An Bord Pleanála

Inspector's Report 16.JP0044

Development	R312 road re-alignment
Location	Townlands of Muckanagh & Kilgrave in Glenisland, Castlebar, Co. Mayo
Applicant	Mayo County Council
Type of application	Section 177AE
Consultees	Heritage Council An Taisce IFI DoAHRRGA
Date of site inspection	12th May 2017
Inspector	Hugh D. Morrison

Contents

1.0 **Introduction**

1.1. Mayo County Council proposes a realignment of the R312 at Glenisland, 11km to the north west of Castlebar. This realignment would by-pass an existing section of the regional road, including a bridge over the Glenisland River, and it would itself entail the construction of a new bridge over this River. The realigned road would be safer than the existing section of road, which it would replace.

1.2. Mayo County Council has made an application for the said road realignment to the Board, under Section 177AE of the Planning and Development Act, 2000 – 2015, (hereafter referred to as the Act). The proposal is accompanied by a Natura Impact Statement (NIS) and other documentation relating to ecology and construction work methodologies.

2.0 **Proposed Development**

2.1. The proposal would comprise the following elements:

- The construction of a single carriageway 525m long road, 8m in width, with two 3.5m wide lanes and two 0.5m wide hard strips. Beyond this carriageway, on either side of it, would be 3m wide grass verges.
- The said road would be constructed on an embankment that would vary between 0.5m and 2m in height above existing ground levels.
- The installation of a pre-cast box culvert bridge, which would be 21m long, 6m wide, and 3m high.
- The junctions with the existing retained road at either end of the new road would be improved in their alignment to aid visibility.
- All ancillary works.

2.2 During the construction phase the following works would be undertaken:

- The temporary diversion of the Glenisland River by means of a channel that would loop around to the north of the site of the proposed bridge. This diversion would facilitate the installation of the pre-cast box culvert bridge and it would be reversed on completion of the same.

- Silt control measures, e.g. 4 bunded silt ponds and silt fences.
- Two top soil storage areas.
- A site office/compound.

3.0 **Further Information**

3.1 Under Item (5)(a) of Section 177AE of the Act, the Board requested the applicant to submit further information pertaining to (a) the selection of a pre-cast box culvert, as the form of construction for the proposed bridge over the Glenisland River, and (b) a Surface Water Management Plan (SWMP) for the construction and operational phases of the project.

3.2 The applicant has responded to this request by submitting a further document in which they set out the case for the selection in question and a preliminary SWMP.

3.3 In relation to the former matter, the following points are made:

- Mayo County Council has worked closely with IFI to develop a pre-cast box culvert that is designed to be 300 mm deeper than the river bed, thereby providing the opportunity for natural indigenous materials to be introduced to mimic the surrounding river bed.

- The NIS expresses a preference for a clear span bridge. While this bridge type has a minimal impact upon existing river beds, it does entail the need to cast insitu concrete abutments in river banks and thus it incurs the risk of spillages and contaminants entering water courses. By contrast, the pre-cast box culvert bridge avoids this risk.

- The pre-cast box culvert can be installed in a single day and so it reduces the period in which construction impacts upon the environment and local community occur. Given, too, the IFI's requirement that construction occur only between 1st July and 30th September, such speed commends this type of

bridge when the alternatives may face delays borne of wetter summers and associated higher river levels.

- The NIS also indicates that the proposed river diversion is not ecologically preferable. However, Mayo County Council has developed a method of undertaking such diversion that virtually eliminates the risk of any silt entering water courses. Furthermore, any fish trapped in the dammed portion of the existing river can be removed by IFI personnel.

- The portion of the Glenisland River that would be affected by the pre-cast box culvert bridge option as distinct from the clear span bridge option would be 126 sqm rather than 104 sqm, a small difference of 22 sqm. Nevertheless, the latter option can "easily be constructed and, if this is recommended, Mayo County Council will revise its Method Statement and other relevant documents to take account of this."

3.4 In relation to the latter matter, the following points are made:

Construction phase:

The two selected top soil storage areas would be sited away from the Glenisland River. Experience indicates that run-off from mounds of top soil does not tend to occur and any that does arise would be channelled into silt ponds.

- Four silt ponds would intercept surface water run-off from the road and bridge construction. Overflow from these ponds would be directed to the surrounding land.

- Limited top soil removal would occur at any one time and the sandy sub-soil would be sealed by means of Class C1 quarry rock material, which would facilitate drainage.

- The temporary river diversion would be dug "in the dry". Excavated material would be mounded and surface water run-off from the same would be

channelled to the aforementioned silt ponds. Water from the dammed section of the river would be pumped into these ponds.

- No refuelling of machinery would occur within 50m of the watercourse and no fuels or oils would be stored on-site. Concrete would only be poured in dry conditions. Immoveable machinery would be bunded and refuelled by trained personnel only.

