. Where avoidance was not possible, every effort has been made to minimise adverse impacts. Robust and proven environmental protection measures have been developed and integrated into the proposed development in full consultation with the NPWS.
- In relation to avoidance of impacts, the scheme makes maximum use of the existing road line to reduce the land requirement; minimises encroachment on European sites; avoids fragmentation of European sites; eliminates encroachment and resultant loss of Qualifying Habitats; and minimises intrusion into the wider landscape.
- The scheme utilises the lowest category of Type-3 single carriageway.
- Alignment freezes and adjustments were made to facilitate ongoing ecological/technological surveys and reports.
- All Annex I habitats within the three SACs have been avoided. Works have been limited to overlaying at five specific locations over 4.09km in order to avoid impacts on Annex I habitats.
- The development integrates with the Connemara Greenway project.
- Road drainage will be filtered through swales and wetlands along new stretches of road.
- Construction corridor has been limited to 3m as opposed to 5m minimum.
- MDAs and MCAs are all located outside the Recess Freshwater pearl mussel catchment.
- The ecology, hydrology and hydrogeology specialists identified the various environmental receptors and construction/operational activities for which avoidance, protective and mitigation measures were required.
- For the purposes of avoidance of sedimentation of water courses, Ciria 648 'Control of Water Pollution from Linear Construction Projects' formed the primary guiding document.
- Appendix 5D of the EIS is a potential Construction Sequence Plan. The overall site was divided into 133 Temporary Construction Areas. These have to have regard to the Temporary Traffic Management Plan for what is largely an on-line upgrade. Each TCA has associated settlement facilities in accordance with the Erosion and Sediment Control Plan.
- For each of the potential impacts associated with the proposed road development identified by the various specialists, detailed and specific mitigations have been developed in accordance with the hierarchy of options – Avoid at source, reduce at source, abate on site, and finally abate at receptor. In many cases, impacts have been avoided through route choice, alignment design, selection of road cross-section, land acquisition requirement, and by limiting the

scope of works to pavement overlay only along approximately 4km of the route. Other more localised avoidance measures that have been incorporated into the design include- clear-spanning bridges/bridge extensions, use of retaining walls to maintain clearance between the road and waterbodies, use of pre-cast units as opposed to *in-situ* concrete for bridge and retaining wall structures, and the inclusion of appropriately designed MCAs and MDAs.

- Mitigation measures are known to have been successfully implemented on a number of recent construction projects in Ireland, including the N59 Clifden to Oughterard Bridge Widening and Rehabilitation Works, Delphi Bridge Rehabilitation Works, Shramore Peat Deposition Site and several ground investigation contracts undertaken throughout the extent of the proposed road project between 2010 and 2014 inclusive. The measures proposed have also been taken into account in the N59 Maam Cross to Oughterard Road Project which was recently approved by the Board, and which is located in a similarly sensitive environment.

Item 7

Chapter 5 of the EIS (Volume 2) summarises traffic impact. Traffic growth forecasts used are those published in NRA Project Appraisal Guidelines. Predicted traffic flows in the Opening Year (2018) and the Design Year (2033) for a High Growth scenario are indicated at Appendix 4. The NO_x average level is approximately 6-8 µg/m³ per annum – below critical levels for the protection of vegetation of 30 µg/m³ per annum. Predicted nitrogen deposition levels for High Growth scenario indicates approximately 0.44 kg(N)/ha/annum. The UNECE critical load for nitrogen in raised and blanket bogs and soft water oligotrophic lakes is 5-10 kg(N)/ha/annum. The Type-3 single carriageway proposed has a carrying capacity of 5,000 vehicles per day (AADT).

Item 8

- Provision of a site compound is exempted development under the Planning and Development Regulations 2001.
- Site compounds will not be located within 50m of any European site.
- Site compounds will be set back from watercourses, floodplains and houses.
- Site compounds will not be located within the Derryneen River Catchment (ch.245+800 to 249+200).
- Storage of fuels/hydrocarbons or chemicals will not be allowed within 50m of a lake or sensitive watercourse or 10m from other watercourses.
- Surface water run-off will be directed to appropriate treatment systems.

- Compounds will be fenced, and a silt fence erected on boundaries.
- Wastewater drainage from all site offices will be disposed of in an appropriate manner.
- Fuel stores will be bunded to 110% capacity of tanks.
- Appendix 6 indicates 8 potential locations for site compounds.

Item 9

- MDAs and MCAs will have a water management system which will remain in place seven years after completion of construction.
- Construction sequence drawings for MDAs have been provided in Appendix 1 book of maps and drawings.
- Sites were chosen with regard to potential impact on European sites and watercourses.
- The applicant has attempted to deal with unwanted peat as part of the application, rather than leave such to the road contractor for off-site disposal.
- A total of 57 locations were assessed for suitability for materials disposal/claim. The NPWS were informed of the final choice of sites at meetings held on 30th July 2013 and 27th February 2014.
- Habitat loss within the MDAs has been indicated in Tables 3.1 & 3.2 (p.17 of the submission).
- Both sites will be restored to wetland/peatland – to be unmanaged. This will support better habitat diversity than exists at present on these sites.
- Sites were subject to multi-disciplinary ecological surveys between 2012 and 2014, with additional surveys for reptiles and amphibians in 2015, as well as for birds (Table 3.3 is an amalgamation of records of data generated from NPWS Rare and Protected Species List, National Biodiversity Data Centre, BSBI Flora Atlas Survey, The Article 17 Species Conservation Status Assessments [NPWS 2013] and specialists' surveys, assessment and knowledge). Tables 3.4 & 3.5 list bird species recorded.
- MDA01 is located 330m north of the Connemara Bog Complex cSAC. Outfall from MDA01 will discharge to Derryehorraun River 710m downstream. The river was surveyed for Freshwater pearl mussel, and none was found.
- The presence of Slender naiad in Derrywaking Lough was taken into consideration when making/compiling the EIS and NIS. Conservation objectives for this plant have not been set for the European sites within and abutting the proposed road scheme. Table 3.6 indicates Conservation Objectives for this species for the Kilkieran Bay and Islands SAC (Site code 002111) for reference purposes. The proposed development will not have any significant impact on the four lakes within which the species has been identified. The water balance within Derrywaking Lough will not be affected by the development. Road outfall no. 3 will divert flow from

1.1km of road from the Derryehorraun catchment to the Owenglin catchment (approximately 0.1% of the total catchment area). The fraction which road drainage contributes to the other lakes in which Slender naiad is present, is tiny in relation to their overall wider catchments. Sediment control measures, swales and linear wetlands will help to ensure that the majority of sediment is filtered out before reaching the lakes. There will be no release of large amounts of peat into lakes to change their pH. Road drainage will produce an almost neutral pH.

- The presence of Atlantic salmon in watercourses was taken into consideration when making/compiling the EIS and NIS. Conservation objectives for this species has not been set for the European sites within and abutting the proposed road scheme. Table 3.7 indicates Conservation Objectives for this species for the Slaney River Valley cSAC (Site code 000781) for reference purposes. Construction of bridge structures will not cause long-term artificial barriers to migrating salmon. In-stream work will be carried out outside of salmon spawning season – May-September. Inland Fisheries Ireland will be given prior notification of works. Sediment control measures and swales and linear wetlands will help to ensure that the majority of sediment is filtered out before reaching watercourses.
- The presence of Otter in and along watercourses was taken into consideration when making/compiling the EIS and NIS. Conservation objectives for this species has not been set for the European sites within and abutting the proposed road scheme. Table 3.8 indicates Conservation Objectives for this species for the Galway Bay Complex SAC (Site code 000268) for reference purposes. Passage for this species will not be significantly obstructed during construction works. There will be no loss of habitats for this species within the MDAs. Sediment control measures, swales and linear wetlands will help to ensure that the majority of sediment is filtered out before reaching watercourses. Mammal ledges are proposed at new bridge crossings where retaining walls are proposed that are deemed to be an impediment to otters crossing when rivers are in spate.
- Conservation objectives for Coastal lagoon habitat has not been set for the Connemara Bog Complex cSAC. Table 3.9 indicates Conservation Objectives for this habitat for the Galway Bay Complex SAC (Site code 000268) for reference purposes. The scheme will not impact on salinity of Salt Lake. Water balance will not be impacted. Road outfall no. 3 will divert flow from 1.1km of road from the Derryehorraun catchment to the Owenglin catchment (approximately 0.1% of the total catchment area). Sediment control measures, swales and linear wetlands will help to ensure that the majority of sediment is filtered out before reaching watercourses.

Outfall from MDA01 will be controlled and will be diluted in the Derryehorraun River (average dilution in excess of 300).

- Table 3.10 indicates that there are no specific conservation objectives for Oligotrophic waters containing very few minerals of sandy plains. There will be no habitat loss arising from this development. Sediment control measures, swales and linear wetlands will help to ensure that the majority of sediment is filtered out before reaching watercourses. There will be no change to the pH of lakes. Peat within MDAs will be retained in a wet state, thereby reducing the potential for the release of nitrogen or phosphorous as leachate into drainage. Spread of invasive species will be controlled through following the 2010 NRA Guidelines.
- Mitigation measures in relation to MDAs and MCAs are set out at section 3.3.31 of the submission. They relate mostly to drainage. MCAs will ultimately be landscaped. 95% of sediment will be settled out by treatment. The remaining 5% will be carried out to sea and will not settle in lakes due to wind and wave action.
- With regard to vibration and sensitive aquatic receptors, levels will be kept below 13.5mm/s PPV to ensure no impact on Freshwater pearl mussel or eggs of fish. Table 3.11 indicates set-back distance relative to weight of explosives used.
- Details of revegetation proposals for the MDA's is included in Appendix 7.
- There is no replanting requirement for trees felled for road construction purposes. A tree-felling plan for MDA02 is included in Appendix 12. Brush mats will be used to minimise impact on soil.
- There may be temporary disturbance of species during operation of the MDAs. Similar habitat is available in the wider area.

Item 10

Retaining wall proposals are set out in section 4.7.14 of Volume 2 of the EIS.

- Drawing no. GC094741-16-20721 Rev. A (Errata 1) shows the plan location of each retaining wall.
- All will be of cantilever design – in reinforced concrete of precast L-shaped design.
- A total length of 760 linear metres will be provided over nine separate locations. The longest section measures 220m.
- For the most part, retaining walls are located parallel to and bordering existing sections of road. As a result, they are unlikely to create a barrier effect.
- Retaining walls may even direct amphibians to safer culverts and bridges.
- Table 3.11 considers the barrier effect for otters of lengths of retaining wall. Mammal ledges will mitigate the impact at identified problem areas.

Item 11

Traffic levels are not likely to increase because of the upgrade to this road. The road will serve the local and visiting community. The improvement proposals are minimal. The traffic volume is modest by national standards. The traffic assessment took into account anticipated economic and tourist development.

Item 12

- The existing environment has been surveyed to a level which is considerably in excess of what is generally accepted as current best practice, and as scoped by the Department in its letter dated 16th May 2011. The field surveys undertaken include exhaustive habitat surveys and mapping carried out over a 4-year period.
- The Relevé Recording Sheets of the Quadrats for the habitats within European sites which will be directly affected by road construction are provided in Appendix 13, and locations shown on drawing no. GC094741-16-23092 of Appendix 1 book of maps and drawings.
- The recording sheets were formatted and reviewed in June and July 2015. A total of 248 recording sheets and a list of Target Notes (TN) are provided.
- This signifies the paucity of contiguous habitat and the small parcels of habitat distributed along the entire length of the scheme for which a recording sheet has been prepared.
- Some relevés were not taken for selected habitat parcels (of low ecological importance – generally influenced by anthropogenic activity).

Item 13

It is assumed that the chainage referred to in this item should have been 232+600 rather than 233+600 – in reference to Ballynahinch Lake.

- The area is one of particular environmental sensitivity between two SACs. Ballynahinch lake is an Annex I habitat – Oligotrophic Lake lying south of the road. It lies between 24-34m south of the existing carriageway. To the north of the carriageway lies Wet heath (an Annex I habitat) – generally within 5m of the road. Wet heath is not a qualifying interest of the Twelve Bens/Garraun Complex cSAC.
- Drainage is towards the lake, and the temporary construction drainage facilities must be incorporated within the land acquisition on the south side of the road.
- The final alignment of the road, on the advice of the NPWS, is revision M1A, which, whilst it involves the loss of 0.5475ha of Wet heath within the Twelve Bens/Garraun Complex cSAC, maintains the road as far away as possible from Ballynahinch Lake. Wet

heath is not a qualifying interest of the cSAC, and it extends northwards as far as the extent of the survey area.

Item 14

- Annex I habitats outside of, but contiguous with, European site habitats, are afforded the same mitigation measures as those inside European sites.
- There will be a permanent loss of 0.005ha of inactive Blanket bog outside designated sites. It is anticipated that MDA's will recolonize with Blanket bog and Wet heath communities – 11.15ha created. The habitat will be fenced-off prior to commencement of construction.
- There will be a loss of 0.009ha of Dry heath outside designated sites. It is anticipated that MCA sites will recolonise with species assemblages indicative of Acid grassland and Dry heath communities – up to 4.28ha. The habitat will be fenced-off prior to commencement of construction.
- There will be a permanent loss of 0.7891ha of Wet heath overall, with 0.2434ha outside designated sites and 0.5457ha within the Twelve Bens/Garraun Complex cSAC (where it is not a qualifying interest). It is anticipated that MDA's will recolonize with Blanket bog and Wet heath communities – 11.15ha created. The habitat will be fenced-off prior to commencement of construction.
- The road development encroaches 3.68ha into the Twelve Bens/Garraun Complex cSAC between ch.223+000 and 241+100. The habitats lost are not significant.
- The road development encroaches 1.78ha into the Maumturk Mountains cSAC between ch.241+170 and 255+900. The habitats lost are not significant.
- The road development encroaches 12.09ha into the Connemara Bog Complex cSAC between ch.229+300 and 255+900. The habitats lost are not significant.
- The road development encroaches 0.009ha into the Connemara Bog Complex SPA between ch.229+300 and 248+540. The habitats lost are not significant.
- There are legacy issues from the digitising of European site boundaries from 6" OS maps. This may explain the inclusion of habitats of low or negligible ecological importance within European sites. In some instances portions of the existing N59 are within such sites. None of the Annex I habitats for which the European sites along the proposed road development are designated, are located within the land-take for the road project.
- Overgrazing, turbary and drainage have impacted on Blanket bog and Wet heath fringing the N59. Scrub has invaded some areas which aids the drying-out process of peat.

- Table 5.1 indicates 36.41ha of Scrub, Acid Grassland and Wet grassland within the scheme boundary, of which 14.22ha is within European sites.
- As a precautionary measure, the proposed road development includes an appropriate protective measure in the form of the installation of an impermeable liner in areas where Blanket bog habitat is located within 30m of the land-take in order to protect the Blanket bog habitat from any potential hydrological changes arising from the works.

Item 15

- Retaining walls are used to protect sensitive watercourses. Seven of the nine retaining walls are within the Recess Freshwater pearl mussel catchment – to obviate the need for in-stream works associated with channel diversions. The two other sections are the Emlaghdauroe Stream and the Shannaunafeola River.
- Retaining walls will be founded on a strip foundation sited on bedrock. It is not envisaged that piling will be necessary.
- The retaining walls minimise the footprint of the road. They have been designed with 100mm diameter pipe openings inserted along the base of the wall at 2m centres over its length. A drainage medium in the form of a filter drain will connect and distribute flow between up-gradient and down-gradient sides of the wall. Granular fill for the drains will be inert and wrapped in geo-textile.
- Table 4.5.1 sets out the nine retaining wall sections and comments on each – RW01-RW09. There will be negligible changes to groundwater flow in the vicinity of each.
- Typical pavement design would include a capping layer of 300mm, a clause 804 sub-base layer of 150mm followed by a bitumen layer of 200mm. The capping and sub-base depth will depend on ground conditions. Unsuitable peat and silt will have to be removed. Ground investigations have shown that substantial sections of the existing N59 have unsuitable foundation material – principally peat, with some silt and alluvium). There is rock outcropping in many areas close to the road. The depth of foundations required will vary significantly over the length of the road. The placement of the sub-grade layer is not considered a significant factor in generating additional drainage flow from the adjacent poor bedrock aquifer and from the overlying till and peat subsoils.
- Rock fill will allow for groundwater flows across or in linear fashion beneath the road. Longitudinal drainage beneath the road is interrupted by the undulating nature of bedrock present along the alignment which is an obstacle to the development of longitudinal drainage paths.
- To avoid any potential localised impact to the groundwater-sensitive Annex I Blanket bog habitat, an impervious barrier in the

form of a geo-textile liner will be placed running longitudinally along the edge of the road formation to prevent ingress of groundwater flow into the road subgrade material from the adjoining subsoils where Blanket bog habitat is present within 30m of the road fence-line.

- There will be no new deep drainage channels created. Drains are kept deliberately shallow, with the use of check dams to maintain high water levels within the drains. Where there are no toe drains present along the N59, it is not proposed to construct new ones at the foot of embankments near sensitive peatland habitats.
- Shallow cut-off drains will be provided where there is run-off from hills onto the road.
- There are 32 no. surface water drainage outfalls associated with the road. The linear wetland is designed to provide 24-hour storage for a 1-in-100 year storm event of one hour duration. There will be shut-off facilities in the event of a pollution incident.
- There are no deep cut sections adjacent to Blanket bog habitat.
- Poor permeability of peat means that dewatering is only likely to occur within 5m of the road edge – with a worst case scenario of 15m. Rock outcropping and cut-over bog areas limit the potential impact of the road. There is evidence throughout the study area of well-established Wet heath habitat at the top of existing cut sections with no apparent detrimental effect, and thus the habitat is maintained.
- Table 15.25 of Volume 2 of the EIS identifies the areas where specific mitigation measures are required to prevent any potential impact on the hydrogeological regime at groundwater-sensitive habitats such as Blanket bog and Wet heath.
- The road will have an imperceptible effect on groundwater base flow conditions within the downstream watercourses that support the Annex I Oligotrophic lakes and the Annex II Atlantic salmon, Slender naiad and Freshwater pearl mussel species.

Item 16

- Generally, the proposed road alignment follows closely the existing horizontal and vertical alignment. Essentially there are only four off-line sections – all of which avoid European sites. Each of the four is outlined at Table 4.6.1 – two in Lettershea, one in Lettery and one at Derrynavglau townlands – all to take bends out of the road. An impervious barrier is to be created on both sides of the road for the latter of these four locations – from ch.236+200 onwards to the east.

Item 17

It is anticipated that MDAs will recolonise with Blanket bog and Wet heath communities. It is difficult to estimate the percentage of the MCAs that will

apply to each habitat type – but likely to be Acid grassland and Dry heath over 4.28ha, based on the experience of verges on the completed Derrylea section of the N59.

Item 18

In relation to ‘in-combination’ impacts, the following is of note-

- The old County Development Plan was replaced by the new Plan with effect from 23rd February 2015. A Natura Impact Report was prepared for this Plan. There is list of policies and objectives to protect habitats and species (including water protection measures) within the county. The Wind Energy Strategy of the Plan was the subject of SEA, and AA. Economic development within Connemara is limited due largely to low population density and environmental sensitivity.
- The Connemara Infrastructure and Interpretation Plan 2012, relates to information and facilities for visitors – with a budget of €3m. Car-parks and lay-bys are included amongst the facilities. The physical measures included in the Plan, relating to the N59 between Clifden and Maam Cross, form part of the current proposal, or are currently in place. Essentially the Plan is a branding tool.
- The Wild Atlantic Way was subject to SEA and AA. The N59 does not form part of the WAW – although it may act as a feeder to it.
- The Board carried out AA for the Maam Cross to Oughterard section of the N59 – Ref. 07.HA0041 – for which approval was granted. 3.5km of that road was within the Screebe catchment (at the Maam Cross end). Of the proposed scheme now before the Board, 2.9km is within the Screebe catchment (at the Maam Cross end). The Screebe has a catchment of 46.5sq.km. All lakes within the catchment are considered to be oligotrophic with good to high ecological status. The operational impacts of both road projects on the hydrology and water quality of the receiving waters and the Screebe catchment have been evaluated as having no negative residual impact, with the road drainage treatment an improvement on the existing situation. There can be no cumulative/in-combination impacts from the two projects. The constructional impacts relate to release of sediment into watercourses. Watercourses are to be protected during construction. There will be no potential for cumulative/in-combination impacts on downstream receiving waters.
- The Moycullen By-pass project (approved by the Board in 2012) is located in a different drainage catchment to the proposed N59 development. There are no hydrological or ecological links.
- An Ecological Study was conducted into the Derrylea section of the N59 in 2005. This 3.5km section of road upgrade was completed in 2009/2010. The impacts of construction were not considered significant in relation to closest European sites. Operational

impacts are not considered significant either. Vegetation has recolonised verges. The Western River Basin Management Plan 2009-2016 currently indicates an overall high ecological status and high macroinvertebrate status for the Derryehorraun River. Water quality sampling of the Derryehorraun River downstream of the Derrylea improvement as part of the current N59 EIS, indicates an unpolluted watercourse with overall good chemical status. No section of the proposed road will discharge to, or upstream of, Derrylea Lough. Sediment control during construction, and drainage measures to be implemented, will ensure that watercourses in the area are protected. There will be no perceptible in-combination hydrological impacts arising from the Derrylea Scheme and the proposed road development.

- Coillte carries out AA on its forestry plans throughout the country – including the Mayo/Connemara district. All commercial plantations have Forestry Management Plans. Within these plans, the protection of the water environment is a priority. Because of sedimentation control and drainage proposals being put in place as part of this road project, irrespective of the size of forestry plantations in the area, there will be no in-combination impacts on receiving waters.
- Peat extraction in the area is mainly small-scale. An extensive area of cut-over bog west of Maam Cross is designated as part of the Maumturk Mountains cSAC. The localised but non-intensive nature of peat harvesting that characterises the study area is spasmodic, and in many areas discontinued. Many watercourses in this area are already considered peaty. Mitigation measures to be imposed in relation to sedimentation and drainage will ensure no in-combination impact with drainage from peat extraction areas.
- Most agriculture in the area relates to sheep grazing. Drainage and over-grazing has impacted on the peatlands fringing the road line. The proposed road development will not contribute towards baseline impacts upon which cumulative impacts associated with current and ongoing agricultural activities could be based.
- The scale of the proposed development (with implementation of effective mitigation measures to avoid impacts affecting European sites), will result in no potential for further cumulative/in-combination impacts with any other plans or projects that may adversely affect the integrity of European sites. There is no reasonable scientific doubt in relation to absence of such effects.

Item 19

- Impacts on Scrub, Acid grassland and Wet grassland habitats and species they support are discussed in detail in the NIS and the EIS.
- These habitats have developed in response to disturbance, drainage, agricultural improvement, grazing etc.

- Table 5.1 outlines the amount of each habitat to be lost as a result of the road scheme – in total 36.4ha.
- Based on the existence of these habitats within 200m of the road, and the availability of habitats in the wider environment, the impact on these habitats is not considered to be significant.

Item 20

- A total of 15.43ha of habitat can be recreated in MDAs and MCAs, and a further 19.92ha through landscaping measures.
- Sections of N59 to be declassified, are considered unsuitable for replacement habitat, as road pavement will not be removed.

Item 21

A map showing the locations of likely interest to bats, where night-time surveys were carried out (and times and dates of survey work), together with results, is indicated at Appendix 1 – Drg. no. GC094741-16-23091.

Item 22

Bat survey results for June 2015, are included in Section 2.2.2 within the updated Bat Fauna Survey (included at Appendix 13).

Item 23

Bats cross the road in numerous places. Bats may pass beneath the road via bridges. No structures with bat roosts will be demolished on the N59 Maam Cross to Oughterard road project – so there will be no ‘in-combination’ impacts.

Item 24

Due to passage of time between survey and construction, tree groups will be surveyed for bats 24 hours prior to their removal.

Item 25

- All buildings and structures listed in Table 12.25 of the EIS were fully assessed for bat activity. This table is updated (pp.91-92) of the submission. Bats are present in two derelict houses which are to be demolished.
- Results of a further dusk to dawn survey at buildings with potential to harbour bats is given in Bat Assessment Report at Appendix 13.

Item 26

Roost categories and bat species present (two species) are indicated in the Bat Fauna Survey.

Item 27

- Signs of Otter activity were recorded in multi-disciplinary surveys carried out over years from 2010-2015.

- Location and dates of Otter surveys are set out at Table 7.1.

Item 28

- As the road is mostly on-line upgrade, the scope to provide for Otter passage is limited.
- New culverts will be 900mm diameter in place of some culverts as narrow as 300mm diameter.
- Mammal ledges will be provided at new bridges where retaining walls are proposed.
- Otter habitat assessment is indicated at Table 12.27 of the EIS – updated by way of Table 7.1 on pp.94-95 of the additional information submission.

Item 29

- The conifer plantation at MDA02 is poorly developed (with trees not greater than 8m in height). It is largely unsuitable for both Pine marten and Red squirrel.
- These species were not recorded in surveys.
- To the northwest and east of MDA02 there is more mature conifer plantation which would be a better habitat for these species.