Operational phase:

- The completed road scheme would be drained by means of ditches on either side of the embankment which carries the road. The design of the scheme would accord with TII guidelines and specifications.

- Surface water run-off into these ditches would in part drain into the underlying sandy sub-soil and in part flow to the Glenisland River.

- Discharges into the Glenisland River would be via pipes fitted with petrol interceptors. Head walls would be constructed at the entrance to these pipes (a minimum of 2m from the River) and the outfall from these pipes would be accompanied by rock armour to prevent river bank erosion.

4.0 Consultees

4.1. An Taisce

Concern is expressed that the water quality of the Newport River SAC, which includes Lough Beltra and Glenisland River, would be negatively impacted by the proposed works and hence the qualifying interest of this SAC, the Atlantic Salmon, would be negatively impacted.

Requests:

- Appropriate mitigation and monitoring to ensure that sediment is not lost and pollutants do not enter the aforementioned water bodies.

- Timing of works to avoid negatively impacting upon protected species, e.g. White-clawed Crayfish, Sea & Brook Lamprey, otter, and other freshwater fish species.
- Appropriate mitigation and monitoring to ensure that invasive species do not spread.

Attention is drawn to the Mayo County Development Plan 2014 – 2020 (CDP), which shows the site as lying within Policy Area 3 (Uplands, Moors, Heath or Bog) and to the R312's designation as a scenic route with views and prospects along it. Under this Policy Area, road projects are deemed to have a low – medium adverse impact upon the landscape character, and adverse visual impact upon scenic routes should be avoided.

4.2. **Inland Fisheries Ireland (IFI)**

Advises that the Glenisland River is a prime sea trout and salmon spawning habitat for Lough Beltra and the Newport River fisheries. EPA monitoring of this River has downgraded it from high ecological status (2010 – 2012) to good ecological status (2012 – 2015) and salmon angling at the said fisheries was restricted as recently as 2014 to catch and release, due to the failure of the spring salmon stock to reach its conservation limit. Given these pressures, the view is taken that any additional pressures should be avoided and so the proposed pre-cast box culvert bridge is opposed on the following grounds:

- Over 108 sqm of river bed would be removed and the proposed replacement river bed within the culvert would not afford the same habitat as that which exists at present, e.g. the bank profile, hydrology, and light penetration would all be adversely affected.
- While the NIS cites the IFI's "Guidelines on protection of fisheries during construction works in and adjacent to waters", the proposed mitigation measures do not reflect these Guidelines.
- The NIS itself states that the proposed culvert is not the best solution from an ecological perspective. Instead a clear span bridge would be preferable, as it would not change the river bed or banksides.

- The Glenisland River is prone to flash flooding. The culvert would introduce a constriction and so, during flood events, the velocity of flowing water may impact upon the passage of fish through the same.

If the proposed bridge is re-specified as a clear span one, then conditions are requested, which would address the following issues/topics:

- The avoidance of silt entering water bodies – silt control measures with overflow to land only.
- Preparation of Surface Water Management Plan (SWMP).
- Vehicle servicing and concrete pouring to be managed so as to avoid run-off into water courses.
- Stockpiles to be minimised and sited well away from water courses. Fuels, oils, greases, and hydraulic fuels to be sited in bunded compounds well away from water courses, too.
- Preparation of Emergency Response Plan to address spillages.
- On-site Japanese Knotweed to be contained and its spread to be prevented.
- Fish stock surveys to be undertaken in the Glenisland River before and after the proposed works.

4.3. **Department of Archaeology, Heritage, the Gaeltacht, Regional and Rural Affairs (DoAHRRGA)**

Nature Conservation:

Project outline and setting

- While the submitted plans show the footprint of the proposal and the “land acquisition line”, they do not delineate the application site *per se*.
- The submitted documents are lacking in their coverage of the geology and soils of the area and the hydrology, hydrodynamics, and flood regime of the Glenisland River.

European sites

- The site lies partly within the Newport River SAC, wherein Freshwater Pearl Mussel (FPM) and Atlantic Salmon are the qualifying interests. The conservation condition of the FPM is currently unfavourable in this site and so the conservation objective is to restore this condition.

Matters relating to this project

- The submitted NIS & EcIA state that the proposed pre-cast box culvert bridge is not the preferred structure for the Glenisland River crossing. The DoAHRRGA notes that this bridge type would be the only one that would have lasting effects on the bed, banks, and hydrodynamics of the River and it would be the only one that would necessitate a temporary diversion of this River. Accordingly, its selection is in need of robust justification.

  Furthermore, the hydrological/hydrodynamic implications of the proposed bridge type for the Glenisland River need to be assessed, too, if its selection is to be justified.