Item 30

- Pre-construction terrestrial mammal surveys will be carried out. Licences will be acquired to excavate refugia if required.
- Measures to protect bat species are included in the EIS.
- Standard mitigation measures will include- limiting season of disturbance, habitat replacement, control of pollution/silt.

Item 31

- Impacts on birds were not considered significant.
- A specific breeding bird survey was carried out in 2015.
- The road is in an open landscape with sporadic tree and hedgerow cover. There are expansive peatland habitats flanking the route – supporting ground-nesting birds such as Meadow pipit, Skylark and Wheatear. All species are habituated to existing N59 road traffic.
- Appendix 14 outlines the results of the breeding bird survey – concentrating on areas of woodland or scrub along the route.
- Tree and shrub clearance will occur outside the bird nesting season –March to August inclusive. If vegetation has to be cleared during this period, it will be surveyed by an ecologist in advance, in order to determine the presence of nests. Nests will be left *in situ* or moved under licence.
- Tables 9.1 & 9.2 set out the conservation status of the qualifying bird species of the Connemara Bog Complex SPA, and current status and trends for species of conservation interest.

- Impacts on wintering birds are not considered significant.
- Golden plover are not found in the immediate vicinity of the N59.
- Greenland white-fronted goose is no longer present in the area and is no longer listed as a conservation interest for the SPA.
- Merlin is present in the locality of the road development. The species tends to avoid human activity.
- Common gulls are likely to nest on islands off the coast or within lakes.
- Cormorant colonies are located at a distance from the N59.
- There are no off-line sections of the N59 within the Connemara Bog Complex SPA which could cause habitat fragmentation.

Item 32

- Scrub and coniferous plantation supports breeding birds along the line of the road. Lakeshore birds are present. Indirect disturbance will be caused to birds during construction.
- Table 5.1 (p.105) indicates the percentage of woodland and scrub which will be lost – 32.88ha.

Item 33

Trees and scrub will be cleared outside of bird nesting season, insofar as practicable. Peatland habitats will be checked for nesting birds prior to clearance. Because the clearance will take place in small sections, it is not possible to guarantee that trees will be felled between September and April. The emphasis in the development has been to avoid silt entering watercourses.

Item 34

- With regard to reptiles, multi-disciplinary surveys were carried out from 2010-2014.
- An additional reptile survey was carried out on 8th & 9th April 2015 – as set out in Appendix 15. Surveys focused on suitable habitats for Common lizard.

Item 35

Old and shallow rock quarries along the line of the N59 provide suitable habitat for Common lizard. A single specimen was recorded during surveys in April 2015. Common lizard is widespread, but not abundant. The development will not have a significant impact on this species.

Item 36

Significant impacts are not expected for Common lizard. Whilst suitable habitats on the verge of the road and bordering habitats will be temporarily removed, they will be replaced and will provide suitable habitat for the species.

Item 37

- With regard to amphibians, multi-disciplinary surveys were carried out from 2010-2014.
- Additional surveys for Common frog and Smooth newt were carried out on 8th and 9th April 2015. Surveys focused on suitable aquatic habitats. Table 11.1 indicates the presence of Common frog along the route, but not Smooth newt.
- Significant numbers of Common frog were not observed.

Item 38

- Common frog is widely distributed across Ireland.
- Suitable amphibian habitat is spread along the entire road route.
- If species are encountered in pre-construction surveys, a relevant licence will be sought to move them.
- Provision of linear wetland and drains along the road will ensure suitable habitat for amphibians.

Item 39

Significant impacts are not expected for amphibians. The proposed road will be almost entirely within the footprint of the existing N59. New drainage will be more favourable to amphibians. MCAs and MDAs will provide suitable habitat for amphibians when construction ceases.

Item 40

With regard to Freshwater pearl mussel, any replacement culvert will be constructed with a minimum embedment of 0.15m for pipe culverts and 0.30m for box culverts. The invert of the culvert will be in-filled with locally sourced channel material to match the upstream and downstream channel invert levels, and dished to promote flow in the centre of the culvert invert.

Item 41

- Multi-disciplinary walkover surveys were carried out by suitably qualified ecologists from 2010-2014.
- Subsequent targeted surveys were conducted where it was considered that there could be potential significant impacts on habitats and species.
- Surveys carried out are listed at section 13.1.3 of the additional information submission.

5.3.2 The additional information submission was accompanied by a series of appendices as follows-

Appendix 1 – A3 book of maps and drawings.

- Ballynahinch options.
- Ballynahinch centrelines.

- Fencing at Gowlan Commonage, Derrynavglau Commonage, Glencoaghan Commonage, Ballinafad Commonage, Athry Commonage, Garroman Commonage, Caher Commonage, Shannakeela Commonage, Bunscanniff and Lurgan/Shindilla Commonage.
- Geometric Design drawings of errata (19 no.).
- Potential site compound locations (8 no.).
- 24 identified sites with invasive species – *Gunnera*, Himalayan knotweed, Japanese knotweed and Rhododendron.
- Zone of Influence maps of the road – 200m buffer zone with rare and protected species records and faunal survey findings.
- MDA01, MDA02 & MCA04 drawings.
- Pedestrian/cycle facilities.
- Otter survey findings map.
- Breeding bird transect locations.
- Bat activity maps.
- Relevé location maps (16 no.).

Appendix 2 – Utilities.

Appendix 3 – Traffic forecast methodology.

Appendix 4 – High growth traffic forecasts.

Appendix 5 – Air quality assessment.

Appendix 6 – Potential site compound locations.

Appendix 7 – Deposit areas (re-vegetation proposals).

Appendix 8 – Hydrological impact assessment of Slender naiad and Coastal Lagoon habitats.

Appendix 9 – Investigation into the performance of settlement proposals for the control of peat run-off.

Appendix 10 – Route maps for Connemara infrastructure and Interpretation Plan and Wild Atlantic Way.

Appendix 11 – Management plan for the control of invasive alien species.

Appendix 12 – Clear-felling plan for MDA02.

Appendix 13 – Bat Fauna Survey (Updated 2015).

Appendix 14 – Breeding Bird Survey.

Appendix 15 – Reptile Survey.

Appendix 16 – Amphibian Survey.

Appendix 17 – Quadrat data recording sheets.

6.0 RESPONSE SUBMISSIONS RECEIVED ON FOOT OF RE-ADVERTISEMENT

6.1 Request to Re-Advertise Proposed Development

Having reviewed the information submitted from Galway County Council on 31st July 2015, it was decided that the information submitted contained significant additional data in relation to effects on the environment of the proposed road development. Galway County Council was requested to publish notice in a newspaper, stating that significant additional information had been submitted to the Board, and inviting submissions to the Board within four weeks of the publication of the notice. Galway County Council was also requested to notify Prescribed Bodies of the submission.

6.2 Re-Advertisement

Galway County Council re-advertised the proposed development on 28th August 2015, indicating that submissions could be made to the Board on or before the 25th September 2015.

6.3 Submissions Received in Relation to Re-Advertisement

6.3.1 There were no submissions received within the appropriate period.

6.3.2 The Board contacted the DoAH&G requesting comment on the additional information received from Galway County Council – the DoAH&G having contacted the Board after the 25th September 2015, indicating that it wished to make a submission.

6.3.3 The submission of the DoAH&G, received by the Board on 30th September 2015, can be summarised in bullet point format as follows-

- The receiving environment is of exceptional importance for nature conservation, at both landscape and catchment levels.
- The additional information submitted addresses many of the concerns raised by the Department in its earlier submission. It is noted that all qualifying interest habitats within European sites have been avoided. Detailed proposed mitigation measures are also

noted as set out in the EIS, NIS and Additional Information submission.

- [Paragraph 5 of the submission is poorly worded, and it is not clear what is meant by it], but it may indicate that cumulative impacts with other plans and programmes have not been fully considered.
- The Department advises the Board what it needs to consider in carrying out AA.

7.0 REPORT ON ORAL HEARING

7.1 General Comments

An Oral Hearing was held into the Compulsory Purchase Order and the Section 52 Approval of this road scheme on the 10th November 2015, in the Station House Hotel, Clifden, Co. Galway. The Hearing opened at 14.00 hours on 10th November: sat on 11th November, and closed at 19.25 hours on 12th November 2015. The Inspector was assisted by Mr. Richard Arnold of Thomson Ecology – engaged by the Board. The proceedings were recorded on behalf of the Board, and a copy of that recording is available. Not all those who submitted written objections to the Board were present or represented at the Hearing. Documents handed into the Hearing have been assigned a ‘Document ref. number’. The documents (No.s 1-37) are included in a separate bound file accompanying this Inspector’s Report. Representation on behalf of parties was as follows-

7.2 Parties Represented

7.2.1 Galway County Council (GCC)

- Sinéad Noonan, Solicitor.
- Esmonde Keane, Senior Counsel.
- Mark Keaveny, Project Engineer, Roscommon Roads Design Office.
- Valerie Loughnane-Moran, Senior Executive Planner, Galway County Council.
- Peter Monahan, Engineer, PMCE.
- John Kehoe, Consultant Planner.
- Jerry O’Sullivan, Project Archaeologist, TII.
- Chris Boyle, Chartered Surveyor.
- Richard Barker, Landscape Consultant.
- Mervyn Keegan, Noise & Vibration Consultant.
- Paula Kearney, Ecology Consultant, RPS.
- Paul Chadwick, Air Quality & Climate Consultant, RPS.
- Anthony Cawley, Consultant Hydrologist, Hydro Environmental Ltd.

7.2.2 Prescribed Bodies

- Dr. Julie Fossitt, DoAH&G.

7.2.3 Objectors in Order of Appearance

- Jim Gaynor, agent representing a number of objectors.
- Kevin Joyce – Representing himself, Mark Joyce, Tommy Joyce & Donal Joyce.
- Emer Joyce, Solicitor, representing Patoomatt Mannion.
- Terence Sutherland.
- Karen Mannion, representing her husband, Peter Davitt, one of the owners of Ballinafad Commonage.
- John & Sarah Ross.
- Peter Sweetman.

7.3 Order of Hearing – Day 1

7.3.1 Esmonde Keane, for GCC, gave a short introduction to the scheme, and indicated specialists who would be giving briefs of evidence on behalf of the Council. In order to facilitate persons who had made observations in relation to the CPO only, it was decided to proceed directly to their submissions and questioning of GCC.

7.3.2 Kevin Joyce, representing himself and also Donal Joyce and Mark Joyce & Tommy Joyce, made four principal points to the Hearing.

- i. New entrance to Connemara Marble works at Lissoughter was inadequate (AC-058). Later in the Hearing, GCC produced **Document 31** – a drawing showing revised entrance to cater for HGVs to meet the criticisms of Mr. Joyce.
- ii. It was also reiterated that an existing agricultural entrance (ch.234+050) to the west of the entrance and the Sutherland house would have to be replaced on a like-for-like basis. GCC was agreeable to this.
- iii. The proposed bus stop at the Health Centre in Recess is in the wrong location and should be moved further to the east. There was regularly parking in front of the Health Centre, and the bus bay would be occupied by cars. GCC was satisfied that the bus stop was in the correct location. An additional four road-side parking spaces would be provided to the west to the Health Centre.
- iv. Any road works carried out in front of shops in Recess should be carried out between the months of November to February inclusive, so as not to hinder tourist business (in a fragile condition already following the economic downturn). It was pointed out that the Council could quite readily require any contractor not to carry out works during a specified period in order to protect a habitat/species – and the same should be possible to protect the business interests of humans. GCC undertook to ensure that there would be two-way traffic through Recess during the summer months of June to August inclusive. The contractor would be obliged to liaise with business

interests in Recess. It was estimated that, as only overlay and a cycle-way was needed in this location, the works might be completed in three weeks. There would be no parking by contractor staff within the parking area in front of the shops in Recess.

- 7.3.3 In response to the written observation of Kevin Joyce to the Board, GCC submitted **Document 1**. Within this document it was agreed to reduce the amount of land to be acquired (where it was originally intended to provide a septic tank for a neighbouring house to the west – the former Lissoughter P.O.). This was indeed done by way of submission of revisions to the CPO (**Document 30**). Later in the Hearing (Day 3), Kevin Joyce submitted a short letter and two colour photographs in relation to signage (**Document 26**), without comment. GCC was satisfied that this latter document could be accepted by the Hearing, but did not consider that it merited any significant comment.
- 7.3.4 The response of GCC to the written observation of Donal Joyce (**Document 2**) states that roadside art for public road schemes is subject to tender. There is no visible trace of the old railway platform serving the hotel in Recess: it would appear to be covered with fill.
- 7.3.5 The response of GCC to the written observation of Mark Joyce & Tommy Joyce (**Document 3**) was largely covered by the response to the submission to the Hearing of Kevin Joyce. In addition GCC indicated that roadside signage which was authorised would be replaced, but that signage which was unauthorised, and which would normally be removed by GCC in any case, would not be replaced.
- 7.3.6 The submission of Emer Joyce, Solicitor, on behalf of Patoomatt Mannion related to objection to the CPO of the house in which she resided (Plot ref. 2805a.201). The house on this site forms one of a pair of semi-detached cottages which formerly comprised the Recess/Lissoughter P.O. During the course of the submission, the High Court Probate Order (**Document 6**) of the will of the late Mary B. Mannion (mother-in-law of Patoomatt Mannion) was submitted to the Hearing. The daughter of the deceased, Teresa Curley, was appointed sole executrix. This document indicated that the objector, Patoomat Mannion, had a one third interest in the estate of the late Mary B. Mannion. GCC indicated that the other two beneficiaries had not objected to the CPO. **Document 5** is a Circuit Court Order (dated 7th July 2010) relating to a dispute between Patoomat Mannion and Teresa Curley (sister-in-law of Patoomat Mannion) with regard to occupation of part of this property. The Order required (at no. 3) that Teresa Curley provide a septic tank to service the dwelling – as the only septic tank on the site was also servicing the other half of the pair of semi-detached cottages. No. 4 provided that the dwelling-house be

vacated within 14 days of the satisfactory installation of the septic tank. No. 5 provided that the dwelling-house be sold at the discretion of the executrix of the will of the late Mary B. Mannion. Planning permission was subsequently obtained by Teresa Curley (ref. 10/1501) for a separate septic tank to serve the portion of the house occupied by Patoomatt Mannion. This septic tank was never constructed, and **Document 32** (a copy of the planning permission), submitted by GCC later in the Hearing, indicated that the permission would expire on 16th January 2016. It would appear that the reason it had never been constructed was that proposals for the road scheme would encroach on the area where the septic tank was to have been located – between the house and the N59. Notwithstanding that this plot is a large one (0.689ha), the area to the rear of the house comprises a steep rocky slope overgrown with scrub woodland – bordering a quarry to the northwest. The area was not deemed suitable for a septic tank. In order to try to expedite matters, GCC examined the possibility of acquiring land to the east of the pair of cottages from Kevin Joyce (who objected to his lands being acquired for the purposes of providing a septic tank for his neighbours). In the event, the ground to be acquired was deemed unsatisfactory due to proximity of settlement tanks connected to the Connemara Marble works; and the CPO amendments submitted by GCC indicate that it is not now proposed to acquire part of Kevin Joyce's lands for the purposes of providing a septic tank. The upshot of this is that the former P.O. at Recess will lose a portion of the front garden of the pair of houses – wherein is located the existing septic tank, and the ground which was to have accommodated the proposed second septic tank. This will leave the pair of houses without any effluent treatment facilities. For this reason, GCC decided to acquire compulsorily the entire of both properties. It was indicated to the hearing that the houses might be used as a bothy in connection with the Connemara Greenway – but would remain without effluent treatment facilities. Following questioning from this Inspector, GCC submitted **Document 33** to the Hearing, indicating a reduced CPO area for plot 2805a.201 – leaving the house and the remainder of the plot – should the Board be minded to exclude the remainder of the house site as being surplus to the requirements of the road scheme. However, it was pointed out that whilst the house would remain, it would not be possible to provide an effluent treatment system within the remaining curtilage. GCC consider that the only way of dealing with the difficulties presented at this site is to acquire the entirety of the two properties. It was pointed out by Emer Joyce, that Patoomatt Mannion would be made homeless if the house was compulsorily purchased, and would require to be housed by the housing authority. GCC could give no undertaking as to when the CPO might be put into effect, but that it would likely be at least a year before notice to treat was issued.

- 7.3.7 Terence Sutherland (the occupant of house no. 101 – which shares an access with the Connemara Marble works (referred to in the objection of Kevin Joyce), objected to the amount of the front garden of his house which was to be lost in order to construct the new road and to improve sight visibility to the west at the entrance. The objector purchased the house in 2014. The proposed new boundary wall would be within 10 feet of the house. The removal of shrubs and trees in the front garden would expose the house to view from the road and remove privacy. Grandchildren playing would be endangered, and pets could easily escape onto the road. The response of GCC to the objection of Ann Stanley & Terence Sutherland (**Document 7**) indicated that the proposed new road would not be located significantly closer to the house than the existing road, but that the new set-back line was required in order to improve sight visibility to the west at the proposed new entrance. GCC would replace the roadside blockwork wall on a like-for-like basis, and was not prepared to provide a 3m high wall for the objectors. The Council submitted a revised land-take map at this location, substituting a temporary acquisition for permanent acquisition on a portion of land shaded blue on attached map (0.011ha) to be returned to the objectors on completion of the road works. The separation between the house and the new boundary wall would be 13.0m and the separation between the house and the edge of the carriageway would be 21.0m. There is no grass lawn to the front of the house – the entire area being given over to laurel/rhododendron shrubs. Notwithstanding the loss of part of the front garden of the house, there would remain a screen of tall shrubs and trees between the house and the new roadside boundary. The verge between the boundary and the edge of the road would be grassed.
- 7.3.8 Karen Mannion on behalf of her husband, Peter Davitt, one of the owners of Ballinafad Commonage, welcomed the proposed new N59 and requested that the commonage be fenced where it flanks the road. The Department of Agriculture is increasingly requiring lands to be fenced in order to avail of farm payments and subsidies. The response of GCC (**Document 8**) indicates that Ballinafad Common is located on either side of the N59 just southeast of Canal Bridge, with no fencing. It abuts Athry Common to the east and southeast; again there being no fencing between the two. The R341 runs through Ballinafad Common up to the junction with the N59. The N59 is not being altered in this area – simply being resurfaced. The N59 has already been re-aligned slightly further to the southwest in this location at some stage in the past – the bed of the old road being still visible to the northeast.
- 7.3.9 The brief of evidence (**Document 9**) of Valerie Loughnane-Moran for GCC, in relation to planning matters, largely restates the position outlined in the EIS. It contains information in relation to the Galway County

Development Plan 2015-2021 – adopted subsequent to the lodging of the application for approval and CPO with the Board.

7.3.10 The brief of evidence (**Document 10**) of Peter Monahan for GCC, in relation to road safety matters, largely restates the position outlined in the EIS. The brief points out that little provision is made for non-motorised road users along the present N59 – and the road is particularly dangerous during hours of darkness.

7.3.11 The brief of evidence (**Document 11**) of John Kehoe for GCC, in relation to socio-economic issues, largely restates the position outlined in the EIS. It is noted that construction works may have a temporary negative impact on tourism-related business at Recess – but that two-way traffic flow will be maintained between the months of June to August inclusive.

7.4 Order of Hearing – Day 2

7.4.1 The submission of John and Sarah Ross to the Hearing (**Document 12**), reiterated issues raised in the original written submission to the Board in relation to reduced speed on the road outside their house in Shannakeela, spread of invasive species, ducting in the road for future services, vibration, signage and parking. The response of GCC (**Document 13**) indicated that the Council was against providing parking spaces on the N59 opposite the house, on grounds of traffic safety – there being inadequate sight visibility in either direction at the house side of the road for pedestrians to cross in safety. GCC was prepared to provide 3 no. parking spaces to the east of the house on the old N59 road bed which currently serves as vehicular access to the house. The objectors stated that such parking spaces would not be overlooked and that the tarmacadam used would be better used in extending the new surface as far as the gate of the objectors' house. GCC pointed out that a short stretch of the road to the gate of the objectors' house was outside of the CPO line and was not in the ownership or control of the Council. It was indicated to the hearing that this land was commonage. The Council was prepared to carry out a structural survey of the objectors' house prior to commencement of works and following completion of works. It was pointed out that the centre line of the road would be moved 6m further away from the house than at present, and that a cycle-lane would be constructed between the house and the carriageway. Road speed limits are outside the scope of the proposed road development. Ducts will be provided at regular intervals for services which may need to be routed under the road from one side to the other.

7.4.2 The brief of evidence (**Document 14**) of Jerry O'Sullivan for GCC, in relation to archaeology/architecture and cultural heritage, largely restates the position outlined in the EIS. Of note is the proposal to reuse the gate

piers of Lissoughter Lodge, if possible, in the new entrance for the house; the proposal to erect signage at an old railway bridge at Gowlan West townland and at Canal Bridge; and the proposals for archaeological testing for the possible remains of pre-Famine buildings in Killymongaun and Lettery townlands, which show up on the first edition OS maps for the area, but for which no upstanding remains are visible today. The submission also noted a negative impact on the old P.O. in Lissoughter if the septic tank serving the houses was removed and the houses were rendered uninhabitable.

- 7.4.3 The brief of evidence (**Document 15**) of Chris Boyle for GCC, in relation to non-agricultural and agricultural property, largely restates the position outlined in the EIS. In relation to the acquisition of non-agricultural property, the impact of the acquisition of one property in Lissoughter was categorised as ‘major’. It was confirmed at the hearing that this related to a piece of ground opposite the entrance to the Connemara Marble works. This is currently a piece of ground with some hard core and nothing else to distinguish it from the surrounding lands covered with scrub vegetation. It was confirmed to the hearing that the two agricultural underpasses would be at ch.233+650 for Tom Pete Joyce, Ballynahinch, and at ch.247+740 for Boheeshal Commonage.
- 7.4.4 The brief of evidence (**Document 16**) of Richard Barker for GCC, in relation to landscape and visual issues, largely restates the position outlined in the EIS. The most significant landscape impact is considered to occur at the off-line section at Derrynavglau – where the road will be partially in cut and partially on fill. Otherwise, interventions are minimal, and will retain the wild and remote character of the route through Connemara.
- 7.4.5 The brief of evidence (**Document 17**) of Mervyn Keegan for GCC, in relation to noise and vibration, largely restates the position outlined in the EIS. It was indicated that property surveys would be offered for all buildings within 50m of the development boundary, and all buildings within 150m of blasting sites, from where rock was to be removed.
- 7.4.6 The brief of evidence (**Document 18**) of Paula Kearney for GCC, in relation to ecology, largely restates the position outlined in the EIS. The following points are of note-
- The Freshwater pearl mussel is not a qualifying interest of the Connemara Bog Complex cSAC, although it is found with the Caher/Recess Rivers within the cSAC.
 - There will be a permanent loss of Annex I habitats- [7130] Blanket bog (inactive) – 0.005ha; [4010] Northern Atlantic wet heath with *Erica tetralix* – 0.78ha; and [4030] European dry heath – 0.009ha.

- Slender naiad has been recorded in Derrywaking Lough – into which MDA01 drains.
- Mammal ledges will be proposed at bridges coincident with retaining walls – Emlaghdauroe Bridge and Caher/Tullywee Bridge.
- Should the time between the road development advancing through statutory approvals and programmed commencement of construction exceed 36 months from the date of the last survey, a Pre-construction Mammal Survey will be undertaken.

7.4.7 The brief of evidence (**Document 19**) of Paul Chadwick for GCC, in relation to air quality and climate, largely restates the position outlined in the EIS. The total estimated greenhouse gas emissions associated with the construction of the proposed road development is calculated at 23,737 tonnes of CO_{2eq}. A further estimated 5,000 tonnes of CO_{2eq} would be lost through the removal of conifer woodland at MDA02. The cumulative impact, in addition to the greenhouse gas emissions from the construction stages of the M59 Moycullen by-pass, the M59 Maam Cross to Oughterard and the N59 Derrylea road schemes, is estimated at 65,000 tonnes of CO_{2eq}. The total estimated net increase in greenhouse gas emissions associated with the operational phase is 124 tonnes of CO_{2eq} and 700 tonnes in combination with other road projects referred to above.

7.4.8 The brief of evidence (**Document 20**) of Anthony Cawley for GCC, in relation to hydrology and hydrogeology, largely restates the position outlined in the EIS. There are three primary cut areas along the road – CS8 (max. 8.5m), CS13 (max 5.0m) and CS21 (max. 4.5m). Groundwater is expected to be encountered at six cut sections CS8, CS9, CS12, CS14, CS18 and CS20. Drainage channels will return water to the same river reaches, such that critical low flow conditions and nutrient and sediment loading will not be appreciably altered in Freshwater pearl mussel river reaches. To ensure protection of Annex I Blanket bog, HDPE liner will be used where bog is within 30m of the road edge.

7.4.9 The brief of evidence of Julie Fossitt (**Document 21**) from the DoAH&G, largely restates the case submitted in two responses to the Board. The Department has engaged with the applicant since 2010. It is considered that a clear picture of what the implications of the project are for conservation objectives for European sites is still not available. Some 17.55ha of the acquisition is within European sites – combining to form direct habitat losses. Site specific conservation objectives for the Connemara Bog Complex cSAC were drawn up on 28th October 2015, and were forwarded to the applicant. For the other three European sites, generic conservation objectives have changed little. For the Connemara Bog Complex cSAC, the conservation objectives are to restore the favourable conservation condition of five of the qualifying interest habitats, including Northern Atlantic wet heath with *Erica tetralix*, European dry

heath and Blanket bog (if active). Damaged or modified areas of these habitats are likely to be most suited to restoration. The Department acknowledges the very recent availability of these site specific conservation objectives, but would point out that for many years, generic conservation objectives have referred to the requirement to maintain or restore the favourable conservation condition of the qualifying interests of the sites. The focus of the NIS submitted by the applicant is on the qualifying interests of the SACs and the special conservation interests of the SPA rather than on the conservation objectives of these sites, and their integrity. Site integrity is defined by conservation objectives and conservation condition. The applicant's conclusions in the NIS and further information response are reached on the basis of a narrower focus than is required by Article 6(3) of the Habitats Directive, and, accordingly, may underestimate the extent and significance of the effects that will result. If habitats are not described and/or if the categorisations are not scientifically justified, or if the categorisations are inaccurate, this will have implications for the robustness of the scientific conclusions reached. Potential or degraded Annex I habitats are excluded from the analysis, which may be of significance in the context of the sites' conservation objectives. The Department has observed the occurrence of deep peats and/or dwarf shrubs in areas which do not fit with the descriptions of this category of habitat set out in the NIS – GS4_UG4. The applicant has presented relevé data in the further information submission, but with no supporting analysis of the data. There is an absence of scientific justification for some of the conclusions – notably in respect of the comparison of the data with Annex I habitat types. There is no explanation why Wet heath (HH3) in relevé 132 is not Annex I habitat Northern Atlantic wet heath with *Erica tetralix*. The Board should note that areas with Annex I habitats in poor condition are the areas where restoration would be targeted in order to achieve favourable conservation condition in a site. Fringing wetlands around Annex I lake habitats need to be considered. Fringing wetlands is an attribute in the site specific conservation objectives for the Connemara Bog Complex cSAC. In the case of the current project, the loss and disturbance of fringing habitats, including, for example, fen, flush, blanket bog, heath, wet scrub and wet woodland should be taken into account in the appropriate assessment. There will be losses of some of these habitat types as a result of the project. Oak-birch-holly woodland (WN1) has links with the qualifying habitat Old Sessile Oak woods with *Ilex* and *Blechnum* in the British Isles. Fencing may have impacts outside of the site on woodland or scrub, particularly on uneven ground. The Department is aware of projects where insufficient or inaccurate information about the receiving environment or the project at the application stage has resulted in problems in delivering mitigation measures, and in unforeseen implications for European sites. MDA01 and MDA02 are in areas where Blanket bog already occurs and could readily be restored.

7.4.10 The submission of Peter Sweetman (**Documents 22 & 23**) contends that the fact that there may be a significant impact on a European site triggers the need for Appropriate Assessment. The observer found it as difficult, as did the NPWS, to find out just what was proposed from a reading of the NIS. Did GCC carry out appropriate assessment for the water crossings already completed on the N59 under the Eirspan project? Is GCC now proposing to go further with what is already an unauthorised development? The road development needs to be considered in association with the Maam Cross to Oughterard section of the N59. The Board was at fault in the past for granting approval for the Maam Cross to Oughterard scheme, in the absence of full information of the impacts on the environment. The development is an example of ‘project slicing’, as opposed to ‘project splitting’, in order to minimise the overall effect of the development on the environment, whilst still producing separate EISs. Further investigative drilling works have had to be undertaken on the Maam Cross to Oughterard section of the N59 upgrade, before works can proceed. This drilling will have an impact on SACs and on the Freshwater pearl mussel. The hydrologist for GCC will have to satisfy the NPWS that there will be no detrimental impact on the Freshwater pearl mussel. The Board was fundamentally at fault in European law by permitting that project, because it did not have all the necessary scientific information in front of it (in relation to the Freshwater pearl mussel) to carry out appropriate assessment. And this only in relation to exploratory drilling in relation to the construction of a retention pond within the Lough Corrib SAC. There is an obligation on the Board to carry out Appropriate Assessment. In the EIS it is stated “That any direct loss of habitat will be minimised by ensuring that the natural bed level will be maintained above the base of all culverts and that natural river substrates will be reinstated within all new culverts and water crossings”. The test relative to an SAC is to ‘obliterate’ [sic] and not to ‘minimise’. If this development is to be approved, it must be done under Section 6(4) of the Habitats Directive. In the Commission v. Ireland (C-215/06) the European Court of Justice decided that competent authorities are obliged to take measures necessary to remedy failure to carry out EIA [and accordingly AA] – for example the revocation or suspension of a consent already granted. This refers back to the Board’s consent of the Maam Cross to Oughterard part of the N59. The proposed scheme was improperly screened. If it had been properly screened, there would not have been the level of disagreement with the NPWS. The Advocate General in the Sweetman Case, C-258/11, set out clearly at paras 47-49, the nature and purpose of the screening process. The effect in question must be ‘significant’, in order to set down a *de minimis* threshold. The assessment carried out under Article 6(3) cannot have lacunae, and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the

protected site concerned. The applicant has not sufficiently distinguished between habitats and Priority habitats. European Court of Justice case C-147/14 – Commission v. Germany (15th October), states that it is not necessary for objections to have been raised during the administrative procedure in order to raise them at judicial proceedings at a future date. The obligation is on the regulatory authority to carry out the job correctly. The Commission points out that judicial proceedings are independent proceedings, in the course of which it may be possible to carry out a full assessment of the legality of the decision. This is a big change in how the Board and the Irish courts have looked at this issue. The €50 fee charged for observations is excessive, and is contrary to the judgement of the European Court in the Commission v. Ireland, whereby it states that the money should only be used for covering administrative costs of handling the objection. This development cannot proceed under Article 6(3).

7.4.11 Esmonde Keane for GCC commented that Document 22 could not be relied upon, as the contents were not entirely accurate (particularly in relation to comments attributed to Brendan Gallagher), which are only hearsay, in relation to the Maam Cross to Oughterard scheme, and the author of the letter was not present to answer questions at the Hearing. The letter is not, in any case, relevant to the scheme before the Board, and if the Board were to place any relevance on this letter, then GCC would require the author of the letter to be available for cross-questioning in relation to assertions made in the letter.

7.4.12 Peter Sweetman argued that GCC was being disingenuous in not admitting that there were problems with the Maam Cross to Oughterard N59 scheme.

7.4.13 Esmonde Keane stated that the cumulative impacts of the scheme have been considered with other schemes and projects in the area.

7.4.14 Peter Sweetman stated that the Freshwater pearl mussel is the most threatened species in Ireland. The Board was in error in approving the Maam Cross to Oughterard part of this road scheme.

7.4.15 Esmonde Keane handed in a letter of withdrawal of objection from An Óige to the Hearing (**Document 24**).

7.5 Order of Hearing – Day 3

7.5.1 The brief of evidence (**Document 25**) of Mark Keaveny for GCC, in relation to engineering matters, largely restates the position set out in the EIS and application documentation. The following points are of note-

- This road design is the absolute minimum standard from TII, for a National Route – Type 3 single carriageway.

- Safe opportunities for overtaking exist along 2% of this route – whereas a minimum of 15% is required.
- There are difficulties in passing when large vehicles meet.
- There is no alternative public transport option on this route to the bus – where time, comfort and safety is hampered by the present condition of the road.
- Within the Infrastructure and Capital Investment Plan 2012-2016 of the Medium Term Exchequer Framework, it is envisaged that a number of improvement schemes including some relatively low-cost, targeted improvements on the national secondary network will be progressed, where road safety is an issue, or in tourist areas.
- The ‘Do minimum’ option would require a continuous maintenance effort with all the associated costs, whilst not addressing the fundamental deficiencies of the road.
- The vertical alignment of the upgraded road is virtually the same as the existing road – with relatively modest changes.
- Six pre-submission meetings were held with IFI, and twelve with NPWS.
- Following further meetings with landowners, the permanent land-take has been reduced to temporary on 0.105ha, with permanent land acquisition reduced by a further 0.273ha – amendments submitted to the Hearing (Document 30).
- Along 4.09km of the road there will only be pavement overlay.
- Where indicated on drawings, a farm access road will be provided to collect a number of field accesses and to provide a single access point onto the upgraded road.
- Fill requirement for this development is estimated at 405,000m³. Acceptable material generated within the site will meet over half the requirement – with 201,700m³ balance remaining to be won from MDAs and MCAs.
- It is estimated that pavement material quantities will be of the order of 32,800m³ of granular material and 42,000m³ of bituminous materials, to be supplied from quarries outside the scheme boundaries.
- Haulage of unacceptable materials will be by means of trucks with water-tight bodies.
- There will be no significant export or import of earthworks materials.
- Movement of earthworks will involve approximately 671,500m³ of material. This is expected to generate up to 363 HGV movements per day – assuming 25-tonne truck capacity and six working days per week.
- The worst-case scenario could see a 20% increase in traffic movements along sections of the N59 during the construction period.

- Accommodation roads will generally be 4m wide and double surface dressed.
- Any redundant roads will be ripped up, soiled over, grassed/landscaped, and rendered unsuitable for parking.
- Forty-nine rights-of-way will be extinguished: forty-five will be re-established. Where the new N59 is off-line, the existing N59 will generally become redundant or form local/farm access road only. Right-of-way I-I1 will not be reinstated. This access has previously been closed and there is an alternative access at ch.224+240. Right-of-way AI-AI1 is located parallel to the existing N59 between ch.249+280 and ch.249+420 and is severed by a local road near the midpoint. The western portion of the right-of-way will be re-established; the eastern portion will not be re-instated.

7.5.2 On being questioned by Esmonde Keane, Mr. Keaveny indicated that linear wetlands would be created to deal with roadside drainage, which would be a positive feature in relation to control of accidental pollution events. Flooding across the road would be reduced through construction of new bridges and culverts.

7.5.3 The response of GCC to the written objection of the Repts of Anna-Patricia Lee (**Document 27**) was submitted. The objector was not represented at the Hearing. It was indicated that meetings had taken place with the family of the objector, and agreement reached on a number of issues – such as design, water supply, re-use of stone, and masonry cladding. The road and bridge structure will not restrict views from the house. The boundary will be replaced on a like-for-like basis. Two culverts beneath the road at this location (carrying the Sruthán Mór stream) will be replaced by one clear-span bridge structure. Design of the bridge has been modified to meet the concerns of the objector. The design of the bridge is to NRA requirements and provides for pedestrian usage. Timber-clad crash barriers will be used at this location. The amount of land to be acquired at this location has been altered – through change from permanent to temporary acquisition (provided for in the CPO amendments – Document 30).

7.5.4 The response of GCC to the written objection of Peter Savage (**Document 28**) was submitted. The objector was not represented at the Hearing. The objector received planning permission to retain a dwelling-house – including sewage treatment plant with percolation area – ref. PD-08-2772. Permission was granted to extend the appropriate period to 15th December 2018 (PD-13-1122). The effluent treatment plant and percolation area are sufficiently far removed from the proposed road line to meet with the Code of Practice – Wastewater Treatment and Disposal Systems Serving Single Houses. GCC has provided assurance by way of letter (copy enclosed) that, notwithstanding the acquisition of 0.043ha at

this location, the status of permission ref. PD-13-1122 would remain unchanged.

- 7.5.5 **Document 29**, listing errata contained within the original EIS and NIS, was submitted by GCC. The document draws attention to minor alterations and misprints. In particular the document contained replacements for pages 582 & 583 of Volume 2 of the EIS, where the incorrect catchments for rivers relating to the Water Framework Directive had been submitted. The errata also contained section drawings of MDA01, MDA02, and MCA02a & MCA02b.
- 7.5.6 **Document 30**, containing CPO amendments, was submitted to the Hearing by GCC. In particular, some changes were made from permanent acquisition to temporary acquisition and other minor changes referred to elsewhere in this summary of the Hearing proceedings – to meet with some of the objections raised by property owners.
- 7.5.7 Discussion ensued between John & Sarah Ross and GCC, in relation to construction traffic on the N59, whether the speed of HGVs could be restricted, and the offer of the Council to carry out a structural survey of the Ross' house at Shannakeela. All construction traffic would be travelling on public roads. The EIS outlines the level of construction traffic expected to be generated. Speed restrictions will be in place only during construction phases of parts of the N59 directly affected. There was concern expressed that initial treatment of invasive species along the existing N59 had not been followed up. Occupants of houses along the route should have been given more information and more opportunity to engage with GCC. The provision of the new road ought to be linked with the undergrounding of services along the road edge.
- 7.5.8 **Document 34** was presented by Paula Kearney for GCC, being a response to the two letters of observation sent by DoAH&G to the Board. Of note is the following-
- Whilst the proposed road will encroach into European sites, there are some areas (1.7km length) where the new road will be relocated further away from European sites.
 - The rehabilitation and widening of eight existing bridges on the N59 as part of the Eirspan Bridge works, was subject to appropriate assessment. In the event, works were only carried out at six of the eight bridges due to land ownership difficulties.
 - The zone of influence, for ecology purposes, was derived from the Institute of Ecology and Environmental Management Guidelines for Ecological Impact Assessment 2006.
 - New drainage arrangements will be better for nature conservation than is the case with the existing road.

The submission is accompanied by a copy of the National Parks & Wildlife Service recently-produced Conservation Objectives for the Connemara Bog Complex SAC (dated 28th October 2015). It was pointed out at the Hearing that Julie Fossitt of DoAH&G had been provided with a copy of Document 34, prior to giving her brief of evidence.

7.5.9 **Document 35** was presented at the Hearing by Paula Kearney for GCC – being a rebuttal of the brief of evidence presented by Julie Fossitt. Of note is the following-

- The EIS and NIS were drawn up having regard to guidelines in relation to the Habitats Directive (Oxford Brookes University) – published by the European Commission, and also Irish Government guidance.
- It is outside the remit of this project to ‘restore the favourable conservation condition’ of the Annex 1 habitat(s) and/or the Annex II species for which the SAC has been selected.
- Wet grassland (GS4) occurs throughout the proposed road project. The habitat has often colonised degraded (mostly through anthropogenic influence) peatland habitats.
- UG4 is a wet, non-Annex grassland community referable to the Fossitt (2000) category GS4 Wet grassland, and many examples are derived from overgrazed wet heath.
- Relevé sheets are provided in the applicant’s response to the Board’s request for additional information. A total of 248 recording sheets and a list of target notes are provided.
- The highly undulating nature of the underlying bedrock limits the length of drainage paths which could develop, and combined with poor permeability within the peaty overburden, as shown at the piezometer test sites, the potential dewatering effect of the road foundation construction material on adjoining peat areas will be extremely localised, to typically less than 5m of the road edge, and worst case less than 15m. In a lot of individual habitat area, rock outcropping and cutover bog areas limit the potential impact of the road project. The extremely high rainfall conditions ensure that saturated conditions are achieved and maintained even at and close to existing cut faces.
- Timber post and wire fencing along boundaries is a standard non-complex operation.
- Interconnections with the Connemara Greenway have been dealt with by way of response to the additional information request from the Board.
- Specific construction sequence drawings for proposed temporary construction areas (320 no.) along with temporary settlement ponds to service each of these areas is presented in Volume 3, Section 6 of the EIS.

7.5.10 Julie Fossitt on behalf of the DoAH&G noted the lengthy response, contending that no new information had been presented. Her position in relation to her Brief of evidence stood. It was acknowledged that ecological survey work had been undertaken and attempts made to mitigate the impacts of the development. The applicant met with the NPWS many times before the application was lodged, but this could not be taken as an indication of approval for the project. Notwithstanding this, it was difficult to assess the impacts of the development on the European sites through a reading of the NIS. Tables 5.1 and 6.1 of the applicant's response are considered to be the only new information. The DoAH&G still considers that there are scientific uncertainties, as well as certain gaps in the analysis submitted. This has implications for appropriate assessment. There appears to be a direct loss of 17.55ha of land within European sites. Data on what habitats are affected has led to concerns within the DoAH&G about the scientific basis and justifications for identification; and the analysis on the impact on the conservation objectives of European sites remains. An overly narrow focus has been concentrated on habitats and species, and not on the wider status of the conservation objectives. Specific impacts on specific habitats are not available. Table 7.1 of the NIS states that impacts on specific habitats or species are generically referred to as habitat loss, excavation and storage of peat, trampling, water pollution, drainage, erosion and invasive species. Information is presented in only a generalised form for individual habitats over the entire project. Habitat categorisation is important within this scheme, as raised by the DoAH&G. The Board asked the applicant for quadrat data and comparison with Annex I habitat types. The applicant presented relev  data, including two which identified the presence of Annex I habitat. No actual comparison has been provided – other than some background text. There are areas of marginal/modified habitat that do occur within the land-take of the road – versions of Annex I habitats – but it is not clear from the NIS. Uncertainties as to loss of Annex I habitats or Annex I habitats which could be restored, still remain. All five peatland habitats within the Connemara Bog Complex cSAC could be restored to Blanket bog (active). There is no definitive information on degraded habitats within the scheme area. There are habitats within the scheme which are linked to Annex I habitats and their structure and function, and which could be restored. Following visits to relev  areas, it was noted that areas mapped as bare peat should have been mapped as blanket bog (overgrazed). Visits to relev  quadrat areas does not reflect what was reported in data sheets – in other words, habitats as mapped are not reflected by what was viewed on the ground. It is questioned whether the GS4/UG4 classification of Wet grassland is correct on maps. Justification for designation of Annex I habitats within survey sheets has not been clearly demonstrated. In-combination effects were not considered (particularly with habitat degradation in relation to 110kV power line in South Connemara – located within the Connemara Bog Complex cSAC).

Tawnaghmore Bridge has now been replaced, and it is clear from the works there that mitigation measures to control siltation of the river were a challenge – particularly with a flowing river and solid rock. Following works, rising water levels may wash silt into the river. The MDAs have deep peat and could be restored, and habitats may not have been correctly identified here. MDA01 habitat identification was different to what was observed by the DoAH&G. MDA02 is an area of deep bog which could be restored as blanket bog. There are reasonable scientific doubts as to the full nature and scale of impacts on European sites – their conservation objectives and their integrity.

7.5.11 Esmonde Keane for GCC pointed out that advice of NPWS was taken into consideration in drawing up the NIS. The applicant is satisfied there are no gaps in the data provided with the application. Data collected has had a direct impact on the final line of the road. The fact that there are five sections where overlay only is proposed, is directly down to constraints imposed by ecology. It is noted that there are degraded habitats along the road line. In-combination effects were considered. The applicant was not made aware that there had been habitat degradation in relation to the 110kV South Connemara power line. Exceptional difficulties were overcome to control siltation at the construction of the Tawnaghmore Bridge. The removal of coniferous plantation at MDA02 will improve the ecological value of the site. The ecologist for the applicant was satisfied that she had sufficient data to carry out an assessment of the impact of the project on the environment and on European sites. There are no lacunae or gaps in the information provided to the Board.

7.5.12 Julie Fossitt sought to remind the Board of the difficulties involved of the control of sedimentation in difficult areas such as this one. There are risks of peat instability in deposition of peat at MDA01, in particular, and the impact on Derrywaking Lough. Peat needs to be kept wet. The comments made in the Brief of evidence still stand, notwithstanding what has been presented by the applicant at the Hearing.

7.5.13 Tony Cawley for GCC pointed out that the MDAs were designed to be kept wet – with control on outflows.

7.5.14 Richard Arnold, on behalf of the Board, questioned if any consideration had been given to habitat loss and creation of new habitats. Paula Kearney, on behalf of GCC, submitted **Document 36** indicating habitat loss within the CPO boundary, and potential areas for creation of habitats within MDAs, MCAs and roadside landscaping – overall 35.31ha – resulting in a net loss overall of 30.46ha of habitat. **Document 37** was submitted to the Hearing by GCC – being a schedule of mitigation measures and environmental commitments drawn together from documents submitted as part of the application and Hearing process.

7.5.15 Following on from questioning from the Inspector in relation to the status of the Connemara Greenway and the Slí Chonamara walking route, GCC confirmed that a small section of the Connemara Greenway, near Clifden, had been constructed, and that the Slí Chonamara walking route was along the N59 for approximately 1.5km. There was no CPO with the Connemara Greenway project, and it was proving difficult to get agreement from landowners. The issue of CPO for parts of the Greenway might have to be looked at in the future.

7.5.16 The closing submission of Esmonde Keane for GCC, indicated that the scheme was the correct one for this area. The scheme has had regard to the concerns raised by the DoAH&G in relation to ecology. This has resulted in sections of road where there will be overlay only, in order to avoid impact on European sites. Road safety will be improved, access to the area will be improved, and the risk of contamination of watercourses in the area will be lessened through the construction of new drainage along sections of the road. The need for the scheme is manifest. Submissions from objectors to the Hearing indicated that they were not opposed to the road scheme in principle – rather to particular impacts on their properties. The precautionary principle has been observed in drawing up the EIS and NIS. The road scheme has been subject to a robust examination, analysis and evaluation. The Board sought additional information as part of its EIA and AA of the road scheme. The assessment has been in accordance with the provisions of the Habitats Directive 92/43/EEC, and the EIA Directive 2011/92/EU; as transposed into Irish legislation by the Planning Acts, Roads Act, and Regulations made thereunder. The scheme has not been deliberately split. Direct and indirect impacts, and in-combination effects with other approved plans and developments in the area, have been considered. The road scheme is self-contained – almost 30km in length. The judgement of Finlay-Geoghegan J, in the case of Friends of the Curragh Environment v ABP (2006 IEHC 390), dealt with the issue of ‘project splitting’. There was no indication that that application had sought to divide a master plan in order to avoid the preparation of an EIS for the racecourse. An EIS was submitted and an EIA conducted. The analysis of this road project has included consideration of ‘in-combination’ effects with other plans and projects, referring to the possibility of cumulative impacts. In relation to AA, the judgement of Finlay-Geoghegan J, in the case of Kelly v ABP, referring to Part XAB of the Planning & Development Act noted, that whilst the provisions of Part XAB are more detailed than Article 6 of the Habitats Directive, there was common case that they do impose similar obligations on the Board to those imposed by Article 6(3) of the Habitats Directive, as construed by reference to case law of the Court of Justice of the European Union. This position is correct. Work carried out in preparation of the NIS and submission of additional information to the Board has been carried out in accordance with the provisions of Article

6(3) of the Habitats Directive, Part XAB of the Planning and Development Act and relevant regulations. EIS and NIS, and the stages of EIA and AA carried out to date, have been executed with a high degree of certainty as to the nature of the development proposed, the impact of same, very extensive analysis of the receiving environment, and in particular, the habitats concerned, the need to avoid sensitive habitats, taking into account the concern of the NPWS. In relation to European sites, properly-designed drainage will provide an improvement in the area. Properly-designed bridges and culverts will reduce the incidence of flooding on the road. A safer road will result in a reduction in accidents and impact from accidental spillage of contaminants. In the case of *Klohn v ABP* 2009 (11RH59), dealing with EIA, but which also is of relevance to AA, McMahon J noted, that the EIS was a document submitted by the developer. In contrast, EIA was an on-going process undertaken by the decision-maker. A great deal can happen and a great deal of information can be accumulated between the lodging of the EIS and the final decision by a planning authority or ABP. The interval between the lodging of an application and the making of decision, means that it is inevitable that a good deal of additional information will become available to the decision-maker in the interim. EIA will be informed by expert knowledge within the body of the decision-maker, an input that will in many cases fill in any remaining deficits in the documentation submitted. In these circumstances a great deal of discretion is left to the decision-maker in making this call. The Board has before it a significant amount of information on which to carry out EIA and AA. There is no lacuna in the information available to the Board, and information submitted has resulted in a high degree of certainty of scientific proof as to the absence of any adverse impacts on the integrity of the European sites concerned. The assessment of the habitats has been comprehensive, and clear evidence that the analysis is in compliance with the provisions of Article 6(3) is shown and manifest in sections 9.1-9.5 of the NIS, and same has been updated in line with what has now been produced in relation to site-specific conservation objectives for the Connemara Bog Complex cSAC. GCC has met with as many parties as possible and attempted to meet their objections. Very few landowners had maintained their objections throughout the planning process. All objectors attending were thanked. The input of Bríd Ward (recently deceased) from the Roscommon National Roads Design Office was acknowledged. The DoAH&G were thanked for attending throughout the Hearing.

7.5.17 The Inspector thanked all those in attendance for their time and patience. He explained that he would be writing a Report for consideration by the Board subsequent to the Hearing, and the options open to the Board in relation to both the CPO and the approval. The Hearing closed at 19.25 hours.

8.0 COMPULSORY PURCHASE ORDER

8.1 General Comment

- 8.1.1 A number of written objections/observations to the CPO were withdrawn before the Hearing in November 2015. One further objection/observation was withdrawn at the Hearing. There are nine outstanding objections/observations to the CPO. Some of these were represented at the Hearing. GCC produced written responses to the Hearing in relation to all objections/observations – whether represented at the Hearing or not. GCC responses are contained within the grey-bound Lever-Arch file which accompanies this Inspector's Report. There is an additional black-bound ring-binder with photographs of each of the relevant properties referenced by objectors/observers.
- 8.1.2 A number of minor amendments were made to the CPO documents by way of amending maps and schedules handed into the Hearing (Document 30) on Day 3. There is nothing of significance within the amending documentation – the overall area of the CPO being marginally reduced (by 0.378ha), and some types of land acquisition being changed from 'permanent' to 'temporary': to facilitate construction.