- The submitted documents refer to mitigation measures that would be brought forward under plans/statements that have either yet to be prepared or are available only in outline. They also refer to post-decision consultation/ agreement with the NPWS and/or IFI on these measures. The dearth of information available at this stage is unsatisfactory when AA is required, as is the reliance upon the DoAHRRGA to assume a regulatory role in the future.

- Full details of mitigation measures should be available as part of the application and they should be demonstrably appropriate to the site during construction and operational phases and under different conditions within these phases, e.g. the efficacy of silt control measures under low and high water conditions. The impact of these measures, too, should be assessed and systems put in place to ensure that they are all implemented in a timely manner.

- Likewise, full details of environmental and aquatic ecological monitoring should be available as part of the application.

Matters relating to the NIS

- The submitted NIS indicates that the proposal would have a range of impacts some of which would be potentially significant for the conservation objectives of the SAC.
- In view of the limited information on mitigation measures that is available, the DoAHRRGA considers that the NIS does not demonstrate the basis for its reassuring conclusions.

Appropriate Assessment (AA)

- The submitted NIS must be taken into account in any AA exercise. Whether this NIS complies with the definition of NISs under Section 177T of the Act needs to be considered. In this respect, case law has established that NISs cannot have lacunae and they must contain complete, precise, and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of a project on the European site(s) concerned. Where differing scientific views emerge, the AA exercise should demonstrate that they have been addressed and resolved.

Matters relating to other ecological effects

- Whether the otter survey is sufficient to establish that this protected species would not be impacted.
- Whether the project would facilitate sufficiently the passage of mammals, such as otter and badger.
- Whether the loss of riparian habitat and of woodland, treeline, and hedgerows has been sufficiently quantified.
- Whether the identified optimal bat corridor of the Glenisland River has been allowed for sufficiently. The absence at this stage of a landscape plan is of relevance in this respect.
- Whether sufficient details are available with respect to salmonid aquatic/ spawning/ nursery habitats in the zone of Glenisland River, which would be affected by the project, and whether sufficient consideration has been given to losses of/modifications to these habitats.

- Whether breeding birds have been considered with respect to the timing of tree felling and vegetation and ground clearance works.

Archaeological Heritage:

Possibility of previously unknown archaeology within the site and so a condition precedent requested for a detailed Archaeological Impact Assessment (AIA).

5.0 Planning History

None

6.0 Policy Context

6.1. Development Plan

Table 3 of the Mayo County Development Plan 2014 – 2020 (CDP) identifies the proposal as an “other roads” priority infrastructure project for the plan period. Policy RD-02 states “It is an objective of the Council to support improvements to the existing National Road and Regional Road network, including road schemes and by-passes outlined in Table 3, where it can be demonstrated that the development will not have significant adverse effects on the environment, the integrity of the Natura 2000 network or visual amenity.”

Map 3A shows the site as lying within Landscape Protection Policy Area 3 (Uplands, Moors, Heath or Bog). Figure 3 sets out a Development Impact – Landscape Sensitivity Impact Matrix, which identifies road projects as having a low – medium impact within this Policy Area.

Map 4 shows the R312 within the vicinity of the site as being a scenic route with scenic views to the south west and to the south east. Policy VP-01 states that “It is an objective of the Council to ensure that development does not adversely interfere with views and prospects worthy of preservation and protection as outlined on Map 4, or on the views to and from places and features of natural beauty or interest (e.g. coastline, lakeshores, protected structures, important historic sites) when viewed from the public realm.”

6.2. **Natural Heritage Designations**

The Glenisland River lies within the Newport River SAC (site code 002144), which also includes Lough Beltra. (To the east, Croaghmoyle Mountain is a NHA (site code 002383)). This SAC was selected due to the presence of the following species listed on Annex I / II of the EU Habitats Directive: [1029] Freshwater Pearl Mussel, and [1106] Atlantic Salmon. Its Conservation Objective is “To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the habitat has been selected.

7.0 **Assessment**

Under Section 177AE(6)(a) of the Act, I will assess the proposal under the following headings:

(i) Likely effects on the environment,

(ii) Likely consequences for proper planning and sustainable development, and

(iii) Likely significant effects upon a European site.

7.1. **Likely effects on the environment**

I consider that the likely effects of the proposal on the environment can be conveniently assessed under the following headings:

(i) Human beings,
(ii) Flora and fauna,
(iii) Water,
(iv) Landscape and visual, and
(v) Architectural heritage and archaeology.

(i) Human beings

7.1.1.1 Within the vicinity of the site, there are a number of dwelling houses that are sited along the line of the existing R312. During the construction phase of the proposal, the residents of these dwelling houses would be affected by a range of temporary impacts, such as noise, vibrations, fumes, and dust.

- Noise and vibrations would be mitigated by means of best practice methodologies for the minimisation of these impacts, which would be set out in a Construction Management Plan (CMP). Likewise, this Plan would state the days and hours of construction operations.