8.2 Community Need

- 8.2.1 Having visited the N59 road network and the Regional and rural road network adjoining it; having conducted an Oral Hearing over a three-day period; and having examined all the written submissions made to the Board; I am satisfied that Galway County Council has established a need for the N59 Clifden to Maam Cross road scheme. Most of the objections received in relation to the CPO are not objections to the CPO *per se*, but rather to particular aspects of the scheme, as it relates to particular plots of land. The scheme will result in the upgrading of 29.4km of road (some 4.1km [I estimate this figure to be 3.9km] of which will only involve new overlay of the existing road). The scheme will result in improvements in the vertical and horizontal alignment of this road which caters for considerable volumes of traffic in summer months. The scheme will increase the overtaking opportunities on this stretch of road from 1.7% currently to 15.0% – thereby reducing driver frustration. It is calculated that 71% of the existing route does not provide adequate stopping sight distance. Accident clusters have been identified, and the issue of road safety addressed in the design of the new road. Travelling times will be improved by 2.25 minutes per vehicle – a not inconsiderable saving to those travelling this road on a daily basis. There is no alternative rail option along this route. Drivers of buses and HGVs will benefit from road widening – where passing on-coming vehicles is difficult at present. Sight visibility will be improved at a number of junctions, both private and public.

The N59 is the main artery through the outstanding landscape of Connemara – and so is a busy tourist route, providing access to Connemara National Park and Kylemore Abbey amongst other attractions. The road is a significant tourist attraction in its own right. There are 8 no. designated viewing areas proposed – to regularise the existing system of informal lay-bys. Seven additional informal lay-bys will be retained. There are multiple safety hazards for non-motorised users of the road. The narrow cross section, deficient sightlines, presence of solid roadside boundaries and poor alignment significantly increase the risk that vulnerable road users will not be seen by motorists. The road pavement condition is poor – with 62% failing under at least one pavement condition parameter. Admittedly the pavement condition could be improved without the need for a CPO. However, roadside drainage improvements will ultimately result in any pavement improvements lasting longer, where water would not be ponding on the road. The above render the current road unfit to serve its purpose as a National Secondary Route. The existing road is considered to be substandard.

8.2.2 The connection of this road scheme with the already improved 3.8km section at Derrylea, and the 15km permitted section (Maam Cross to Oughterard); realignment of Regional road and county road junctions with the N59, and the rationalisation of these junctions; the creation of an additional 11.9km of cycleway/footpath, particularly within the settlement of Recess, linking commercial/residential/community services, and also connecting to the already approved Connemara Greenway scheme; will result in substantial improvements for road users and those using the planned Connemara Greenway, in terms of comfort, safety and convenience. The provision of dedicated bus stopping bays at four areas will be a benefit for the community. At the Hearing, the arguments put forward by GCC for the Recess bus stop to be located at the western end of the village, were persuasive.

8.2.3 I would be satisfied that GCC has argued coherently the community need for this road scheme, and has indicated clearly the benefits which will flow from it for those living in the area, and also for visitors to the area.

8.3 Suitability of the Site

8.3.1 The N59 Clifden to Maam Cross Road Scheme makes use of the existing road reservation along approximately 80% of its length, in order to limit the amount of land it would be necessary to acquire to effect road improvement, and to limit the impact on European sites. Public information meetings were held by the Council with additional follow-up meetings with Council staff and agronomists for those whose property was directly affected by the scheme (continuing right up to the time of the Hearing in November 2015). There are no significant off-line elements to

this scheme – there being 25 discrete smaller off-line sections. Some 4.1km [I estimate this figure to be 3.9km] of the overall route will involve no alterations to the cross section or alignment of the existing N59 – involving only new surfacing. The off-line sections are necessitated by the constraints imposed by bends on the N59 at lakes and watercourse crossings – particularly at Derrynavlaun townland. A number of options were considered for this part of the route – the eventual choice being Option 2 of three – the shortest one with an off-line length of 390m. The scheme will connect with the recently-completed N59 improvement at Derrylea (3.8km), and with the Maam Cross to Oughterard N59 road improvement scheme (15km), which was approved by the Board in December 2013 [with no construction to date]. The scheme will also connect with the Connemara Greenway Scheme (ref. 07/JA0033), approved by the Board in March 2013. The proposed CPO will facilitate the provision of discrete stretches (4.9km) of the Connemara Greenway – which is to be constructed in association with the road improvement scheme, within the CPO line. These discrete stretches are located between Weir Bridge in the west and Bunsconniff townland (ch.252+400) in the east. A new bicycle bridge is to be created abutting Weir Bridge. In addition, link sections of cycleway and walkway will be provided for connections to loops at Clifden and Ballynahinch, and to connect the Slí Chonamara walking route with the Western Way walking route along a 1.5km section of the N59.

8.3.2 It is acknowledged by the Council that the development will have negative impacts on some property, and measures have been considered to abate the potential nuisance or, where this could not be done, to pay relevant compensation (if necessary, and subject to arbitration). Mitigation measures include screen planting along the road. It should be noted that some houses will end up further away from the proposed road, where off-line sections are to be constructed. Existing agricultural, commercial and residential access points will be retained or set back/relocated, where necessary.

8.3.3 It is acknowledged by the applicant that the principal constraint on the line of the improved road was imposed by ecological designations on either side of the road, and the need to protect species and habitats linked to the road line by way of the many watercourses in the area. A significant portion of the application submissions relate to ecology and surface water/hydrology. The road forms the boundary between a number of European sites – designated for their habitats or species of note and conservation interest. Avoidance of ecologically important sites and minimisation of impacts has informed the design of the road. All Annex I habitats were avoided within the three affected SACs (although the classification of the habitats by the applicant has been disputed by the DoAH&G and the Consultant Ecologist appointed by the Board). The

working/maintenance width has been reduced from 5m to 3m. Material excavated, which is unusable in the scheme will all be disposed of within the MDAs or MCAs. Erosion and sediment control are regarded as the most significant elements requiring mitigation during the construction phase. Bridges, culverts, permanent/temporary drains/ponds, and retaining walls have all been designed with this issue to the fore. Some 4.1km [I estimate this figure to be 3.9km] of the proposed 29.4km length is on-line resurfacing only, in order to avoid encroaching on ecologically sensitive areas. The existing road footprint has been used to the greatest practicable extent to minimise impact on the environment. The Type 3 single carriageway is the absolute minimum standard available under current road design standards. Peat will have to be removed and some rock blasted to facilitate the road construction. The peat will be disposed of within the site boundaries and rock excavated will be used to reduce the amount of construction material to be imported to the site. Rock necessary to make up the balance will be won from the MCAs and the MDAs – areas included within the CPO boundary.

8.3.4 I would be satisfied that the majority of the proposed CPO lands are suitable for the road scheme proposed. However, having regard to the concerns expressed by the Consultant Ecologist engaged by the Board to report on ecological issues for the purposes of EIA and AA [see following sections of this Inspectors Report relating to EIA and AA], I would recommend to the Board that the CPO should not be confirmed – at this stage. Should the Board be minded, it would be possible to confirm that portion of the CPO between Clifden and Gowlan West – the most westerly portion of the scheme. This is a discrete 2.8km section between ch.223+000 and ch.225+800 – joining the town of Clifden with the already improved Derrylea section of the N59. However, this represents a small fraction only of the overall 29.4km length of the road upgrade proposed, and for reasons outlined elsewhere in this Report, would not be a course of action which I would recommend to the Board.

8.4 The Need for All the Lands

8.4.1 The decision to utilise the existing N59 road reservation as far as is possible (some 20% of the total being off-line) has limited the amount of land to be compulsorily acquired by the Council. Old sections of the N59 are to be retained to provide access to houses and agricultural land. The EIS estimates that 32.7ha of existing road will be utilised, 2.0ha of residential/commercial, 12.2ha of forestry and 58.5ha of agricultural/commonage land – an overall CPO of 105.4ha. This was marginally reduced (by 0.378ha) at the Hearing – as part of the submission of revisions to the CPO, where landowners had argued that the amount of land-take was excessive or not required. It is proposed to provide a single carriageway road of 6.0m width, flanked by 0.5m wide

hard strips and landscaped margins of varying width. The N59 has been realigned in the past. Property boundaries have been set back from the edge of the road following development. This has resulted in a corridor being available within which to realign the road, at the Clifden end of the scheme in particular.

- 8.4.2 Some 6 no. houses are to be demolished to facilitate the road. None of these houses are occupied, and most are in a ruinous or poor state of repair. There have been no objections to the Board regarding the CPO of these houses. Some time at the Hearing was given over to the former P.O at Lissoughter (house no. 100) – currently divided into two houses. The occupant of the most westerly portion of the house objects to GCC acquiring the house in which she lives. The record of the Hearing details the circumstances of this particular property. I would consider that GCC has put forward a convincing case for acquiring the entire property of these two houses (even though it would appear that it is not proposed to demolish them). Adjoining land to the east, which was considered within the CPO for provision of effluent treatment for the two houses, was removed from the CPO by way of amendments made to the CPO at the Hearing. I would consider this to be reasonable, as the ground was not considered suitable for effluent treatment. GCC submitted Document 33 to the Hearing – an option for CPO of just the roadside portion of the two houses – should the Board be minded to confirm the CPO of just this roadside portion. However, this would result in a situation where the houses would be left without effluent treatment facilities, or any means of providing for such within the remaining curtilage of the properties. On balance, it would seem that the entire of the two plots should be acquired by CPO. A number of agricultural sheds are to be demolished, and GCC have put forward a reasonable case for such demolition.
- 8.4.3 GCC argued cogently at the Hearing in relation to the need to acquire a portion of the front garden of house no. 139a at Bunsconniff (Reps. of Anna-Patricia Lee). The arguments put forward in relation to the need for demolition of ruinous stone sheds on the opposite side of the road were persuasive. A water supply from the Sruthán Mór stream beneath the N59 at this location is to be replaced, and amendments made to the bridge structure and crash barrier to meet some of the objections of the owners.
- 8.4.4 The acquiring of part of the front garden of house no. 32 (substantially constructed) will not impact on the effluent treatment area for this house within the front garden portion of the site. GCC gave undertaking at the Hearing that there would remain sufficient area within the site to carry out permission ref. 13/1122 (an extension of permission of ref. 08/2772).
- 8.4.5 In relation to the two Material Deposit Areas, Galway County Council has presented a convincing case as to why these are necessary for the

success of the scheme and for limiting inconvenience to road users and residents of the area. Their location, whilst off the N59 itself, is not at such a great distance – 430m and 730m respectively. MDA01, at the Clifden end, forms part of cutover bog commonage, and is accessed by a narrow cul-de-sac, but provisions have been made for two passing places to be constructed. The road has recently been resurfaced. The construction period will cause some nuisance to the residents of four houses on this cul de sac and to farmers who use it for access. However, the inconvenience caused will be of limited duration, and the state of the road will ultimately be an improvement on what exists. MDA02, near Maam Cross, forms part of a coniferous forestry plantation, and is accessed from a Regional Road, suitable for HGV traffic.

- 8.4.6 Galway County Council has put forward a convincing case for the 8 no. tourist lay-bys spread out along the length of the road. There are already a number of unofficial lay-by areas – particularly where the N59 has been realigned in the past or where road repair aggregate is stored. In addition to the tourist lay-bys, there are a further 7 no. informal pull-in areas. These will serve an important tourist function for visitors wishing to park, take photographs and admire the scenery.
- 8.4.7 No additional lands are to be acquired to facilitate the approved Connemara Greenway project. The road scheme will provide 11.9km of cycleway/footpath which will form part of, or link in with, the approved Greenway and with cycleway/footpaths already constructed at the Derrylea section of the N59 (which does not form part of the proposed scheme).
- 8.4.8 The need to create perpendicular side road junctions with the N59 has necessitated the compulsory acquisition of small amounts of land on either side of such roads. Such works are necessary to improve sight visibility and are reasonable.
- 8.4.9 In addition, some lands have been acquired to improve sight visibility at private access points, and GCC has presented a convincing case for such improvements – particularly along a road where the 100kmph speed restriction applies for most of its length. The arguments put forward at the Hearing for the improvements necessary at the entrance to the Connemara Marble Works/Sutherland house (no. 101) in Lissoughter townland were convincing – necessitating the removal of part of the front garden of the Sutherland house to improve sight visibility to the west. GCC gave an undertaking at the Hearing to replace an agricultural entrance to the west of the Sutherland house on a like-for-like basis. These arrangements are considered to be reasonable.

- 8.4.10 The arrangements put forward at the Hearing by GCC in relation to relocation of parking spaces to serve the Ross house in Shannakeela (no. 132) are reasonable. Parking spaces are to be relocated from the opposite side of the N59 to the same side of the road as the house itself – but beside the vehicular, rather than the pedestrian, access. The road will be moved slightly further away from the house and a cycle lane constructed. No land is to be taken from the garden of the house. GCC undertook at the Hearing to carry out a structural survey of the house on this site – stated to be more than 200 years old. These arrangements are considered to be reasonable.
- 8.4.11 GCC has put forward reasonable arguments for the on-line upgrade of the road; where off-line replacement to the north or south of the existing route would have involved the acquisition of significantly more land; not to mention much greater impact on ecology and the environment.
- 8.4.12 MDAs and MCAs have been identified as possible site compounds for construction works. Such compounds will, therefore, be located within the CPO line of the road.
- 8.4.13 I would be satisfied that GCC has justified a need for all of the lands included within the CPO area, as amended by CPO Document 30 submitted at the Hearing.

8.5 Compatibility with Development Plan Provisions

The Galway County Development Plan 2015-2021, the Clifden Local Area Plan 2009-2015, and the Gaeltacht Local Area Plan 2008-2014, are the relevant county level planning documents. The relevant policies of the various plans are set out below.

8.5.1 Galway County Development Plan 2015-2021

The CPO was lodged with the Board during the currency of the old Development Plan. The new Plan came into effect on 23rd February 2015. Table 5.1 lists Priority Transport Infrastructure projects – amongst which is the N59 Maam Cross to Clifden scheme. In relation to this piece of infrastructure, a footnote states as follows- “The N59 National Secondary route in County Galway is the primary transportation link to North Conamara. The route is substandard from an alignment, pavement, capacity and safety viewpoint and requires substantial investment. It is proposed to develop a mostly on-line improvement of the route appropriate to the capacity, safety and economic needs of the Conamara area. The first phase of the improvement process has commenced planning (Maam Cross to Oughterard) and the Clifden to Oughterard [sic] section will follow”. The Plan identifies the landscape character as mostly ‘special’ or ‘unique’ along this length of the N59 – the two highest

classifications in a list of five. Objective LCM 1 states that the planning authority will have regard to the landscape sensitivity classification of sites where significant development is being proposed, but balanced by the need to develop key strategic infrastructure. There are a number of listed focal points/views along this stretch of the N59, including no. 114 Clifden; no.s 87 & 88 at Ballynahinch Lake; no. 116 Wetland areas to southeast of Clifden; no. 122 Views of western end of the Twelve Bens. In addition to these numbered views, there is an array of unnumbered views indicated along the route, frequently pointing towards the northern mountain ranges, but also towards the southern boglands, over lakes and towards Cashel Hill. It is an objective to preserve focal points/views as listed in Map FPV1, but again balanced against the need to develop key strategic infrastructure. [I note that the scale of map FPV1 is such as to make it almost undecipherable]. The proposed road scheme is mostly an on-line upgrade: there is only one significant off-line section (390m), at Derrynavglau townland, which will involve significant cut and fill. This section will not impact to any significant degree on views of Ballynahinch Lake to the south or the Twelve Bens to the north of the road. There are two Protected Structures which will be impacted by the road – the boundary wall of the old railway station at Recess and the gate piers at Lissoughter Lodge. The interventions are not major and the impact on the Protected Structures will not be significant. The affected boundary wall of the old railway station is not original work, but will be dismantled and set back. The brick gate piers at Lissoughter Lodge are not original – the original entrance to Lissoughter Lodge was severed when the railway was constructed in 1895. Brick from the piers will be salvaged and reused in the relocated entrance to the house curtilage. Objective NHB-1 relating to Protected Habitats and Species, states as follows- “Support the protection of habitats and species listed in the Annexes to and/or covered by the EU Habitats Directive (92/43/EEC) (as amended) and the Birds Directive (2009/147/EC), and regularly-occurring migratory birds and their habitats and species protected under the Wildlife Acts 1976-2000 and the Flora Protection Order”.

8.5.2 Clifden Local Area Plan 2009-2015

The western 1.5km of this proposed road scheme is located within this Plan area. The importance of tourism to the economy of the town is acknowledged. Section 2.3 states- “With respect to the Maam Cross to Clifden section it is hoped that this scheme will be advanced next year 2013. The current proposal extends into the 60kph speed limit on the eastern end of Clifden on the N59”. Objective T14 (in relation to proposed walking and cycling routes) seeks to facilitate the development of such a route on the NRA N59 realignment proposals from Derrylea to Cúirt Cregg housing estate. This Local Area Plan was extended to 2020, on 28th April 2014.

8.5.3 Gaeltacht Local Area Plan 2008-2014

Approximately half of the length of the N59 scheme is located within the Conamara Gaeltacht area. The poor condition of many of the roads within the Gaeltacht is identified as inhibiting rural regeneration and the development of the area's cultural, marine and tourism resources. Signage in the area is bilingual. The proposed development will not have any significant impact on the Gaeltacht. This Local Area Plan was extended to 2018, on 25th March 2013.

8.5.4 I would be satisfied that the proposed CPO is in accordance with the policies and objectives contained within the Galway County Development Plan (aside possibly from those objectives relating to the conservation of ecology), the Clifden Local Area Plan, and the Gaeltacht Local Area Plan.

8.6 **Other Issues**

8.6.1 Extinguishment of Public Rights-of-Way

Part 1 of the Second Schedule to the Compulsory Purchase Order refers to extinguishment of 49 no. public rights-of-way. These relate to realignment of existing junctions, closing-off redundant sections of the old N59, or small side roads where ready alternative access either exists or will be provided as part of the scheme. The Council is to provide alternative access where rights-of-way are extinguished. The extinguishments outlined in the Second Schedule are necessary in order to construct the realigned road and associated junctions with side roads. There were no objections lodged to the proposed extinguishments. The extinguishments proposed are acceptable.

8.6.2 Boundary Treatments

Much of the existing N59 is not fenced. Fenced sections are in timber post and wire – a type of fencing suitable to the open landscape of Connemara, in terms of not impacting on the views available from the road. This type of fencing will be replicated along the land acquisition line of the scheme. GCC indicated at the Hearing that it was not prepared to erect fencing for Ballinafad Common, and this is reasonable. GCC stated that nature designations at this location would mitigate against fencing – but I would consider that simple fencing could not have any significant impact on either habitats or species at this location. The erection of fencing at this location would not do anything to prevent animals wandering onto the N59 – as they could just skirt around any fence, either along the R341 or into adjacent Athry Common lands. Boundaries which are removed at houses will generally be replaced on a 'like for like' basis, and again, GCC argued cogently at the Hearing that it would not be reasonable to construct more expensive replacements – particularly for house 101 at Lissoughter.

8.6.3 Severance

Resulting from the mostly on-line nature of improvements, the issue of agricultural severance does not arise within this scheme. Where plots of land are small, the CPO covers the entire plot, rather than leaving a small area severed from the principal portion of the farm. There is no issue of community severance as the road will be open, with existing access points for residential, commercial and agricultural lands retained, or alternative access provided. Two agricultural underpasses are to be provided at ch.233+650 and ch.247.740 to facilitate farmers. This would appear to be reasonable.

8.6.4 Costs

The Board can direct the local authority to pay costs incurred by the Board or any person appearing at the Hearing (Section 219 of the Planning and Development Act 2000). I would not recommend that the Board should direct any such payment to be made to persons appearing at the Hearing.

8.6.5 Public Art & Old Railway Platform

In relation to the objection/observation of Donal Joyce, I would agree with the comments made at the Hearing by GCC in relation to roadside art for public road schemes and the buried nature of what may or may not exist of the old railway halt for the former Recess Hotel in Lissoughter townland. The landowner will be compensated for any property compulsorily acquired.

8.6.6 Timing of Future Road Works at Recess

In relation to the objection/observation of Mark Joyce, Tommy Joyce and Kevin Joyce, GCC argued at the Hearing that it would not be possible to restrict roadworks in the vicinity of the shops at Recess to winter months only. GCC gave an undertaking that two-way traffic would be maintained along this section of the N59 between the months of June to August. In the context of a road scheme which is to be carried out in a number of phases, this would appear to be reasonable.

8.7 **Conclusion in Relation to CPO**

I have argued in the preceding sections that the proposed CPO is acceptable on grounds of community need, site suitability, the need for all of the lands and compatibility with Development Plan provisions. The single caveat is the potential impact on European sites and the potential loss of Annex I habitats. For this reason, I would not recommend that the Board confirm the CPO in its entirety. I have argued elsewhere in this Report that the short 2.8km section between Clifden and the recently completed Derrylea section could be completed without impacting on European sites, as could other discreet sections of the road. The feasibility of completion of any section would to some extent be dependent

on MCAs and MDAs elsewhere within the scheme, but it might be possible to consider such a partial confirmation of the CPO, pending any decision/course of action the Board may wish to take in relation to the approval of the road scheme.

9.0 SECTION 51 APPROVAL – ASSESSMENT

9.1 General Comment

Most of the assessment in relation to this road scheme is contained within the following section of this Report dealing with Environmental Impact Assessment. In a similar fashion, the assessment in relation to the Compulsory Purchase Order in the preceding section captures many of the planning issues related to the road approval. I do not intend to repeat these assessments. The following additional issues are of note in consideration of this road scheme.

9.2 National Guidance

9.2.1 National Secondary Roads Needs Study 2011

This National Roads Authority, NRA-sponsored study identifies the Clifden to Maam Cross section of the N59 in the Priority 2 List of schemes. There are only two lists – Priority 1 and Priority 2. The N59 Maam Cross to Oughterard section is included in the Priority 1 list. Section 8.4.3 of the Report states on p.372 as follows- ‘Priority 2 schemes do not represent value for money under this analysis, which assumes an opening year of 2015. These Priority 2 schemes are therefore not recommended for immediate entry to the programme of improvements being taken forward by the NRA. Over time the economic case for taking forward these schemes will improve due to a combination of deteriorating condition of the present road, rising traffic levels and rising values of time with economic growth. They should therefore be seen as longer-term improvements. I note that the 2009 estimated cost of this road scheme was €45,368,000. Whilst the scheme is not included on the Priority 1 list, it is included on the Priority 2 list, and time has passed since the Study was produced in 2011, and more time will elapse between any approval of the scheme/confirmation of the CPO, the issuing of Notices to treat to landowners, and the awarding of a contract(s) for construction, and commencement of development.

9.2.2 National Cycle Policy Framework 2009-2020

Objective 3 states- ‘Provide designated rural cycle networks, especially for visitors. The National Cycle Network Scoping Study (published in August 2010) identifies Corridor 2 of the National Cycle Network – running from Dublin to Clifden (EuroVelo Route 01). It is Policy in relation to upgrading of National Roads- ‘In regard to the upgrading of national roads, we will

ensure that any such proposals do not impact negatively on the safety and perceived safety of the road for cyclists'. The proposed development will provide 11.9km of cycleway (some of which forms part of the proposed Connemara Greenway). Approximately 3.5km of the Greenway has been constructed (from Clifden to Gowlan West). There was no CPO accompanying application 07.JA0033 (for the Connemara Greenway), and GCC stated at the Hearing that it has been experiencing difficulty getting voluntary agreement of landowners to the construction of certain lengths of the Greenway, and that it may have to consider a CPO in the future if agreement cannot be reached. The proposed road scheme will result in the creation of cycleway and loop cycleways as part of the development – some of it putting into effect portions of the Connemara Greenway. The scheme is in accordance with the Framework.

9.2.3 Regional Planning Guidance

The Regional Planning Guidelines for the West Region 2010-2022, are of relevance to this scheme. Specifically, in relation to roads, Objective IO5 refers to the need to upgrade and improve all National Secondary Roads – referring specifically to the N59 Galway to Ballina route serving the west of the Region: minimising environmental impact. Objective IO33 states- 'Support the provision of designated rural cycle networks especially for visitors and recreational cycling and develop a network of walkway/cycleway through the region which includes green routes...' The proposed scheme accords with the Regional Planning Guidelines, both in terms of upgrading the N59 and in providing cycle networks for visitors and recreational cycling.

9.3 **Materials Balance**

9.3.1 Section 4.9 of the EIS deals with this issue. Approximately 72,900m³ of soil will be excavated from the site, and it will not be necessary to import soil for landscaping. An estimated 395,300m³ of material will be excavated – of which 114,600m³ will constitute re-useable material (glacial till and existing road materials), 88,700m³ of which will comprise rock, and 192,000m³ will constitute spoil (mainly peat) to be disposed of. The total fill requirement will be 405,000m³ – leaving a negative earthworks balance of 201,700m³ which will have to be imported from elsewhere. It is estimated that 175,000m³ of rock and 50,000m³ of granular fill can be won from other areas of the site, such as the 5 no. material claim areas and from the 2 no. material deposit areas (30,000m³ each) – all of which will require blasting. Balances are set out at Tables 4.12 & 4.13. The 192,000m³ of spoil will be disposed of within the 2 no. Material Deposit Areas - 50,000m³ in MDA01 and 60,000m³ in MDA02. The remainder will be placed in the 5 no. Material Claim Areas – after rock/granular fill has been won from them. Together these MCAs have a capacity of an

additional 130,000m³ – in total more than enough for the 192,000m³ which will have to be disposed of.

9.3.2 Road construction materials apart from rock will have to be imported to the site – including concrete pipes for culverts and precast concrete structures for bridges and retaining walls. Road surfacing and dressing materials will have to be imported (estimated 74,800m³). Some steel will be needed for bridges and steel cable and posts for crash barriers – together with new signage.

9.4 Signage & Lighting

Section 4.11 of the EIS deals with these issues. Signage will be designed for a speed of 85kph. Reflective road markings are to be provided. There is currently no route lighting within the scheme boundary, and none is proposed.

9.5 Services

There is a relatively high density of overhead telecoms and electricity lines within the area of the scheme. Additional ducting for cables (perpendicular to the road) will be provided to allow for future development. There is no proposal to provide for ducting along the length of the road for future services, although this was argued for by one of the objectors to the CPO and road scheme. The location of known services is indicated on drg. no. 16-20753. There are watermains in the road at the Clifden end of the scheme only. Any necessary relocations are to take place within the CPO line. I would be satisfied that the precise relocation of services is something which could only be planned immediately prior to construction, as it is possible that such services could be changed in the period between which surveys were originally carried out and any commencement of construction. The applicant confirmed to the hearing that all necessary relocation of services would take place within the boundary lines of the CPO.

10.0 ENVIRONMENTAL IMPACT ASSESSMENT OF ROAD SCHEME

10.1 General Comment

10.1.1 In relation to what was then the N59 Clifden to Oughterard Road Project, the Board confirmed on 5th October 2011, that an EIS was required. The road scheme has since been split into two projects. The Maam Cross to Oughterard section of the road has received approval from the Board under separate EIA process (**ref. 07.HA0041**). No work had commenced by November 2015 on the construction of that road scheme. The current

EIS, prepared by Roscommon National Roads Design Office, on behalf of the applicant, Galway County Council, comes in four volumes. The Non-Technical Summary (Volume 1) has been translated into Irish (separate volume). Volume 2 contains the main text. It addresses in grouped format the following headings-

1. Traffic & Safety
2. Socio-Economic/Community.
3. Material Assets – Non-Agricultural Property.
4. Agriculture and Agricultural Property.
5. Air Quality and Climate.
6. Noise and Vibration.
7. Landscape and Visual.
8. Ecology.
9. Soils and Geology.
10. Surface Water.
11. Groundwater.
12. Archaeology, Architecture and Cultural Heritage.
13. Inter-relationship between Environmental Aspects and Cumulative Aspects.

10.1.2 There is no specific chapter dealing with human beings – the impact on human beings is addressed within a number of the other chapters. Alternatives are considered in Chapter 3. The final chapter contains a summary of the mitigation measures to be undertaken and the environmental commitments made within the document. Volume 3 is a separate book of A3 maps and drawings. Volume 4 contains appendices. Taken all together, the EIS is a substantial document, by any standards – Volume 2 alone running to more than 800 pages. A separate Natura Impact Statement (NIS) volume accompanies the application for approval.

10.1.3 Following a detailed request for additional information from the Board, a substantial submission of written documentation and maps was made by the applicant on 31st July 2015, which added significantly to the information already submitted, in relation to ecology and hydrology in particular. At the Hearing into this case, GCC submitted a series of Briefs of Evidence, which largely restated information already contained within the original EIS and the additional information submission of 31st July 2015. However, some further clarification in relation to the proposed development was contained within the Briefs. Briefs of Evidence were submitted to the Hearing in relation to the following subjects-

1. Planning.
2. Road safety.
3. Socio-economic factors.
4. Archaeology, Architecture and Culture.
5. Non-agricultural and Agricultural property.
6. Landscape and Visual.

7. Noise and Vibration.
8. Ecology.
9. Air quality and Climate.
10. Hydrology and Hydrogeology.
11. Engineering matters.

10.1.4 Yet further information was supplied in relation to detailed written and verbal responses at the Hearing to submissions made in relation to objections/observations submitted: from the DoAH&G, in particular – relating to ecology. GCC also made submissions to the Hearing in relation to habitat loss and new habitats formed within the CPO boundary (Document 36). Finally, GCC produced at the Hearing, a Schedule of Mitigation Measures and Environmental Commitments – compiled from the various documents submitted through the course of consideration of the application for approval (Document 37). The Board has before it a substantial amount of information upon which to base its assessment of likely significant effects/impacts and the measures envisaged to avoid, reduce and where possible remedy significant adverse effects/impacts on the environment.

10.2 Consultations

The original N59 Clifden to Oughterard Route Assessment Report was prepared in 2009. Consultations were held in relation to route constraints, and surveys and assessments undertaken. As part of the design process of the N59, public information days were held on 12th & 13th December 2011. Further public information days were held on 10th & 11th July 2013. Individual meetings were held with affected property owners on 17th, 18th & 19th July 2013. Further meetings were organised with agronomy and property specialists. Written consultations were undertaken with governmental and non-governmental organisations. It is stated that no particular difficulty was encountered in compiling information for the EIS. Meetings with affected property owners continued right up to the time of the Hearing in November 2015, in order to try to reach agreement on matters in dispute – relating largely to particular sites.

10.3 Alternatives Considered

10.3.1 Chapter 3 deals with this issue. To the north of the road line, the land is generally mountainous; whilst to the south, it is generally flat bog interspersed with lakes. The presence of European sites is a considerable constraint in this area – north and south of the existing road – which threads a path between them. The line of the road is constrained by existing tie-ins at Clifden to the west and Maam Cross to the east, and to a lesser extent by the line of the proposed Connemara Greenway. The constraints boundary largely comprises a corridor 1.25km on either side of

the existing road. Other constraints are the extensive surface water network (lakes in particular), topography, landscape character, peat and settlement patterns. Route options to the north and south of the existing road would impact significantly on European sites, would involve the loss of habitats and would result in fragmentation of remaining habitats. There is lowland Blanket bog, Oligotrophic lake and Wet heath Annex I habitats in some or all of the cSACs flanking the road. Extensive movement of peat would have a negative impact on Freshwater pearl mussel and Atlantic salmon. Online widening will encroach marginally into some European sites, but the encroachment will be minimal with regard to the existing extent of such sites. An offline road would have to thread its way through a lake-studded landscape, and would involve an excessively tortuous route which would not be able to avoid encroachment on European sites. Relocation of the route to the north of the existing line would generally be onto higher ground and would involve rock cutting and embankments, which would render the road more intrusive in this highly scenic landscape. Relocation onto lower ground around lakes would generally involve extensive work within peat (associated with the lakes) and the need for embankments to prevent flooding. The existing road is one of the most important tourist routes in the country, with several iconic views to be had on either side. The road largely provides for local access and for tourism: it is not a commuter route. Off-line construction would not benefit local access. Offline routes would result in severance of some agricultural holdings. The do-nothing option does not take account of the need for carriageway repair and improvement or the need to improve traffic safety. Off-line routes are not considered feasible for reasons set out above. The on-line upgrade is considered the most appropriate option, as the existing road threads the least obtrusive path through this area. Use of the existing road provides for 32.7ha of the overall land-take of 105.4ha. Construction costs of an on-line upgrade are considerably less than off-line options.

10.3.2 A route corridor, 400m wide approximately, was adopted. Some 80% of the chosen route is on-line. There is only one point (Derrynavglau townland) where an off-line section is more than 50m from the centreline of the existing N59 – representing only 1% of the total length of the road scheme. This is a particularly difficult location with substandard vertical and horizontal alignment. The stopping distance is 45m only, where the recommended standard for a road of this speed is 160m. Residential access points further increase the danger of the existing road at this location. A number of off-line alignments were considered at this location (3 in total) with the second being the preferred one (390m in length). It is acknowledged that this will involve agricultural severance and will necessitate the demolition of agricultural sheds. Two agricultural underpasses are proposed elsewhere on the line of the road to avoid agricultural severance.

10.3.3I would be satisfied that alternatives (including the do-nothing option) to the proposed scheme were duly considered when drawing up the EIS.

10.4 Traffic & Safety

10.4.1 Introduction

These issues are dealt with in Chapter 5 and Appendix 5 of the EIS, and the Briefs of Evidence (Documents 10 & 25) of the Hearing. The base year is given as 2013, the opening year 2018, and the design year 2033. Annual Average Daily Traffic (AADT) is highest during summer months and at weekends. Traffic volumes are highest at the PM peak – there being no AM peak to speak of. Some 8% of traffic comprises HGVs. Table 5.1 of the EIS sets out the different traffic surveys which have been carried out on this road – from January 2000 to October 2013. For 2013, the AADT on discrete sections of the road varied from a low of 1,740 to a high of 2,330. The proposal is for mainly on-line upgrade of the road, and it is not envisaged that there will be any increase in traffic volumes as a result. This assumption is reasonable in the light of the nature of the scattered road network in Connemara. Upgrading of this route will not draw traffic from other routes in Connemara.

For ease of reference, the N59 road scheme has been divided into four sections as follows–

1. Clifden to Gowlan West townland (2.8km).
2. Derrylea stretch (3.8km) has recently been upgraded, and works are completed. This stretch does not form part of the road scheme. The new Derrylea stretch is provided with a cycleway/footpath along its entire length.
3. Derrylea to Weir Bridge – just west of Recess (11.8km) – subdivided into 3A, 3B & 3C.
4. Weir Bridge to Maam Cross (14.8km) – subdivided into 4A, 4B, 4C and 4D. [4A, 4B and 4C comprise the Recess Freshwater pearl mussel catchment].

Sections 4.2.1 to 4.2.4 of the EIS give a description of each of the above stretches of proposed road, describing changes in horizontal and vertical alignment.

10.4.2 Cycleway/Footpath

A 2.5m wide cycleway/footpath will be provided along the north side of the road for the entire length of section 1 – to tie in with the cycleway/footpath already constructed within section 2 (Derrylea). A 2.25m wide cycleway/footpath will be provided along approximately 3.37km of section 3. A 2.25m wide cycleway/footpath will be provided along approximately 4.92km of section 4: of this, 0.8km will use short stretches of still extant old railway line. This overall length will form part of the already approved

Connemara Greenway route (**PL 07.JA0033**) – linking Clifden with Oughterard, and coincides with stretches where the N59 has been substantially built over the old Galway to Clifden railway line. In this way, the road scheme will deliver off-road stretches of cycleway/footpath which the Connemara Greenway scheme could not deliver. Additional short stretches of cycleway/footpath (totalling 0.89km) are proposed to provide connectivity for existing walking facilities and/or community facilities, and to integrate them with the Connemara Greenway. It should be noted that, to date, construction of the Connemara Greenway is limited to a 3.5km length at Clifden. Problems with agreement over access to private land are holding up the advancement of the project. Overall, the provision of this amount of cycleway/footpath will be a positive impact on the environment.

10.4.3 Public Transport

The road is served by Bus Éireann route 419/421 and by the City Link (Galway – Clifden) route. There are up to 10 services per day in summer. Stops are proposed at Recess (ch.242+400), R340 junction (ch.239+250), Canal Bridge (ch.237+000) and Ballynahinch (ch.232+100). The position of the stop at Recess was discussed at the Hearing. I would be satisfied that the proposed location is acceptable. The provision of formalised bus stops and bays will be a positive impact on the environment.

10.4.4 Road Safety

The existing N59 does not generally cater specifically for pedestrians/cyclists. There are a number of hazards on the road such as open drains, faded signage and poor quality surface. Some junctions are hazardous due to alignment and lack of sight visibility. The pavement width is less than 7m over 94% of the route. There are many tight bends. The opportunities for overtaking are limited. Forward stopping distance of 160m is available on only 29% of the route. In the period 2000-2011 there were 54 collisions – five of which were fatal and three of which resulted in serious injury. The proposed scheme will improve safety/efficiency in a number of ways-

- Provide better passing for HGVs and public service vehicles with a uniform carriageway width.
- Improve passing opportunities – up to 15% of the route.
- Improve sight visibility at all junctions, and provide a right-turning lane on the N59 at the junction with the R340.
- Improve horizontal and vertical alignment of the road – including improved carriageway surfacing.
- Create time savings of 2.25 minutes per journey on the full length of the route.
- Improve provision for cyclists/pedestrians – with 11.9km of cycleway/footpath to form part of, and tie in with, the Connemara Greenway.

- Improved pull-in areas for tourists.

It is estimated that the proposed improvements will reduce the number of collisions by approximately one per year over the 30 years following construction – a saving of €5.798m. Improvements in the horizontal and vertical alignment, together with improvements in safety and reduction in the number of accidents represents a positive impact on the environment.

10.4.5 Construction Phase & Traffic

The construction phase will result in works being carried out in a number of mainly consecutive stages – each stage being typically 2.6-12.0km in length and taking 16-30 months to complete. The N59 will remain open to ‘through traffic’ throughout the construction phase, although some diversions onto local roads will be required on occasion. Construction will involve significant disruption and delays to traffic – details of diversions onto local roads and traffic flow restrictions are clearly set out Appendix 5E. Some targeted pre-construction works involving relocation of services may be undertaken. Construction compound sites were not identified within the EIS – other than to state that they would not be located within environmentally-sensitive areas (cSAC, SPA, NHA or the Recess Freshwater pearl mussel catchment). The additional information submission of 31st July 2015, identified a number of possible site compound areas – mostly located within MCAs or MDAs – without giving specific dimensions. Construction traffic impacts in terms of volume and increase in AADT are set out at Table 5.4 of the EIS. The worst case scenario would result in an additional 363 HGV movements per day over a six-day working week – up to 20% increase in the AADT for particular stretches of the N59. The most significant localised impact in terms of increased volume will be on the L31511 cul de sac leading from the N59 to MDA01 in the townland of Gowlan West – involving 75 movements per day – an increase of 150% on AADT. Two new passing places are to be constructed to facilitate HGV traffic on this recently resurfaced minor road. The principal MDAs are located at either end of the scheme, which will necessitate haulage of materials a considerable distance. The desire to avoid siting MCAs or MDAs within the Recess Freshwater pearl mussel catchment, effectively excludes this 10.5km stretch of the N59. All materials for construction or disposal will have to be hauled into or out of this area – although MCA04 and MCA05 are located at either end of the Recess catchment. The entire earthworks balance for the project is stated to be available within the boundary of the site – MCAs and MDAs and cut areas for new sections. Pavement materials (estimated at 32,800m³ of granular material and 42,000m³ of bituminous materials) will be imported via one of the Regional Routes and/or the N59 itself. Materials are likely to be sourced from a number of local quarries – spreading the HGV movement over the N59 from either end and from the four Regional Routes which intersect the N59. Whilst construction traffic will clearly have a significant impact in terms of increase in daily traffic flows of HGVs

– particularly within the Recess Freshwater pearl mussel catchment – the nuisance caused will be of limited duration as construction advances from one section to another, and as different MCAs and MDAs come into/go out of operation.

10.4.6 I would be satisfied that the impact of the proposed scheme on road safety and traffic has been addressed in the documentation submitted with the application. Mitigation measures will ensure that the impact on the environment is kept to a minimum. There will be some positive impacts in terms of reduction in accidents, provision of cycleway/footpaths, parking and public transport facilities.

10.5 Material Assets

Socio Economic & Community

10.5.1 Chapter 6 of the EIS and Document 11 of the Hearing deal with socio-economic and community issues. Improved transport infrastructure will improve the local economy, and improve amenities in terms of time saved. It is acknowledged that construction impacts can be severe in terms of nuisance and congestion. Population has increased in Clifden, and Co. Galway generally, between 1996 and 2011. Temporary construction employment will be generated locally. Local suppliers (such as quarries) and accommodation/food providers will benefit. There will be no significant severance of communities – the road being a Type-3 carriageway which can readily be crossed. The road scheme will not result in any significant agricultural severance either, as up to 80% of the scheme involves on-line improvements, and the remaining 20% comprises a number of shorter stretches of off-line carriageway. The N59 is 3km at its closest to the Western Way walking route to the north. The Slí Chonamara walking route intersects the N59 at Cappagoosh townland at ch.246+800. New cycleway/footpath (1.8km) will link Slí Chonamara with Caher Bridge to the west – alongside the N59 – from where a county road links the N59 with the Western Way walking route to the northeast. The N59 provides an important link to a number of important tourist amenities in the area. It also provides direct access to outdoor activities such as hiking, pony-trekking and fishing. Community connectivity will be improved through construction of cycleway/footpath – particularly at Recess (where there is no footpath at present). The development will not have any impact on the Irish language. A full Irish Language Impact Report is included at Appendix 3 of the EIS. Road signs within the Gaeltacht areas of the N59 will be bilingual, as is the case at present.

10.5.2 The principal mitigation measures proposed for the construction phase include the following-

- Prior notification of works and temporary signage.

- Local sourcing of construction materials, where possible.
- Construction Traffic Management Plan.
- Location of site compounds outside of ecologically sensitive areas.
- Minimisation of dust.
- Minimisation of noise.
- Maintenance of access to local businesses.

10.5.3 There are no mitigation measures proposed for the operational phase of the road, outside of those amendments which have been incorporated in the overall design of the scheme as it progressed through planning stages. It was confirmed at the Hearing that two-way traffic would be maintained through Recess during the months June-August inclusive during any construction works. Ultimately, the improved road will have a positive impact on the economy and the community living along the road.

Non-Agricultural Property

10.5.4 Chapter 7 of the EIS deals with this issue – relating to residential and commercial/community property. Individual property owners have been visited and/or contacted. There are 109 non-agricultural properties affected by the scheme. Some 28 commercial/community properties are affected by the scheme. One commercial property is to be acquired in its entirety – less than 0.2ha at Lissoughter townland (just opposite the entrance to the Connemara Marble works) – an open piece of ground with some hard-core.

10.5.5 The route corridor generally includes sporadic one-off housing. The density is highest at the Clifden end. The scheme will result in the permanent acquisition of 6 no. houses (Table 7.2) as follows-

- Property 100 west (Lissoughter) – semi-detached cottage – ch.243+000 [2805a.201].
- Property 100 east (Lissoughter) – semi-detached cottage – ch.243+000 [2806a.201].
- Property 111b (Lissoughter) – derelict residence and stables – ch.244+800 [2826a.201].
- Property 115a (Caher) – derelict residence – ch.245+150 [1901a.201 & 2615b.201].
- Property 117a (Derryneen) – derelict residence – ch.246+150 [1955a.201].
- Property 141 (Bunscanniff) – detached cottage – ch.254+700 [2110g.201].

Of these six houses, only one is occupied. I note that there is one further house for demolition – not included in this list – a derelict residence known as Halfway House at ch.252+750. The last four in the list above are for demolition, as it would appear is Halfway House. It is not clear what will be the fate of the first two on the list above – as effluent treatment facilities

will be removed to allow for road widening. Some time was spent at the Hearing discussing these two cottages. Details of the issues involved are set out within the CPO assessment section of this report. On balance, I would consider that GCC has put forward a convincing case for the acquisition of all of the houses. Some 75 residential properties will have some of their curtilage removed permanently (listed at Table 7.7). A further 18 residential properties are located close to the scheme (Table 7.8). The impact of the road scheme on these 18 properties is set out Table 7.11. The principal mitigation measure is the payment of compensation for loss of property – not something of relevance to EIA. Temporary access will be maintained to all property during the construction phase. Pre-construction surveys of affected houses will be undertaken. Water supply, sewers or septic tanks affected by construction will be restored/replaced. Property boundaries will be replaced on a like-for-like basis. Table 7.10 lists the mitigation measures proposed for houses – part of the curtilage of which will be acquired compulsorily. Table 7.12 lists the mitigation measures proposed for commercial/community property – part of the curtilage of which will be acquired compulsorily.

10.5.6 Difficulties were encountered contacting 7 no. property owners. These involve 2 no. roadbed acquisitions, 3 no. vacant plot acquisitions, 1 no. acquisition from curtilage of a former schoolhouse, and 1 no. acquisition from the curtilage of a semi-completed residence which has been abandoned for some time. It was not always possible to identify the locations of water pipes, drainage pipes, and percolation areas serving houses. The improvement of sight visibility at a number of house entrances represents a positive impact on material assets.

Agricultural Property

10.5.7 Chapter 8 of the EIS deals with this issue, and with the issue of agriculture in general. Contact was made with landowners affected by the scheme – sixty-three in total. It did not prove possible to contact a further three landowners. There are significant areas of commonage along the road – in multiple ownership. Table 8.8 lists eleven commonage areas affected by the scheme. Assessment related to loss of land, type of farm enterprise, noise, vibration, dust, watercourses and drains, access and boundary treatments. The topography of the area is generally rugged marginal land, bog and forestry. The intensity of agricultural use is low to moderate. Agricultural lands are generally used for shared/mixed grazing for cattle and sheep. There are no dairy or tillage farms along the route. Some farms have an equine element. The 20% off-line sections of this route are more likely to impact on farming activity than the on-line works. Some agricultural buildings are to be acquired for the road scheme and will be demolished. Access will be restricted during construction phase,

but overall access to lands will be maintained. Areas of commonage are not fenced at present, and livestock can move back and forth across the N59 at will. Restriction will be placed on this free movement during the construction phase. At the Hearing GCC argued convincingly against the need to fence commonage lands at Ballinafad townland. There may be temporary impaired drainage during construction, pending the final reinstatement of drainage networks. During the operational phase, the principal impact will relate to land-take and severance – particularly severance from main farmyard buildings.

10.5.8 Tables 8.5 and 8.6 of the EIS indicate the impact of the road on individual farms (both where contact was made and where contact could not be made). These tables include the area of the landholding and the amount of land-take in each instance. There are major impacts for three farms and moderate impacts for a further nine. Major impacts relate to loss of farm buildings/handling facilities, severance of the holding, loss of road frontage, and area being acquired relative to area being retained.

10.5.9 During the construction phase, the principal mitigation measures to be undertaken will include the following-

- Pre-construction survey of affected agricultural buildings.
- Appointment of Liaison Officer for movement of livestock.
- Precautions to limit dust, noise and vibration.
- Maintenance of access to all landholdings during construction.
- Temporary fencing to delimit boundaries of the road – where there is no fencing at present.
- Temporary crossing points on the road.
- Diversion of drains to avoid flooding.

10.5.10 The design of the scheme was the principal means of avoiding/mitigating impacts on landowners. Mitigation measures proposed for the operational phase include-

- Provision of gates where the cycleway/footpath cuts across farmland.
- Replacement of fencing/gates with stock-proof fence/gates.
- Provision of replacement buildings/livestock handling facilities.
- Payment of monetary compensation in accordance with the relevant Arbitration Acts (not an EIA issue).
- Replacement of removed accesses.
- Provision of land drainage.
- Provision of two underpasses for agricultural access.

Mitigation measures will ensure that there are no major impacts on landholdings – with just seven moderate impacts remaining.

10.5.11 I would be satisfied that the impact of the proposed scheme on material assets has been properly assessed. Mitigation measures will ensure that

the impact on the environment is kept to a minimum. There will be some positive impacts on material assets – particularly where the road is realigned further away from houses and where new agricultural fencing and access is to be provided.

10.6 Air Quality & Climate

10.6.1 Chapter 9 of the EIS and Document 19 of the Hearing deal with these issues. Baseline air quality monitoring for nitrogen oxides (NO₂ and NO_x) was undertaken at thirteen locations (A1-A13) along the route over a three-month period (dates unspecified). The annualised results for NO₂ are presented at Table 9.7 of the EIS. The results are well below the annual threshold of 40 micrograms per m³ set down for the protection of human health in the Air Quality Standards Regulations 2011. The annualised results for NO_x are presented at Table 9.9. The results are below the annual threshold of 30 micrograms per m³ set down for the protection of human health. Monitoring for particulate matter PM₁₀ and PM_{2.5} was not carried out at this site. Values were extrapolated from a rural monitoring station in Co. Monaghan, and found to be approximately one quarter of the target value for the protection of human health. Other than road traffic, there are no major sources of pollutants along the route corridor.

10.6.2 The predicted impacts of the proposed development relate principally to dust emissions during the construction phase, which has the potential to cause nuisance. The MDAs and MCAs will be the main generators of dust. There is a house within 30m of MDA01 and another within 150m of MDA02. The house beside MDA01 would not appear to be occupied at present. Houses are located between 140m and 400m of the 5 no. MCAs. Sensitive ecosystems are located in close proximity to MCAs in particular. The separation distances of MDAs from houses and sensitive ecosystems are sufficient to ensure that there will be no significant impact from dust. Three of the MCAs (MCA03-05) are sufficiently close to sensitive ecosystems to warrant additional mitigation measures.

10.6.3 In addition, the greenhouse gas emissions caused by quarrying, haulage and transport for the construction of the scheme will amount to approximately 23,737 tonnes of CO_{2eq}. A further estimated 5,000 tonnes of CO_{2eq} would be lost through felling of coniferous plantation at MDA02. There may be carbon losses from peat disturbance, but peat will be reused at the MDAs and the MCAs to mitigate against such losses. Peatland-type habitats will be created at the two MDAs. The intention at the five MCA's is not to manage the areas for deposition of peat, but that the moisture content of the peat will remain high, which will mitigate against carbon losses to some extent. The estimated loss of carbon from the removal of peat will be 4,840 tonnes. An estimated additional 124

tonnes of CO_{2eq} will be emitted per annum if the scheme goes ahead, owing to higher speeds of traffic – an increase of 2% on existing levels. An estimated additional 1.79 tonnes of NO_x will be emitted per annum if the scheme goes ahead, owing to higher speeds of traffic – an increase of 1% on existing levels. The cumulative impact, in addition to the greenhouse gas emissions for the construction stages of the M59 Moycullen by-pass, the M59 Maam Cross to Oughterard and the N59 Derrylea road schemes, is estimated at 65,000 tonnes of CO_{2eq}. The total estimated net increase in greenhouse gas emissions associated with the operational phase of all of the above road schemes in association with this proposed scheme is 700 tonnes of CO_{2eq}.

10.6.4 The comparison of existing background NO_x levels and the likely occurrence after the road is constructed indicate a slight increase in exposure – resulting from increased traffic speeds. Some houses will see the road moved further away from them and some will have the road closer to them (particularly at off-line sections). The proposed scheme will not result in any significant increase in traffic volumes over and above existing levels. For the purposes of examining local impact (NO₂, NO_x and PM₁₀) on receptors, the road scheme was divided into 10 no. sections (Table 9.18). In no instance will exposure exceed the thresholds set down for protection of human health.

10.6.5 NO_x and PM₁₀ emissions can have impacts on sensitive ecosystems both within and without European sites (of which there are 4 no. flanking the route). Modelling carried out indicates levels of NO_x along the route are of the order of 3-7 micrograms per m³ per annum. The annual limit for protection of ecosystems is 30 micrograms per m³. Given the sensitivity of the site, a nitrogen deposition assessment was carried out for the year 2018 (Table 9.29 of the EIS). The predicted nitrogen deposition levels onto each designated ecological site as a result of the proposed N59 road development indicates levels of approximately 0.44kg(N)/ha/year. This represents approximately 9% of the critical load for raised and blanket bogs set down by the United Nations Economic Commission for Europe. Even without the proposed scheme, almost the same levels of nitrogen will be deposited on these areas, as traffic continues to travel along the existing N59. Once dust deposition rates are maintained below 350mg/m²/day, plant life will be protected – the threshold for smothering of leaves by dust being of the order of 1,000mg/m²/day.

10.6.6 Proposed mitigation and avoidance measures during the construction phase include the following-

- Regular cleaning and maintenance of site roads.
- Water spraying during dry periods to suppress dust.
- Use of wheel-washes.

In addition, the following measures will be applied to MCA03-MCA05-

- Restriction of site traffic speeds to 20kph.
- Minimisation of drop heights.
- Use of water bowsers on roads, stockpiles and material-handling systems.

10.6.7 There will be no mitigation measures required during the operational phase. The Derrylea section of the road has been completed. The cumulative impact with the Maam Cross to Oughterard section of the N59 will not be significant, as an entirely separate section of the road is in question – the linkage of the two schemes being at Maam Cross – and there will be no increase in traffic volumes.

10.6.8 The issues relating to impacts on air quality and climate have been clearly outlined in the EIS and supporting documentation. I would be satisfied that the proposed development would not have any significant impact on these elements of the environment.

10.7 Noise & Vibration

10.7.1 Chapter 10 and Appendix 6 of the EIS, and Document 17 of the Hearing, deal with these related issues. In addition, alterations/changes were made to the EIS by way of Errata (Document 29) submitted to the Hearing – Appendix 6A ‘Predicted Noise Levels’. The cumulative impacts of construction of the Derrylea section of the N59 have been considered. A baseline noise survey was undertaken in April 2010, at nine noise-sensitive locations along the route – some were ‘15-minute attended’ and others ‘24-hour unattended’ surveys. Houses within 300m of the road line were identified as being potentially impacted. Assessment of impact is on the basis of a worst-case scenario for a two-storey house (even where houses were only single-storey). The noise prediction model used a speed of 80kph and took into account the screening effect of embankments and cuttings. The base year of 2013 was used, with an opening year of 2018 and a design year of 2033. The dominant noise source in the area is the N59 itself, although agriculture and birdsong affect baseline measurements.

10.7.2 Construction noise and vibration involving quarrying of rock, cuttings, construction of embankment sections, haulage of materials, mobile generators and excavation in general are likely to cause noise and/or vibration nuisance for the one hundred and twenty five receivers located along the route. The NRA guidelines for construction noise levels for daytime (0700-1900 hours) evening (1900-2200 hours) and night-time (2200-0700 hours) are set out in Table 10.4 of the EIS for weekdays, Saturdays and Sundays/Bank Holidays as $L_{Aeq} (1 \text{ hr})$ dB. Construction phases will last between 20-50 weeks. Typical noise levels for the various stages of construction are outlined in Table 10.5. Predicted increase in

noise levels at 10m from the N59 for traffic-related construction noise are set out at Table 10.6 – varying from +1 to +8 – this latter at the cul de sac access road to MDA01 which will see a significant increase in HGV haulage to and from MDA01. Property condition surveys are to be offered to all property owners within 50m of the development – prior to commencement of any construction work, and then again when construction is completed. The impact of rock blasting/breaking/drilling at the MCAs is set out at Table 6.B.2 of Appendix 6. The proximity of nearest houses is indicated. The NRA identifies 2.5mm/second as vibration which is tolerable from piling works and 12mm/second for blasting. Residents within 200m of a blast site will be given prior notification of blasting, and sirens will sound. Where buildings are within 150m of blasting sites, pre-blasting surveys will be undertaken with the permission of the owners: post-blasting surveys will then be undertaken. Minimum distances from watercourses will be observed when carrying out blasting to ensure no damage to fish species (set out at p.228 of the EIS).

10.7.3 The potential for fly-rock will be dealt with by contractors – ensuring the danger area is clear during blasting operations.

10.7.4 Noise levels during short periods of rock extraction will result in some nuisance for nearby residents, but will be of limited duration – and will only be carried out during daytime hours.

10.7.5 Construction mitigation measures for noise, to ensure levels of 70db(A) $L_{Aeq}(1\text{ hr})$ will include the following-

- Temporary noise screens will be erected where necessary – close to noise sources such as rock breakers.
- Regular maintenance of plant and machinery.
- Piling will be limited to daytime hours.
- Noise monitoring at sensitive locations.
- Machinery fitted with exhaust silencers.
- Machinery shut down when not in use.
- Acoustic enclosure around generators/pumps required to operate outside normal working hours.

10.7.6 Operational noise and vibration will not be significantly different from that occurring at present, as there is no increase in traffic likely as a result of this scheme. Vibration from road traffic is not considered significant and has not been modelled in the EIS. Some houses will be located closer to the new road than they were previously, as approximately 20% of the road will be off-line. However, some houses will end up being further away from the new road as a result of the same off-line sections. Table 10.7 of the EIS estimates that more houses will be in a better position than in a worse position following realignment. In particular, 6 no. houses to the west of Glencoaghan Bridge, at Derrynavglau townland, will benefit.

Operational noise mitigation measures will be necessary only where noise levels exceed 60dB L_{den}. The EIS concludes that no house will be subject to this level of noise, post construction. Therefore, no noise mitigation measures were incorporated into the design of the scheme.

10.7.7 There are no other significant projects in the area which would result in a cumulative impact for noise and vibration – apart from the N59 scheme from Maam Cross to Oughterard. This linear project would not result in any in-combination impacts.

10.7.8 I would be satisfied that the potential impacts of the development in relation to noise and vibration have been clearly outlined and appropriate avoidance and mitigation measures incorporated into the design of the scheme. The proposed development will not have any significant impact on occupants of buildings along the road or on sensitive water-based habitats.

10.8 Landscape & Visual Impact

10.8.1 Chapter 11 of the EIS and Document 16 of the Hearing deal with these issues. The impact on landscape is a resource issue and relates to character, whilst the visual impact relates to views and amenity. Visual impact of cuttings and embankments will be more severe during construction phase – until re-vegetation occurs to soften the impact. The baseline landscape is one of transition between mountains to the north and extensive coastal bog to the south. The area is dotted with lakes. The road is flanked by marginal agricultural land, peatland, scrub, and forestry blocks. The general character of the landscape is open, with little by way of hedgerows. The area is sparsely populated, with dwellings scattered along the road – the only concentration of note being at Recess. The road largely winds around prominent landscape features such as lakes and hills. The majority of the route is either unfenced commonage or has post & wire fencing which is not obtrusive. The N59 is the principal access route into Connemara. The road is narrow and winding in places. There are a considerable number of informal pull-in areas along the road – testifying to the high scenic quality of the landscape it traverses – where visitors stop to admire the view and take photographs.

10.8.2 The Landscape Character Assessment for the county was carried out by Galway County Council in 2002. The road traverses two Landscape Character Areas – LCA14 ‘West Connemara’ (between Clifden and Recess) and LCA10 ‘East Connemara Mountains (between Recess and Maam Cross: then extending further eastwards towards Moycullen). In addition, the road closely borders LCA22 ‘Connemara National Park’, and LCA23 ‘Joyces Country’ both to the north of the road. Not surprisingly, the landscape value is almost uniformly ‘High’ and the sensitivity ‘Special’ or

'Unique'. The landscape value rating is almost entirely 'Outstanding' or 'High'. Clifden and its surroundings have the lowest landscape value rating within this proposed project. The most sensitive area is stated to be the stretch of road running along the north shore of Ballynahinch Lake – sandwiched between the lake and the foothills of Benlattery Mountain. The sensitive stretch extends from ch.230+300 to 236+600 and incorporates 3 no. MCAs and a deep cut section at Derrynavglau. The impact at this location is stated to be 'Moderate'. During construction, the impact on the landscape will be particularly noticeable. Impacts estimated as 'Slight-Moderate' are anticipated at ch.236+600 to 239+400 and at ch.245+300 to 247+600, due to the open nature of the countryside, sparse development and loss of scrub woodland.

10.8.3 The Development Plan identifies a number of Focal Points and Views along this route-

- No. 114 – Clifden.
- No. 87 – Ballynahinch Lake.
- No. 88 – Ballynahinch Lake.
- No. 116 – Wetland areas to the southeast of Clifden.
- No. 122 – Views of western end of Twelve Bens.

In addition to the above, there is an array of un-numbered views along the N59. Views for road users tend to be extensive – except where scrub or forestry intervenes. These Views will certainly be impacted during the construction phase. However, on completion of this largely on-line upgrade, I would be satisfied that the impact on Focal Points and Views will not be significant.

10.8.4 Off-line sections (20% of the length) can have most impact in terms of cuttings and embankments. The open nature of the landscape will render such off-line sections more noticeable. Off-line sections will not be more than 130m from the existing road, and most will be much less. The road will run substantially 'at grade' reducing the necessity for large-scale cut and fill work. In 6 no. areas, level changes will range from 1.7m to 8.3m. The largest level change occurs at ch.235+800 for a distance of 0.8km (Derrynavglau to Glencoaghan Bridge) where level changes will be up to 8.3m [Table 11.4 of EIS]. Section 11.4.3 of the EIS gives a detailed description of the proposed route and its impact on the surrounding landscape. The impact is rated as moderate adverse at worst.

10.8.5 Visual impact for residents will vary, depending on whether the road is brought further or closer as a result of works. Residences adversely impacted are marked on drawings submitted (126 in total); as is an indication of post-mitigation status. Impacts on derelict or permanently unoccupied houses was not calculated. Section 11.5 of the EIS describes the impact of the road on houses along the route. In particular, some houses will see parts of front gardens removed and also screen planting

removed – either within the house site or within the existing road line. Others will perceive the road as a more prominent impact on the landscape, even though not abutting the road line. There are no profound adverse impacts identified. Section 11.5.1 predicts the following negative impacts-

- Significant adverse impact – Properties 19, 38, 85b, 93, 101, 133, 138 [7 in total].
- Moderate adverse impact – Properties 17, 86a, 90e, 91, 99, 103 (Lissoughter Lodge, Protected Structure), 107, 108, 117b, 118, 134a, 139a, 142 [13 in total].
- Slight adverse impact – amongst which are properties 21 (eight houses in Clifden Glen), 65 (Connemara Heritage Centre), 72 (church), 74, 75, 83, 84, 104, 105, 106 (Recess NS), 110b, 112, 113, 114, 119a, 119b, 120, 125, 127, 130, 131, 132, 135, 136, 143. [Table 11.5 indicates that a total of 64 properties will suffer a slight adverse impact].
- Imperceptible impact [36 in total].
- Positive impact will occur at 6 no. properties – where the road line will be moved further away from houses.

10.8.6 The visual impact for road users along the different stretches of this road is expected to be ‘Slight adverse’, arising from the need to construct off-line sections, quarry out cut sections, construct embankments, and to widen and straighten the road overall.

10.8.7 Avoidance measures have been incorporated into the design of the route. The refinement of the road alignment was not driven solely by landscape considerations. Section 11.6 of the EIS outlines the mitigation measures proposed. These largely relate to roadside landscaping and planting. Species composition will reflect adjoining landscape. At individual properties, landscaping measures involve replacement of existing boundary vegetation. MCAs are to be re-graded with reclaimed peat and to return to open bog habitat. MDAs are to be retained in a wet state to allow for peatland regeneration.

10.8.8 Site fencing will consist of timber post and wire fencing – in order to minimise impact on the open landscape. There is no proposal to fence areas which are not already fenced.

10.8.9 The 8 no. amenity areas will be finished with gravel. There will be seating at some of the areas and information panels at others. The 7 no. informal pull-in areas will remain largely as they are – with hard-core surfacing.

10.8.10 Section 11.6.7 of the EIS outlines the mitigation measures proposed at properties that are significantly or moderately adversely affected by the road. This only relates to planting and does not contain any other

proposals such as screen embankments, fencing, walls etc. This will reduce the number of properties experiencing significant adverse impact from 7 to 2; reduce the number of properties experiencing moderate adverse impact from 13 to 4; and increase the number of properties experiencing slight adverse impact from 64 to 78 [Table 11.13]. Table 11.14 lists all properties and the impact of the road – pre-mitigation and post-mitigation. In only two instances has it not proved possible to mitigate a significantly adverse impact – for properties 38 and 133. Property 38 is located on a slightly elevated site to the south of the N59 in Gowlan West townland. The house is visible when approaching from the west. The roadside screening and a detached roadside garage for the single-storey house will be lost. A new driveway will be constructed to access the house. There will be space for shrub planting only between the house and the road. In relation to property 133, a single-storey house on the south side of the road in Shannakeela townland, there will be a loss of front garden area and associated screen planting. The house is on a level with the road, and clearly visible from the road at present. These impacts will be addressed by way of compensation as part of the CPO process – something not of relevance to EIA. Neither the owners/occupants of the two houses submitted observations to the Board in relation to the CPO or the Road Approval. I consider that the impact of the road scheme on these two houses would not constitute a significant impact on the environment.

10.8.11 The cumulative impact of the Maam Cross to Oughterard section of the N59 upgrade was considered when drawing up the EIS. There will be no significant impact on the landscape and visual amenities of the area, as the road schemes are linear (connected only at Maam Cross where the N59 intersects the R336 Leenaun to Costelloe Regional Road) and do not, therefore, impact directly on the same landscapes. The Connemara Greenway project follows the line of old Galway to Clifden railway – the route still extant in most areas, and will not, therefore, have any significant cumulative impact with the proposed road scheme.

10.9 Soils & Geology

10.9.1 Section 13 of the EIS deals with these associated issues. Site surveys were carried out in July 2010, in 2012, 2013 and 2014. Other ground investigation reports were available when compiling the EIS. A total of 74 trial pits, 78 boreholes, 88 dynamic probes, 57 peat probes, and 10 Russian sampler holes have been sunk to assess overburden and bedrock characteristics. Locations are indicated on drawings in section 10 of Volume 3 of the EIS.

10.9.2 Section 13.3 describes the existing environment. Topography is flat to gently undulating. Levels vary from a low of 13m to a high of 61m. There

are three principal bedrock formations traversed by the road – viz. Lakes Marble, Streamstown Schist, and Barnanoraun Schist formations. There is one small section (80m) of Oughterard Granite traversed by the road scheme around ch.250+900. Only 15% of boreholes encountered rock at more than 5m below ground level. Fracturing indicates that most rock is suitable for extraction by drilling rather than blasting. There are thirteen identified small quarries along the N59 which have historically been used for extraction of aggregate for either road or railway. Connemara marble, used for decorative purposes, is quarried in the area.

10.9.3 There are two sites of geological heritage indicated along the route at ch.223+400 to 223+700 (Killymongaun – fold nappes in rock) and at ch.251+400 (Bunscanniff – pegmatitic veins of quartz and cordierite with minor muscovite content within Streamstown formation). Policy NHB-5 of the County Development Plan states- “Protect, conserve and enhance important geological and geo-morphological systems in the County and seek to promote access to such sites where possible”. Objective NHB-4 states- “Protect and conserve geological and geo-morphological systems, sites and features from inappropriate development that would detract from their heritage value and interpretation and ensure that any plan or project affecting karst formations, eskers or other important geological or geo-morphological systems are adequately assessed with regard to their potential geophysical, hydrological or ecological impacts on the environment”. The Development Plan does not contain a listing of such sites. The maps submitted with the application for approval do not outline the extent of these geological sites or the potential impact of the road scheme upon them. The descriptions of the two sites refer to them as being ‘on the north side of the proposed acquisition boundary’, and that works in the area are ‘At-grade’.

10.9.4 The majority of the site is covered by a relatively thin blanket of peat deposits. Rock is exposed in places. Only 7% of boreholes/trial pits indicate peat of 3m depth or greater. The maximum depth encountered along the mainline route was 3.7m. Some peat deposits lie beneath made ground. There are peat deposits beneath parts of the existing N59. Peat of 6.1m depth was recorded at MDA01 and 4.5m depth at MDA02. There is glacial till within the site – on average up to 1m thick in places. The deepest deposit of fine-grained till extends to 18m at ch.246+160 to 246+400. Existing cuttings on the N59 reveal till and sands & gravels. There is evidence of made ground along the N59, the old railway line and in the vicinity of buildings along the route. There is an area of made ground adjacent to the road at ch.229+900 which may be associated with deposition of spoil from the Derrylea section works. Made ground is generally 1.0m thick, although a maximum depth of 5.8m made ground was identified at ch.248+240. Fuel tanks below the ground are located at Recess – on either side of the road (not all of which are in use). Low

levels of hydrocarbons were detected in soils around these tanks, which would not be considered significant. There is evidence of waste having been deposited at ch.224+330, but the material is inert (comprising tree stumps, cans and plastic between 2.2m and 4.5m depth). There are no instances of peat slides recorded along the N59. Some loose rock was identified at former cut areas of the N59.

10.9.5 Predicted impacts largely relate to moving soil and rock. There is a gross earthworks deficit of 202,000m³ for this scheme. There are numerous quarries in the area to supply this deficit. Peat and soft soils (192,000m³) will have to be removed and disposed of. This does not allow for excavation under the width of the cycleway, which is proposed to be on a 'floating road'. The impact of HGV movements to transport this spoil will be significant. Excavation of up to 11m in depth are indicated at Table 13.5. However, this greatest depth relates to predominantly glacial soils. The greatest depth of rock cutting is up to 8m between ch.235+960 and 236+190 (at the Derrynavglau off-line section). Most of the cutting within this section is substantially less than 8m. Table 13.5 refers to a further rock cut section of up to 8m, between ch.246+570 and 247+670. This 8m section is for a short stretch just to the east of Derrynreen Bridge, along a section where N59 is already in cut on what was the former bed of the railway line, and involves only the widening of the cut in a southerly direction. There will be no significant impact in terms of rock slopes – and even some improvement where rock is fractured and unstable at existing cuttings. Rock cut slopes will be designed to be stable. Stability of peat/soft soil slopes will have to be engineered for safety. Some bored or displacement piling may be necessary for foundations at bridges and flanking retaining walls.

10.9.6 Proposed mitigation and avoidance measures include the following-

- Selection of route which avoided large areas of cut and fill.
- On-line upgrade for 80% of the route, and re-utilising existing road-base, where possible.
- Cleaning of existing rock faces to avoid over-toppling. Widening of verges in the vicinity of rock faces.
- Existing road sub-base, where deemed suitable, will be re-used (estimated at approximately 18,000m³).
- To avoid impacts on ecologically sensitive areas, some 4.1km of road will see minimal upgrade and alterations [I estimate this figure to be 3.9km].
- Use of 'floating road' of geo-grid and geo-textile for cycleway/footpath will reduce amount of spoil to be excavated and exposed.
- Use of on-site MCAs will allow for potential claim of 165,000m³ of materials, whilst these areas can be used to dispose of up to

130,000m³ of unwanted spoil. This will avoid the necessity of exporting spoil off-site.

- Use of on-site MDAs will allow for potential claim of 30,000m³ from each of the two sites (60,000m³ in total), whilst the principal proposed use for deposition will accommodate up to 110,000m³ of unwanted spoil. This will avoid the necessity of exporting spoil off-site. The total area of the MCAs and MDAs is 15.34ha).
- Sealed trucks are to be used for the transportation of peat.

10.9.7 Residual impacts were identified as the need for multiple rock cuttings, movement of considerable volumes of spoil, and need to dispose of unsuitable materials off-site (such as landfill materials unearthed or existing road materials). The identification of sites within the boundary of the scheme from which materials can be won and into which unwanted materials can be deposited results in a largely neutral balance in terms of import and export of excavated materials. This will ensure that the proposed development does not have a significant impact on soils and geology of the area.

10.9.8 Based on the above, I would be satisfied that the proposed road scheme would not would not have a significant effect on the soils and geology of the area.

10.10 Surface Water (Hydrology)

10.10.1 Section 14 and Appendices 8A-8F of the EIS deal with the issue of hydrology. Document 20, submitted to the Hearing, comprised a Brief of Evidence on behalf of GCC on the associated issues of hydrology and hydrogeology.

10.10.2 Gauges for measuring flow in certain rivers and lakes along the route are in place. Annual rainfall for the site is reported at 2,100mm per annum – almost twice the national average. There is an effective run-off and recharge rate of 1,600mm – almost three times the national average. This amount of rainfall, coupled with low-permeability soils and impervious bedrock, results in the wet landscape in evidence today. Mean annual maximum flood flows for each of the proposed watercourse crossings have been estimated for ungauged catchments. A 20% increase in peak flows is included to allow for climate change. Steep hillside streams have been observed to run dry following periods of low or no rainfall. Lake out-flows are less susceptible to short-term dry periods. Design has incorporated the 1-in-100-year flood flow. Some sixty-five watercourse crossings have been identified along the route (fifty-two of which are existing crossings, and which will be retained, modified/extended or replaced). It is likely that other smaller culverts will be identified during roadworks. Crossings range from drains to rivers – the largest being the

Ballynahinch River at Canal Bridge, with an upriver drainage catchment of 111km². The following river catchments are listed with the number of crossings within each-

- Owenmore – 55.
- Screebe – 5.
- Derryehorraun – 3.
- Owenglin – 2.

Most culverts will need to be lengthened or replaced. Bridge and culvert works have already been completed in 2011 and 2012 as part of the Eirspan Programme at six locations – WC 6.0, 7.0, 12.0, 13.0, 15.0 & 15.1. No works are proposed to five existing crossings, viz. Tullyvoheen, Killymongaun, Canal, Weir and Lurgan Bridges (WC 1.0, 2.0, 8.0, 9.0 & 18.0 respectively). Thirteen of the proposed crossings are new culverts associated with the realigned road, of which eight are along the northern shore of Ballynahinch Lake. EPA monitoring of lakes in the area indicates oligotrophic or mesotrophic waters, with no eutrophic or hypertrophic waters. Water quality sampling was undertaken for the EIS at sixteen river/stream crossings and three lakes on 6th & 7th October 2010. Monthly surface water quality monitoring has been undertaken at twenty-two river/stream crossings and eight lakes (with a 23rd river added in December 2013). Sampling commenced on 15th July 2013.

10.10.3 Regional hydrology is dominated by a series of lakes and a large number of rivers and streams. All of the lakes in the area are oligotrophic, with the exception of small Derryneen Lough (5.4ha) which is mesotrophic. It should be noted that the trophic status of some lakes varies over the years of sampling – but only between oligotrophic and mesotrophic. The largest lake in the area is Derryclare Lough (222.5ha) with Ballynahinch Lake next in size at (165.3ha). Some six new culverts will be required on off-line sections of the road. Rivers/streams in the area are flashy due to the steep catchment to the north of the N59 in the Twelve Bens and Maumturk Mountains. Peat and glacial till soils/subsoils have low permeability. Rock outcrops lead to further instant run-off.

10.10.4 Flood risk potential of the road is heightened by the flashy nature of rivers and streams and the low permeability of soils/subsoils and rock. OPW floodmaps indicate 16 no. recurrent flooding locations along the N59. Preliminary flood risk assessment locations (with chainages) are listed at Table 14.13 of the EIS, for 1-in-100-year flood events. Most are bridges and culverts where flow is obstructed; others are low-lying stretches of road. Mitigation measures include provision of road drainage with intercepting open drains and regular culvert crossings (appropriately sized), raising the road above flood levels, and maintenance to clear blockages. This will involve increasing the size of some existing culverts – the minimum to be 900mm diameter.

- 10.10.5 Table 14.16 lists the sixty-five water crossings (chainages given) – setting out whether work is proposed or not and type of crossing; giving characteristics of the water body, catchment, mean annual flow, low flow, and ecological evaluation.
- 10.10.6 The surface water drainage regime along the existing N59 comprises direct discharge to lands or roadside open drains via ‘over-the-edge’ or grass margins. No specific attenuation or outfall controls exist. Such a system for the low traffic volumes on this stretch of road would normally be considered adequate. However, in view of the ecological sensitivity of the receiving waters, an upgraded system is to be provided. Appendix 4 of the EIS outlines the details of the drainage scheme. The system provides for grassed channels which will provide for a level of attenuation. These will, in turn, discharge to a system of drains and constructed linear wetlands – designed to remove pollutants. The channels will also store water in times of flood. There are thirty-two outfalls proposed (OF01-OF32) – summarised at Table 14.17 of the EIS. Of these, 22 will discharge direct to lakes via existing streams/channels or proposed channels. The table gives details as to chainage, road length drained, upstream catchment, primary receiving waters, downstream receiving waters and the Q-status of receiving waters. No road drainage improvement works are proposed in the overlay sections, where existing drainage (such as it is) will remain in place.
- 10.10.7 The N59 traverses the Recess Freshwater pearl mussel catchment between ch.243+200 and 252+400 – some 9.2km in length. Appendix 8A of the EIS is an Hydrological Impact Summary of the impact of the scheme on the catchment. The Recess River catchment outfalls to Garroman Lough – the upstream catchment being 45.4km². Included within this are the two main tributaries – the Owentooey River and the Caher River. The river upstream of Cloonoppeen Bridge is known as the Boheeshal River. The catchment includes Lough Tawnagh, Derryneen Lough, Cloonoppeen Lough and Lough Oorid. This section includes thirteen watercourse crossings and nine surface water drainage outfalls (out of a total of thirty-two proposed). Table 3 of Appendix 8A lists the outfall locations and the receiving waters. Table 2 of Appendix 8A lists the crossings within the catchment. Upgrade works have been completed at four of the thirteen crossings (WC12.0, 13.0, 15.0 & 15.1). It is estimated that 55,000m³ of peat will be removed from within the catchment and 51,000m³ of materials will be imported (there being no MCA within this catchment). The removed peat is largely contained within pockets, intercepted by rock outcrops. The line of the new road largely follows the line of the existing road, with the existing bedrock formation (poor permeability) remaining mostly intact. There are no proposed deep-cut excavations to intercept and divert groundwater flow. Replacement of peat with suitable fill material (locally-sourced non-limestone; so as not to alter pH of waters)

will not give rise to the creation of any significant drainage gradient beneath the road due to the retention of undulating bedrock beneath. Permeability tests on peat at a number of test sites demonstrated low permeability, and thus the conductivity from adjoining upstream peat to the road formation will be low, with little implication for base flow contribution in downstream sensitive rivers or lakes. MCA04 and MCA05 are located close to the catchment. The former will supply 25,100m³ of rock, and accept 18,600m³ of peat/spoil. The latter will supply 23,000m³ of rock, and accept 20,000m³ of peat/spoil. The remaining requirements for this stretch of road can be catered for at MDA02. HGV movements associated with this work will be of the order of ninety per day. None of the five replacement pipe culverts are located at confirmed mussel sites. Associated minor watercourses potentially run dry in summer. Table 3 of Document 20 lists and describes water crossings which are salmonid or where Freshwater pearl mussel is present downstream of the roadworks.

10.10.8 The MDAs and MCAs lie outside of the Recess Freshwater pearl mussel catchment. MCA04 is located adjacent to Loch na Cúige Rua, which is host to Slender naiad. MDA01 (3.93ha) is within the Derryehorraun River catchment, and MDA02 (7.22ha) is within the Screebe River catchment. Once material has been deposited within the MDAs, drains will be blocked to encourage restoration of a wet peat habitat. Sites will be bunded, with run-off drained to settlement ponds, with controlled outfalls to surface watercourses. Both are adjacent to oligotrophic lakes – Lough Muingacurry and Tonlgee Lough (neither of which are within a cSAC). MDA01 will ultimately drain to Derrywaking Lough within the Connemara Bog Complex cSAC, whilst MDA02 will ultimately drain to the Screebe River within the Connemara Bog Complex cSAC. Cut-off drains will divert normal drainage from MCAs prior to their being filled with spoil. MCAs, which are also to be used for deposition of non-engineering-grade road material will also be provided with low bund embankments, and surface water will be passed through temporary settlement ponds. Some revised section drawings for MDA01, MDA02, MCA02a, MCA02b and MCA05 were included as part of the Errata submission of GCC to the Hearing (Document 29).

10.10.9 Table 14.20 of the EIS illustrates that EPA monitoring at eleven stations in the area indicates Q5, Q4-5 and Q4 values for unpolluted waters. [I note that ecological surveys carried out in preparation for the ecology section of the EIS indicated much less favourable Q-values for waters in this area (many of them on tributaries) – some of which were Q2 and Q3: see Table 12.18]. Monthly surface water quality monitoring has been undertaken for twenty-three river/stream sites and eight lake sites – RQM01-23 and LQM01-08. The monitoring points are indicated in Table 14.21; with Table 14.22 presenting 11 no. samples for twenty-two of the rivers/streams and 6 no. for the 23rd; and 7 no. samples for the eight

lakes. Results report on temperature, pH, conductivity, total hardness, dissolved oxygen, biochemical oxygen demand, turbidity, colour, suspended solids, ammonia, nitrate, nitrite, total ammonia, phosphate, total phosphate and chlorophyll.

10.10.10 The Water Framework Directive (WFD) provides for protection, improvement and sustainable use of waters. 'Good status' is the aim for all waters by 2015. The Errata submission to the Hearing (Document 29) substituted correct Tables 14.28 & 14.29 within the EIS, relating to Water Framework Directive river status and lake status for the catchments traversed by the proposed road. The road project has been designed not to negatively impact on the WFD conservation objectives both during construction and operation and will, through improved road drainage, and the provision of a safer road, assist positively with the conservation objectives.

10.10.11 Section 14.4 of the EIS deals with predicted impacts – the majority of which relate to the construction phase. Impacts include-

- Silt/sediment (including peat) run-off caused by diversion of channels or works at watercourse crossings. Three areas of channel diversions are likely required at ch.232+650 to 233+650, ch.249+680 to 249+820 (within the Recess Freshwater pearl mussel catchment), and ch.250+740 to 250+950 (again within the Recess Freshwater pearl mussel catchment).
- Accidental spillages of hydrocarbons or liquid concrete.
- Excavation and transportation of peat and soft soil. Peat is unlikely to settle out in fast-flowing rivers, and is more likely to settle out on the beds of lakes.
- Increased run-off of contaminants from road surface.

Operational impacts are likely to result from accidental road spillages and routine road run-off. This latter will be dispersed through the extended number of outfalls (32) and will not, in any event, represent an increase over and above existing run-off from the N59.

10.10.12 Construction work at watercourse crossings include thirteen new off-line structures. Some five bridges will not be modified, and a further six have already been modified. This results in forty-one on-line upgrades. The total sixty-five crossings are indicated at Table 14.42 of the EIS, with figures broken down into the four river catchments – the Owenmore catchment being further divided into three sub-catchments (Ballynahinch Lake, Athry Lough & Loch na Cúige Rua, and Recess). Possible impacts within each catchment are then set out in the succeeding paragraphs. Table 14.44 of the EIS lists potential hydrological impacts on ecological receptors in the absence of mitigation measures – for all four of the river catchments.

10.10.13 Avoidance and mitigation of impacts are set out at section 14.5 of the EIS, and were expanded upon at the Hearing, to include the following-

- Choice of route to avoid, where possible, significant impacts on ecological areas (many of which are water-based habitats) – particularly Recess Freshwater pearl mussel catchment and European sites.
- Design and construction of water channels (as outlined in Appendix 4) to include erosion control, low-flow precautions, baffles/weirs/pools, engineered meanders, riverside planting, and perpendicular culverts beneath the road where possible (to reduce culvert/crossing length). Minimum watercourse culvert diameter to be 900mm to avoid likelihood of blockages.
- Use of cofferdams, where necessary.
- Install drainage and run-off controls in advance of commencing site works.
- Establishing vegetation as soon as possible following completion of works, to reduce run-off and sedimentation.
- Implementation of measures contained in Erosion and Sediment Control Plan (Appendix 5B). In particular, use of ‘aquadams’, double silt fencing, and silt screens (e.g. ‘Sedimat’).
- Avoidance of major channel diversions on ecologically sensitive watercourses – the exceptions being upstream of crossings WC15.0 and 16.1. Works here to be carried out in dry weather flow conditions.
- Over-pumping at crossings WC 3.0 and 12.1, notwithstanding that they are deemed to be ecologically sensitive watercourses.
- Relocation of road further away from lakes, where possible. Only two sections are realigned closer to lakes – Ballynahinch Lake (40m from shore) between ch.233+570 and 234+000; Garroman Lough (20m from shore) between ch.242+000 and 242+700.
- Existing road line maintained where N59 crosses Lough Arderry on two stretches of causeway – ch.255+260 to 255+380 and ch.255+450 to 255+580.
- Design of roadside drainage to include grassed channels discharging to linear wetlands with diffuse outfall points (32 in no.) to existing watercourses. This will ensure that there is no concentration of pollutants (accidental, or general road run-off) at a limited number of points. There will be raised edges adjacent to lakes as an added precaution to prevent direct overflow. Outfalls will be fitted with manual penstock (or similar) controls which can be closed in the event of accidental spillages. Contaminated water/soil can then be removed for disposal.
- Use of reinforced concrete retaining walls to limit the extent of the encroachment of the road into watercourses or floodplains.

- Use of pre-cast bridge elements with larger than necessary arches to facilitate the further set-back of support structures from river/stream banks.
- Use of locally-sourced non-limestone road base so as not to alter the pH of waters.
- Construction of bridge elements, where possible, above flood levels of streams/ivers.
- Omission of any significant water retention facilities due to high number of watercourses in the area.
- Limitation of increase in hard surface impermeable area – approximately 2.5ha additional.
- Location of MCAs and MDAs outside of the Recess Freshwater pearl mussel catchment.
- Design of scheme so as not to increase or decrease flow rates in watercourses – particularly within the Recess Freshwater pearl mussel catchment.
- MDAs to be fully bunded, using engineered embankments. Sedimentation ponds will be used prior to discharge to surface waters. Minor streams will be diverted away from these areas or culverted beneath them. These areas will be monitored for 7 years following construction.
- MCAs will be surrounded by low bunds to divert surrounding surface water. Temporary settlement ponds will be used prior to discharge to surface waters.
- Emergency response procedures to be put in place in the event of accidental spillages of hydrocarbons, cement, bitumen etc.
- Use of ‘Clearspan’ structures where possible for bridging watercourses.
- Carrying out works during dry periods to minimise pumping and avoid siltation.
- Site compounds to be located on dry ground away from watercourses. Foul drainage to be collected within the site and disposed of off-site.

10.10.14 I note that the EIS itself, at pp. 4 & 5 of Appendix 7C, refers to concerns by Inland Fisheries Ireland that mitigation measures were not properly implemented during the works on the Derrylea section of the N59, resulting in release of silt into Derrylea Lough. However, that was a separate development, and the Derrylea section of the N59 does not form part of the current application. It was noted at the Hearing that difficulties were encountered in putting into effect the mitigation measures for siltation at the works to put into effect the approval granted by the Board for the replacement of a small road bridge in Tawnaghmore townland, located within the Recess Freshwater Pearl mussel catchment. Notwithstanding the above, I would be satisfied that the EIS has described the baseline conditions of the area, and identified the possible impacts of the

development on hydrology. Appropriate mitigation measures have been identified which, if properly implemented, will ensure that the road scheme will not have a negative impact on this aspect of the environment.

10.11 Groundwater (Hydrogeology)

10.11.1 Section 15 and Appendices 9A-9C of the EIS deal with the issue of hydrogeology. Document 20, submitted to the Hearing, comprised a Brief of Evidence on behalf of GCC, on the associated issues of hydrology and hydrogeology.

10.11.2 It is anticipated that the greatest impact will arise from off-line sections of road. The bedrock geology of the area comprises marbles, schist and granite. There are a number of fault lines associated with the complex geology of the area. There is no evidence of major groundwater flow associated with these fault lines. The aquifer classification is Poor Bedrock which is Generally Unproductive except for Local Zones (PI). Rock outcrops are visible along the route, and are visible at all MCAs except MCA02. Bedrock is exposed at MDA01. At MDA02, rock is between 0.2m-3.0m below ground level. The hydrogeological characteristics of MDAs and MCAs are set out at Table 15.32 – through which run a number of geological fault lines, which are not considered to be of hydrogeological importance.

10.11.3 The Water Framework Directive (WFD) provides for the protection, improvement and sustainable use of waters, including rivers, lakes, coastal waters, estuaries and groundwater. ‘Good’ status must be achieved in all water bodies by 2015. There are four groundwater bodies traversed by the route viz. Clifden Castlebar, Clifden Marbles, Recess, and Recess Marbles. The status of all four is ‘Good’. Most of the route has a vulnerability rating from ‘High’ to ‘Extreme’ due to the shallowness of the soil and outcropping rock. There are some areas of ‘Low’ to ‘Moderate’ vulnerability along the route. Groundwater flow to rivers and lakes in this area is low, due to the poor permeability of the bedrock. Base flow in lakes and peatland-dominated streams is reasonably maintained by the slow, sponge-like release of rainfall recharge. Because of the low permeability of the peat, much rainfall discharges to streams and rivers. There are no known karst features in the area. Groundwater levels vary from 0-8m below ground level. The mean annual rainfall for the area is 2,100mm. The effective rainfall (minus evaporation) is 1,600mm. The EPA Groundwater Recharge Web mapping gives a low groundwater recharge rate of 100mm per annum.

10.11.4 Groundwater flow is closely connected with a number of water-dependent habitats of ecological importance – viz. Blanket bog, Rich fen and flush, Cutover bog, Eroding blanket bog, Marsh, Wet grassland, Reed

- and large sedge swamps, and Wet heath. Road works that pose greatest risk include cut sections, deep excavation, fill sections and drainage.
- 10.11.5 Sites of geological importance are set out at Table 15.10 of the EIS – and are dealt with in the Archaeological/Architectural/Cultural section of this assessment.
- 10.11.6 The proposed road will not impact on the groundwater recharge in the Recess Freshwater pearl mussel catchment, as the entire road project is underlain by a poor aquifer, and flows intercepted by the new road would be negligible. As the aquifer is poor, the likelihood of contamination is negligible.
- 10.11.7 Some 21 no. cut sections that are greater than 1.5m deep, and greater than 20m in length, have been identified along the route. Table 15.12 lists the cut sections with depth to bedrock and depth to water strike. The principal cut section (CS) is at Derrynavglau townland (CS8) the maximum depth of cut being 8.5m. At CS13 there is a maximum cut of 5.2m, and at CS21 there is a maximum cut of 4.5m. Groundwater monitoring has been undertaken over a period of two years. The water table is expected to be encountered at CS8, CS9, CS12, CS14 & CS20. The road drainage will be designed to capture the resultant flows. Some five of the cut sections will be traversed by fault lines – CS9, CS11, CS13, CS19 & CS20. There is a potential for localised groundwater flow at such fault lines. A slide is to be traversed by CS3 and the deep cut at CS8 runs parallel to a slide feature. There is potential for groundwater flow to be encountered at the weathered rock areas associated with slides. There will be a localised impact only on groundwater.
- 10.11.8 Properties in the vicinity of Clifden are supplied from the Clifden Regional Water Supply Scheme – supplied from Lough Nahillion which is upstream of the road scheme. The majority of properties along the road are supplied by gravity from streams and lakes – identified by landowner survey along the route. There are private well and spring supplies along the route. Because of the impermeability of the bedrock, it is likely that flows into wells are through weathered rock close to the surface. There are no public group water schemes in operation along the route. Some landowners combine to get water from a private group water scheme. The numbers of properties and their water supply service is indicated at Table 15.13. There are no GSI source protection areas mapped for this route.
- 10.11.9 Hydrogeological investigation was carried out at four sites in 2012 – Lissoughter, Caher A, Caher B and Shannakeela (Appendix 9C of the EIS). These sites were selected to evaluate the impact of existing road drainage features on hydrogeology and drainage of adjacent blanket peat bogs. The results showed that the effect of road drainage is dissipated

within 6-8m of the drain, and that peat water levels are stable and remain at or close to ground surface level. A more detailed Peat Drainage Study was undertaken between May 2012 and February 2014 – involving monitoring of three transects in Lissoughter townland – the most intact of the blanket peat bogs. The study concluded that the road and its adjacent drainage is exerting a definite drainage influence on the adjacent bog, as the gravel/stone base of the road acts as a drawdown influence – but is limited to within 5-8m of the road. The remedial impact recommended is that an impervious barrier be incorporated into the design of the new road to prevent drainage from adjacent bogs.

10.11.10 The predicted impacts of the scheme are as follows-

- Temporary dewatering in cut areas or construction sites – likely to be required in CS8, CS9, CS12 & CS20.
- Impact on Annex I and Annex I Priority habitats located within 30m on the road – indicated at Table 15.20 – CS1, CS2, CS5, CS6, CS7a & MCA03, CS12, CS16, CS17, CS18, CS19 & CS21.
- Minor impact on groundwater, arising from the impermeable nature of the bedrock.
- Accidental spillages of hydrocarbons would impact on groundwater.
- Contaminated run-off from the road will be treated in grassed swales and linear wetlands, and the impact will not be significant.
- Impacts on wells and springs at cut sections (Table 15.21 lists the fourteen identified in landowner surveys, and Table 15.22 indicates the potential impacts on the supplies). The impact will be negligible given the nature of the cut sections, local topography and distance from the road.
- At fill sections, porosity of material introduced could act as a drainage channel on sloping sites. Six such sites have been identified close to Annex I or Annex I Priority habitats. The undulating nature of the bedrock limits the length of such drainage paths. Table 15.27 lists the relevant fill sections and proximity of habitats.
- Tables 15.23, 15.24 and 15.26 indicate the location of Annex I habitats within 30m of the road – Wet Heath, Blanket Bog (Inactive and Active) and Cutover Bog. Table 15.25 indicates that mitigation measures will be necessary in relation to certain areas of Blanket bog.
- At MDAs and MCAs the excavation for rock will encounter fault lines, synclinal axes and slide features. Such geological features could provide ready access to groundwater (summarised in Table 15.32), but are unlikely to intercept any significant groundwater flows given the poor aquifer characteristics of the bedrock.

10.11.11 Principal mitigation and avoidance measures include the following-

- Most avoidance measures were undertaken during design and selection of the route.
- Within site compounds, fuel stores will be bunded and trucks parked on impermeable hard-standing.
- Accidental spillages of hydrocarbons will be dealt with immediately.
- There will be no on-site mixing or batching of concrete.
- Non-limestone and other comparable materials will be used for fill.
- Wells or water abstractions in direct line of the road will be decommissioned, and a replacement supply provided.
- Where Blanket bog is within 30m of the road, an hydrogeological (HDPE) barrier will be erected. This will be necessary along 10.22km, at locations indicated in Drgs. GCO94741-16-20712. The construction will include excavation of unsuitable material to a distance of 1m beyond the toe of the proposed replacement fill slope. A permanent low-permeability geo-membrane/liner will be placed on the fill side slopes and for a minimum of 1m on the exposed formation level beyond the toe of the fill slope. The top of the geo-membrane will be returned under the verge located beyond the road drainage grassed channel. The voids between the excavated and the embankment fill side slopes (lined) will be backfilled with peat. These works are to be extended beyond the zone of potential impact to ensure no preferential groundwater pathway has been formed which would lead to dewatering of a sensitive habitat. [Diagram at Figure 15.1 of the EIS].
- The potential impact on Annex I Wet heath and Blanket bog habitats within 30m of the road, where cut sections are proposed (CS12, CS16, CS18, CS19 & CS21) has been avoided as these habitats are either down-gradient, buffered by existing and old road alignments or buffered by non-sensitive habitats adjacent to the road cut sections.
- European wet heath Annex I habitat is less sensitive to hydrogeological impact from dewatering by the road formation permeable media, as they are predominantly surface saturated systems located on shallow peat deposits of generally less than 0.5m. New drains will be shallow to prevent dewatering of such habitat. Check dams will be used to keep the groundwater level high.
- Only pavement overlay will be undertaken on some stretches adjacent to Priority habitats. Within these areas existing roadside drains will be maintained, or where none exist, there will be no new drains created.
- Baseline groundwater quality in wells along the route will be established prior to commencement of roadworks.
- Dewatering of MCAs and works areas will be controlled via the Erosion and Sediment Control Plan.

- Potential residual impacts would involve dewatering of Annex I wetland habitats. Such impact is likely to be localised – as is the case with the existing road. This impact would be confined to Wet grasslands and Cutover bog – arising from mitigation measures put in place to protect Blanket bog.
- Because the underlying aquifer is a poor one, there will be no cumulative impact with other schemes. The N59 Maam Cross to Oughterard scheme will involve similar mitigation measures.

10.11.12 Having regard to the foregoing, I would be satisfied that the EIS has described the baseline conditions of the area, and identified the possible impacts of the development on groundwater (hydrogeology). Appropriate mitigation measures have been identified which, if properly implemented, will ensure that the road scheme will not have a negative impact on this aspect of the environment.

10.12 Archaeological, Architectural and Cultural Heritage

10.12.1 Section 16 and Appendices 10A-10J deal with these associated issues. Document 14, submitted by GCC to the Hearing, comprised a Brief of Evidence in relation to these issues. The study area is a corridor 400m in width. The original N59 was designed by Arthur Nimmo in the 1820s, and constructed along the line which largely exists to this day. The line of the road is shown in the first edition OS 6" maps for the area, dating from the late 1830's. Some bridge structures from the 1820's still exist (twenty-two early bridges can be identified): some fourteen of these are on the N59. There are fine examples of early bridges at Emlaghdauroe (No. 43), Canal Bridge (No. 58), Weir Bridge (No. 75) and Waterloo Bridge (No. 10) – this latter just off the N59. Most of the surviving examples were widened in the 20th century, by way of unsympathetic reinforced concrete structures. The Connemara railway reached Clifden in 1895, running partly along the line of the N59. It closed in 1935. Later the N59 was partly rerouted along the abandoned railway line. Features of heritage interest along the route are described in Appendix 10A (numbered 1-148) – not all of which are affected by the road, but which are close to it. These items are mapped in Volume 3 of the EIS – series no. 16-20790. Appendix 10A is comprehensive – describing each item in detail, with particular attention given to structures of note. The listing also indicates which structures are included on the Record of Protected Structures of GCC. A selection of photographs is included within the chapter itself, and at Appendix 10J. Some of these features have been removed or obliterated over time. There are no known pre-historic or mediaeval sites or monuments in the immediate environs of the proposed road, other than a ringfort at Killymongaun (RMP GA 035051), located some 180m from the scheme boundary.

- 10.12.2 There is a history of small-scale mining in Connemara. One lead mine was discovered during construction works on the Derrylea section of the N59. There are no identified mining sites within the road scheme. But there is potential for discovery of mine sites as construction proceeds. There is an operational marble quarry (no. 84) east of Recess, continuing a long tradition of quarrying for this material. This quarry is on the site of the former Railway Hotel in Recess. The quarry will not be impacted by the road scheme – although a realigned entrance is to be provided.
- 10.12.3 It is proposed to demolish Caher House (no. 97) on the eastern edge of the village of Recess. Part of the garden of the old post office (no. 82) in Recess will be encroached upon, resulting in the loss of the effluent treatment serving the building. This will render the building uninhabitable, and its future is not, therefore, certain – as outlined in the summary of the Hearing (part of this Inspector’s Report). The entrance avenue to Lissoughter Lodge (no. 85) is to be altered once again (it was already changed once to facilitate the construction of the railway in 1895. Materials from the brick gate pillars will be re-used, where possible. The old road bridge at Caher/Tullywee (no.96) will be widened and raised – where both faces are currently visible below parapet level. The alterations will obscure the view of the southern elevation of the bridge and its abutments – although views of this southern face of the bridge are not really available due to the straight nature of the N59 at this location and the absence of any side road or laneway. A steel structure for cyclists/pedestrians is to be attached to the south side of Weir Bridge (No. 75). It is proposed to demolish Recess Bridge (no. 81), a minor, but early road bridge – currently hidden from view behind concrete extensions to north and south. The first edition of OS maps indicates pre-famine dwellings/farm buildings at 3 no. sites. The three are to be archaeologically investigated (no.s 18, 44 & 46). Five houses will be demolished (none of which are occupied) – no.s 93, 97, 99(c), 135 and 139 – described at Appendix 10I.
- 10.12.4 There are a number of railway heritage buildings surviving the closure of the Midland Great Western railway line in 1935. The line is substantially intact along the entire route – sometimes laid beneath the current line of the N59 (particularly to the east of Recess in Derryneen, Boheeshal and Shannakeela townlands): this amounts to some 5.2km. The line represents an important industrial heritage resource. Permission has been granted to develop the line as a cycleway – the Connemara Greenway. The present scheme will also overlie 1.9km from Recess village to the east end of Garroman Lough. Here the railway line will be used to carry a cycleway/footpath. Appendix 10F sets out the impact of the road on the railway line. An old railway bridge at Gowlan West – no. 19 (RPS no. 3305) which used to carry the N59 over the railway line, before the N59 was rerouted to the south, will be renovated; and spoil

dumped into the railway cutting beneath the bridge will be removed as part of the proposed road scheme. An old railway bridge at Lissoughter – no. 87 (carrying the entrance to Lissoughter Lodge over the former railway line) will be refurbished to facilitate the creation of the new Connemara Greenway along the former railway line, as part of the proposed road scheme.

10.12.5 The scheme will impact on road bridges, railway bridges and other buildings and walls. The principal predicted impacts are as follows-

- Removal, setting back and rebuilding of part of the boundary wall of the former Recess railway station complex (no. 76).
- Severing existing brick entranceway to Lissoughter Lodge (no. 85) from the house itself.
- Early road bridge at Caher/Tullywee (no. 96) to be modified and permanent masking of the southern elevation.
- Demolition of dwelling-house/shop in Caher (no. 97) dating from late 1800's. The building has recently been gutted and lies derelict.

Moderate impacts are predicted for farmhouses, curtilage boundaries and gates (some of which are to be demolished) – no.s 40, 93, 135 and 139. Alterations to road bridges include no.s 28, 75 and 81, and will result in widening and concealing of original stone arch elevations, or demolition in the case of Recess Bridge (no. 81) – an early Alexander Nimmo road bridge, currently hidden behind concrete extensions to north and south.

10.12.6 Appendix 10C lists the Protected Structures contained within the then current Development Plan and also those included within the new Galway County Development Plan. Structures within 1km of the project are listed. A small number of the total will be directly impacted by the development – and some of these impacts will be positive – as in the case of bridge structures. The two negative impacts will be on Lissoughter Lodge (RPS 626), and the former Recess Railway Station (RPS 628). In the case of the former, the gates will be demolished, but materials will be re-used. The impact, I would consider to be minor, particularly as the entrance is not the original – it was changed when the railway was constructed in 1895. In the case of the latter, the roadside boundary wall of the former railway station is to be demolished to facilitate junction realignment. It will be reconstructed on a set-back line. I would not consider that this is a major impact. The owners/occupiers of the properties concerned have not submitted objections/observations to the Board.

10.12.7 Positive impacts include-

- Relocation of road away from old roadside stables building (no. 98) – now converted to residential use.
- Early Alexander Nimmo road bridge to be refurbished – Canal Bridge (no. 58).

- Two old railway bridges will be refurbished – bridge at Gowlan West (no. 19) and Lissoughter (no. 87) – this latter on the Connemara Greenway.
- Two early road bridges will be made redundant by the new scheme – Lettershea/Emlaghdauroe (no. 33) and Emlaghdauroe/Lettery (no. 43).
- Replacement of concrete additions to old road bridges will be more sympathetic in design – e.g. no. 115 and no. 129.
- New arched structures at bridges will be clad in stone.

10.12.8 The choice of route was one of the factors utilised in avoiding significant impact on cultural heritage items. Mitigation measures include-

- Recording (photographs and detailed written descriptions and surveys) at thirty-three locations where heritage items could be impacted. Some nineteen items will be surveyed. In a further fourteen instances, only photographs and written reports will be undertaken.
- Boundary replacement and/or screen planting at six locations where there are adverse impacts on the curtilage or setting of affected buildings – no. s 30, 76, 82, 85, 89 & 138. Additional screen planting is proposed at no. 85.
- Signage at an early road bridge and a railway bridge to draw the attention of the public to the history of the structures – no.s 19 & 58.
- Archaeological investigation of three building clusters which probably represent pre-famine dwellings – no.s 18, 44 & 46.
- Archaeological testing and monitoring at pre-construction stage – particularly in areas of deep peat.
- Surveys and studies to be made available at public libraries.
- Archaeological lecture relating to any public finds and publication of any archaeological finds.

10.12.9 Table 16.4 sets out a summary of architectural and archaeological impacts on all 148 identified structures/sites of architectural/archaeological significance within 300m of the site. I would be satisfied that the proposed development will not have a significant impact on the archaeological/architectural/cultural environment.

10.13 Ecology

10.13.1 General Comment

Chapter 12 and Appendix 7 of the EIS deal with this issue in some detail. A detailed separate Appropriate Assessment (AA) volume deals with ecology as it relates to European sites. Much of the information provided in one, is replicated in the other. A significant amount of additional information in relation to ecology was submitted to the Board on 31st July 2015, and was further supplemented by submissions made to the Hearing

both by the applicant and by DoAH&G. The Board engaged the services of a Consultant Ecologist – and the separate report (dated March 2016) is appended to this Inspector’s Report.

10.13.2 Principal Findings

The principal finding of the Consultant Ecologist were as follows-

- At least some of the areas classified by the applicant as non-Annex I Wet grassland habitat GS4_UG4 were either Wet heath or Blanket bog – both of which are Annex I habitats – and the impact this would have on European sites, which are considered of regional or national importance, may, therefore, be underestimated. This matter is more fully addressed in the Appropriate Assessment Report of the Consultant Ecologist.
- The development would have a significant negative effect on terrestrial habitats outside of European sites – of local significance.
- The cumulative impact of the development – in association with the Derrylea section of the N59, the Maam Cross to Oughterard approved section of the N59, the R336 Bearnna to Scrib via Ros a’ Mhíl road scheme, the consented Connemara 110kV Reinforcement Project, and felling of woods by Coillte were not properly taken into consideration.
- The impact of the development on bats – where there will be a loss of two bat roosts and possible increase in mortality from collision with vehicles – was identified as being of local significance.
- The development would have a significant negative effect at the local level on bird populations associated with the loss of woodland habitat.
- Information submitted on Pygmy shrew and Common lizard is not complete.

The final sections of the Report are quoted in full as follows- “Subject to the full and proper implementation of the mitigation measures put forward by the applicant, all other potentially significant negative impacts associated with the development that were identified in the EIS are capable of being avoided. The identification of significant negative residual effects does not preclude the granting of planning permission. For this development, the most serious effect is that on the Natura 2000 sites. Although the areas of these sites affected by the development is [sic] small relative to the total area designated, they are part of an internationally important network of designated sites which have a high level of legal protection. The implications of the effect of the development on these designated sites is addressed separately in an appropriate assessment report. If the legal requirements for these designated sites are met through amendments to the design then the significant negative effects identified here could be reduced to local significance. The remaining significant negative effects identified here could then be accepted (e.g. the loss of conifer woodland) or addressed by requesting

additional mitigation measures from the applicant (e.g. the provision of more substantive mitigation for bats). Ensuring compliance with the law protecting species could be achieved through appropriate planning conditions". I would note that the word "requesting" in the above could better be phrased as "requiring" (by way of condition).

10.13.3 Conclusion

Having regard to the extensive documentation submitted in relation to ecology and to the contributions of the DoAH&G and the Consultant Ecologist engaged by the Board, I would be satisfied that the EIS and subsequent written submissions from the applicant have described the baseline conditions of the area, and identified the possible impacts of the development on the ecology of the area. Appropriate mitigation measures have been identified which, if properly implemented, will ensure that the road scheme will not have a negative impact on this aspect of the environment. The loss of a small amount of Wet heath or Blanket bog habitat would not be significant in the context of the amount of similar-type habitat which exists within the immediately surrounding area (both inside and outside of European sites) – particularly when consideration is given to the proposed mitigation measures which would involve the recreation of similar-type habitat within the MDAs and MCAs, and also along the roadside margins of the scheme. The residual impacts, following on from mitigation measures to be implemented would ensure that the environmental impact arising from the loss of existing Wet heath and/or Blanket bog habitat would not be significant. I would be satisfied that appropriate mitigation measures for bats could be put in place in relation to the carrying out of surveys, immediately prior to construction of any road section, of any buildings to be demolished and trees to be felled, through obtaining the relevant Derogation Licence(s) from the DoAH&G to interfere with an Annex IV species, through implementation of any mitigation required to provide alternative roost sites or to carry out works at certain times of year.

10.14 Inter-relationship between Environmental Aspects & Cumulative Impacts

10.14.1 Section 17 of the EIS deals with this issue. Table 17.1 sets out the principal inter-relationships in a matrix. Monetary compensation will be used to mitigate certain impacts on agricultural and non-agricultural property. There is a close link between ecology, hydrology and hydrogeology. The impact of the removal of peat and its deposition within MCAs and MDAs has been highlighted in the EIS.

10.14.2 The cumulative impacts of this proposed scheme with other schemes in the area has been examined – particularly in relation to the Derrylea

section, the N59 Maam Cross to Oughterard road scheme, and the Connemara Greenway scheme.

10.14.3 Section 18 of the EIS provides a summary, in tabular form, of general and specific mitigation measures proposed in relation to aspects of the environment. This series of tables is a useful and easy reference listing of all of the principal mitigation measures proposed. A modified version of this section was presented to the Hearing (Document 37) to reflect the additional information submission of 31st July 2015, and undertakings given by way of written responses to objections/observations to the Hearing. Appendix 1 gives undertakings in relation to weather forecasting and what rainfall level triggers are to be used to control certain construction activities. Similar turbidity investigatory levels will trigger corrective actions or shut-down of construction activity in an area.

10.15 Conclusion – Environmental Impact Assessment

The EIS contains a description of the proposed road development, comprising information on the site, the proposed design and its size. The existing environment is described, and the development put in context with regard to character, significance and sensitivity of the area. The EIS describes the likely significant impacts with regard to extent, magnitude and complexity, probability of occurrence, duration, frequency and reversibility. There is an adequate description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects. The data required to identify and assess the main effects that the proposed road development is likely to have on the environment is contained within the relevant volumes and later additional information submission and written submissions to the Hearing. An outline of the main alternatives considered and an indication of the main reasons for the selection of the preferred route, taking into account environmental effects, is contained within chapter 3. I would be satisfied that the EIS broadly complies with the requirements of Section 50 of the Roads Act 1993 as amended by the European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1999. The proposed development is not likely to have significant effects on any aspect of the environment, save that of ecology, as argued in the Consultant Ecologist's Report in relation to impact on the integrity of European sites – which is dealt with under the Appropriate Assessment heading below.

11.0 APPROPRIATE ASSESSMENT

- 11.1 There are four European sites traversed by the road scheme-
- Twelve Bens/Garraun Complex cSAC (Site code 002031).
 - Maumturk Mountains cSAC (Site code 002008).
 - Connemara Bog Complex cSAC (Site code 002034).

- Connemara Bog Complex SPA (Site code 004181).

11.2 In addition, there are a further twenty-two sites within 15km of the scheme which were considered because of proximity to any part of the road scheme. These sites are listed at Appendix B of the NIS as follows-

1. Lough Corrib cSAC (Site code 000297) – 3.5km to northeast.
2. Rusheenduff Lough cSAC (Site code 001311) – 12.9km to north.
3. Tully Mountain cSAC (Site code 000330) – 12.9km to north.
4. Aghrushbeg Machair and Lake cSAC (Site code 001228) – 11.7km to northwest.
5. Omey Island Machair cSAC (Site code 001309) – 10.2km to northeast.
6. Barnahallia Lough cSAC (Site code 002118) – 8.7km to northeast.
7. Kingstown Bay cSAC (Site code 002265) – 7.1km to northeast.
8. Slyne Head Peninsula cSAC (Site code 002074) – 3.6km to southwest.
9. Sluynes Head Islands cSAC (Site code 000328) – 9.5km to southwest.
10. Dog's Bay cSAC (Site code 001257) – 10.8km to southwest.
11. Cregduff Lough cSAC (Site code 001251) – 9.4km to southwest.
12. Murvey Machair cSAC (Site code 002129) – 10.2km to south.
13. Rosroe Bog cSAC (Site code 000324) – 5.9km to south.
14. Lough Carra/Mask Complex cSAC (Site code 001774) – 10.7km to north.
15. Tully Lough SAC (Site code 002130) – 10.9km to north.
16. West Connacht Coast SAC (Site code 002130) – 6.4km to west.
17. Lough Corrib SPA (Site code 004042) – 3.5km to northeast.
18. Lough Mask SPA (Site code 004062) – 10.7km to north.
19. Slyne Head to Ardmore Point Islands SPA (Site code 004123) – 10.1km to southwest.
20. Illaunoon SPA (Site code 004221) – 7.7km to north.
21. Inishbofin, Omey Island and Turbot Island SPA (Site code 004231) – 8.9km to northwest.
22. Cruagh Island SPA (Site code 004170) – 13.5km to northwest.

11.3 These sites were excluded because of absence of connectivity with the road scheme. There are no surface water linkages with these sites and no direct or indirect effects arising, alone or in combination were identified. The four sites which were identified for inclusion in the NIS are directly impacted by the scheme – the N59 effectively forming the boundary between the two sites to the north and the two sites to the south. The four European sites affected are large in area and extend for a considerable distance to north and south of the road scheme. An examination of the maps included within the NIS indicate the wide extent of the coverage of these four European sites within this part of Connemara. It is reasonable to screen out the above 22 additional sites which lie within a 15km radius

of the proposed road scheme, as the proposed development will not have a significant direct or indirect effect, alone or in combination, on the sites – having regard to their conservation objectives. The scheme would not have any impact on the Special Protection Areas and the species of bird for which they have been designated, in terms of nesting, breeding, feeding or migration. As such, the Consultant Ecologist's Report identifies, similarly, these four sites for Stage 2 Appropriate Assessment. I would concur with this approach.

- 11.4 The NIS volume submitted with the application goes into some considerable detail in relation to the four European sites referred to above. In addition, the Board requested a significant amount of additional information from the applicant (almost entirely relating to ecology), which was responded to on 31st July 2015. Yet more information in relation to matters ecological was presented at the Hearing in November 2015. It is estimated that approximately 17.55ha of habitat within the four European sites would be lost if the road scheme was to proceed. In designing the line of the proposed upgrade, the location of adjacent European sites was one of the principal constraints – in the desire to avoid or limit the encroachment of the road into such sites. I note that the total land-take for the road is 105ha. The assessment of impact on European sites is dealt with in the report of the Consultant Ecologist engaged by the Board – entitled 'Appropriate Assessment Report – N59 Clifden to Maam Cross – for An Bord Pleanála' (March 2016).
- 11.5 The most significant conclusion relates to the classification of habitats along the route of the road. The applicant had classified certain habitats as GS4_UG4 – Wet grassland or non-Annex I Wet heath. It is the contention of the DoAH&G, and the Consultant Ecologist engaged by the Board, that some habitat has been incorrectly classified, and is in fact Annex I habitat 'Northern Atlantic wet heath with *Erica tetralix*'. Peat depth is determined to be a critical factor in distinguishing Wet heath from Blanket bog habitat – this latter an Annex I Priority habitat (if active). Data on peat depth was not presented for the approximately 250 quadrat samples undertaken along the route. The Consultant Ecologist has attempted to estimate the depth of peat at some of the quadrat sampling areas by reference to trial holes and exploratory tests undertaken by the applicant in the vicinity– but this is necessarily only an estimation. The contention of the Consultant Ecologist is that Wet heath and Blanket bog is more extensive within the land take than indicated in either the EIS or NIS.
- 11.6 The Consultant Ecologist was satisfied that the loss of habitat for Annex II species was marginal in the context of the overall size of the cSACs; and that impacts on the Annex II species could be avoided through the implementation of good construction practice. The loss of 0.12ha of the

Connemara Bog Complex SPA would not result in any effect on the populations of any of the four/five qualifying bird species, particularly as the road upgrade is largely on-line. The in-combination impact of the scheme, taken together with the already-completed Derrylea section of the N59, is considered – particularly where there has been habitat loss within the Twelve Bens/Garraun Complex cSAC and to a lesser extent the Connemara Bog Complex cSAC – resulting from the construction of the Derrylea section. The combined amount of habitat affected is calculated.

- 11.7 The mitigation measures proposed by the applicant are noted. However, concern was expressed by the Consultant Ecologist in relation to the longevity of the impermeable membrane proposed to prevent de-watering of Blanket bog habitat flanking the road: the installation of this membrane might simply delay the onset of damaging effects. I would note that Annex I Priority habitat (Blanket bog – Active) currently exists in very close proximity to the existing N59, and has in fact determined the line of the proposed upgrade in many areas. There are no impermeable membranes along these sections of the existing N59, and yet Blanket bog – Active persists. In light of the information submitted, the Consultant Ecologist was unable to conclude that there would not be an adverse effect on the integrity of the Maumturk Mountains cSAC and Connemara Bog Complex cSAC and their conservation objectives.
- 11.8 Section 9 of the Consultant Ecologist’s Report deals with the potential to compensate for loss of habitat. Whilst this issue was not addressed in any of the written submissions to the Board, it was addressed at the Hearing (Document 36, submitted by GCC), and is clearly something which the Board may wish to consider, should it decide the scheme must nevertheless be carried out for imperative reasons of over-riding public interest, including those of a social or economic nature. Section 9 of the Consultant Ecologist’s Report is quoted in full below-

Whilst, based on a strict assessment against the conservation objectives, there is likely to be an adverse effect on integrity of at least the Maumturk Mountains cSAC and the Connemara Bog Complex cSAC, and possibly also the Twelve Bens/Garraun Complex cSAC, the following factors may be relevant if the development is taken beyond this stage of the assessment.

Firstly, it is clear that the degree to which the integrity is affected is slight. As the applicant has pointed out, the overall area of land affected relative to the rest of the cSAC is a very small proportion (less than 0.02% in each case) and only a slightly higher proportion when compared to the total amount of the same habitat type estimated to be within the cSAC. This is potentially compounded by indirect effects (de-watering, etc.) and ‘in combination effects’ from other developments but the situation is broadly unchanged.

Secondly, the wet heath and blanket bog habitats are potentially re-creatable elsewhere. The applicant gives the example of N5 Charlestown Bypass which is not unique. This means that the provision of compensatory habitats is technically possible. Indeed the applicant is already proposing to create such habitats in place of conifer woodland at one of the material deposition areas. Moreover, there are areas of degraded and damaged peatlands in the locality which could potentially be restored.

Thirdly, whilst the potential to restore the habitats affected by the development has been taken into account when reaching the conclusion on site integrity, it is notable that there is no management plan for the cSACs (see Natura 2000 Standard Data Form) nor are there any stated plans to actually carry out the restoration work which would enable the conservation objectives i.e. restoration to be fulfilled.

Fourthly, it is clear that the landtake for the development includes the Annex I type 4010 wet heath from within the designated sites and that this is likely to be the principal Annex I type affected. The data gives some indication that Annex I type 7130 blanket bog may also be present within the landtake of the development but further information on peat depths would be required to confirm that this is the case. The Annex I type 7130 blanket bog is not a priority habitat if the bog is inactive, i.e. not peat forming, and is a priority habitat type if it is active i.e. peat forming¹. The presence of *Sphagnum* moss is normally used to help distinguish active from inactive bogs². Both types occur in proximity to the development and within the cSACs (see Drawings GC094741-16-20712) but it is not clear whether the latter occurs within the landtake and if it does to what extent (see for example Quadrat/Relevés 184 and 260). If active blanket bog does occur in the landtake, its extent is likely to be limited. Regardless, the mere presence of an Annex 1 priority habitat within a cSAC restricts the reasons for which consent can be given for a project which will have an adverse effect on the integrity of such a site³.

11.9 On the basis of the conclusions reached in the Consultant Ecologist's report, it is not clear that the proposed development, individually or in combination with other plans or projects, would not adversely affect the

¹ *Interpretation Manual of European Union Habitats - EUR28* states "The term "active" must be taken to mean still supporting a significant area of vegetation that is normally peat forming".

² Perin et al (2014). *Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland* states "The main peat-forming plants are *Sphagnum* mosses but *Eriophorum* spp., *Schoenus nigricans*, *Molinia caerulea* and other moss species such as *Racomitrium lanuginosum* are also reported to be peat-forming".

³ See Article 6(4) of the Habitats Directive.

integrity of European sites 002008 and 002034 (and possibly 002031), in view of the Conservation Objectives of those sites. In such circumstances the Board is precluded from granting approval, where uncertainty exists as to the extent of Annex I and Annex I Priority habitats within the land take of the road scheme.

12.0 OVERALL CONCLUSION

12.1 I would be satisfied that the CPO and the approval for this road scheme could be confirmed/approved by the Board on all grounds, save for that which solely relates to the potential to adversely affect the integrity of a number of European sites.

12.2 The Board might wish to consider the option of confirming part of the CPO and approving sections of the road scheme which would not adversely affect the integrity of European sites. Whilst there are a number of sections of the road which are outside of European sites, there are also sections within European sites where the conservation objectives would not be affected. The lengths involved are generally short and fragmentary. As referred to earlier in this report, the section of road between Clifden and Gowlan West (abutting the Derrylea section) is a discrete section of the road which could be approved. Similarly, that section of the road at Derrynavglau townland (where a bad bend is located) could be approved. It would be possible to approve the section of the road through the village of Sraith Salach (Recess). Further along, that section of the road which was relocated onto the railway line at Derryneen, Cappagoosh, Boheeshal and Shannakeela townlands could be approved. Finally, the sections of road on which only minor overlay works are to be carried out could also be approved. Clearly, there would be implications for drainage and the location of wetland treatment areas for surface water run-off, continuity of cycleways/footpaths, diversion of services and the extent of plots of land for CPO. For ease of reference, the relevant sections which the Board might consider approving (with chainages) are set out below-

- Section from Clifden to Gowlan West townland (ch.223+000 to 225+800) – 2.8km.
- Section in Derrynavglau townland (ch.235+450 to 236+300) – 0.85km.
- Section in Lissoughter townland (Sraith Salach/Recess) (ch.242+050 to 244+200) – 2.15km.
- Section in Derryneen, Cappagoosh, Boheeshal and Shannakeela townlands (ch.246+000 to 250+200) – 4.2km. [Junction JN-018 on the north side of the road would have to be excluded on the basis that it encroaches on a European site – the existing junction at this location does not so encroach].
- Sections of road where only minor resurfacing works are proposed (ch.237+100 to 237+900: ch.239+380 to 241+100: ch.241+200 to

242+000: ch.253+550 to 254+100: ch.254+800 to 254+950). This results in a total of 3.9km.

Added together – the above come to a total of 13.9km – almost half the length of the proposed 29.4km. Neither of the MDAs are located within European sites, and could be approved. I would further note that none of the 5 MCAs are located within the above sections of road. However, all but MCA03 are located outside of European sites, and so could be approved. Notwithstanding this, provision is made for winning of road construction materials from the two MDAs.

13.0 RECOMMENDATION IN RELATION TO COMPULSORY PURCHASE ORDER

I recommend that the Board does not confirm the Compulsory Purchase Order pending decision on the manner in which to proceed in relation to the potential impact of the road approval scheme on ecologically sensitive areas, as the confirmation of the CPO is necessarily dependent on the approval of the road scheme.

14.0 RECOMMENDATION IN RELATION TO SECTION 51 APPROVAL

I further recommend that the Board does not approve the scheme, for which an Environmental Impact Statement and a Natura Impact Statement have been submitted, in accordance with the requirements of the Planning and Development Acts 2000-2013, and of Section 51 of the Roads Acts 1993-2007, for the Reasons and Considerations set out below.

REASONS AND CONSIDERATIONS

The route of the proposed road scheme directly impacts on four European sites – namely: Twelve Bens/Garraun Complex candidate Special Area of Conservation (Site code 002031); Maumturk Mountains candidate Special Area of Conservation (Site code 002008); Connemara Bog Complex candidate Special Area of Conservation (Site code 002034); and Connemara Bog Complex Special Protection Area (Site code 004181).

The qualifying interests for these Special Areas of Conservation indicate habitats and species for which the sites have been selected – including, and in particular, Blanket bog (Active), an Annex I Priority habitat, and Northern Atlantic wet heath with *Erica tetralix*, an Annex I habitat. It is an objective to maintain or restore the favourable conservation status or habits and species of community interest.

Information presented within the Natura Impact Statement and subsequent submissions to the Board (both in writing and at the Oral Hearing), indicate the

presence of Annex I habitat 'Northern Atlantic Wet heath with *Erica tetralix*' [4010] and possibly, Annex I Priority habitat 'Blanket bog (active)' [7130], within lands which are to be included in the proposed road scheme and which lie within European sites.

It is considered that, in the absence of clear information in relation to the habitats which are within and adjacent to the proposed scheme, it is not possible to conclude that the road development would not result in the loss of such priority habitats, for which it is a stated conservation objective to maintain or restore the favourable conservation status of habitats and species of community interest. It is not, therefore, possible to conclude that the proposed road development, alone or in combination with other plans or projects, would not adversely affect the integrity of European sites 002008 and 002034 – and possibly 002031, in view of the site's conservation objectives.

**Michael Dillon,
Inspectorate.**

5th April 2016.