- Fumes would be mitigated by the proper maintenance of vehicles and machinery.

- Dust would be mitigated by means of best practice methodologies for the minimisation of this impact, which would be set out in a CMP.

7.1.1.2 During the operational phase of the proposal, the completed by-pass would follow an alignment that does not pass existing dwelling houses. The existing section of the R312, which would thus be by-passed, would be re-used for local access only and so the dwelling houses along this section would enjoy reduced short range exposure to traffic and its associated environmental/amenity impacts. With respect to traffic on the new by-pass, the Local Authority expresses confidence that the design goal of 60 dB L_{den} at these and other nearby dwelling houses would be capable of being met without recourse to special noise reduction measures.

7.1.1.3 I conclude the proposal would, subject to the stated mitigation measures at the construction stage, have no significant effects upon human beings.

(ii) Flora and fauna

7.1.2.1 The Local Authority has submitted an Ecological Impact Assessment (EcIA). I will interact with this Assessment and the submissions of consultees in my consideration of flora and fauna below.

7.1.2.2 Figure 4 of the EcIA presents a Habitat Map of the site within its context. This Map shows the line of the proposed new road passing over improved agricultural grassland for the greater portion of its length. At its southern extremity, this road would pass through a roadside hedgerow and over wet grassland. As it progresses in a northerly direction it would pass through field boundaries that are denoted by an earth bank and a stone wall. The Glenisland River is categorised as an eroding/ upland river at the point where it is proposed to cross it. Trees line either side of this River. The invasive species, Japanese Knotweed, was identified as forming part of the understorey of some of these trees. Finally, the road would pass through a roadside treeline at its northern extremity.

7.1.2.3 The EcIA evaluates the habitats that would be affected by the proposed new road, which would include the construction of a new bridge across the Glenisland River. This River forms part of the Newport River SAC, within which the qualifying interests are Freshwater Pearl Mussel (FPM) and the Atlantic Salmon. This Assessment thus categorises the Glenisland River as being of international importance. It categorises the treelines as being of local importance (higher value) and the other remaining habitats are categorised as being of local importance (lower value).

7.1.2.4 During the construction phase, the EcIA states that the impact of the proposal upon the SAC would be moderate with respect to terrestrial habitats and substantial with respect to fluvial and lacustrine (shoreline) habitats. During the operational phase, the EcIA comments only on surface water arrangements for the proposal. While it is

silent on the permanent loss of riverbank and accompanying trees and the permanent loss of existing river bed in favour of a simulated river bed, which would be incorporated in the proposed pre-cast box culvert form of bridge construction, these impacts are acknowledged above under the construction phase. I will consider further these construction/operational impacts under the third heading of my assessment.

7.1.2.5 The EcIA advises that the above cited invasive species should be eradicated and that measures should be taken to ensure that it and other invasive species are not spread during the construction phase.

7.1.2.6 The DoAHRRGA questions whether the proposal has quantified sufficiently the loss of riparian habitat and that of treelines and hedgerows. Insofar as the riparian habitat, which includes trees, forms part of the SAC, I consider that this lack of precision as to the full extent of the envisaged intervention/loss is of significance.

7.1.2.7 The EcIA identifies a number of species of fauna that are either present or potentially present within the site and these are listed under the following headings:

- Non-volant (non-flying) mammals (e.g. otter, pine marten, Irish stoat, hare, fallow deer, fox, and rabbit),
- Bats (e.g. Soprano Pipistrelle and Daubenton's Bat),
- Birds (various species, none of which are red list ones),
- Fish (Atlantic Salmon and lamprey),
- Reptiles and amphibians (n/a),
- Aquatic macroinvertebrates (FPM and various other species), and
- Terrestrial invertebrates (no rare/protected species observed).

7.1.2.8 Surveys undertaken as an input to the EcIA did not record the presence of FPM in the Glenisland River, as distinct from the Newport River. Atlantic Salmon do

however use this River and, as they are one of the two qualifying interests referred to above, the EcAI evaluates them as being of international importance. The other species referred to above are evaluated as being either of local importance (low value) or local importance (high value).

7.1.2.9 The DoAHRRGA questions the adequacy of the survey work undertaken with respect to otters and the Atlantic Salmon. As the former is listed in Annex II of the EU Habitats Directive and the latter is one of two qualifying interests referred to above, any inadequacy in the survey work of these species is of significance.

7.1.2.10 The DoAHRRGA also questions whether the design of the culvert form of the proposed bridge would facilitate the passage of mammals and whether, in the absence of details of the proposed landscaping scheme, the optimal bat corridor represented by the Glenisland River would be sufficiently allowed for. Again, insofar as these concerns would affect protected species, they are of significance.

7.1.2.11 Both An Taisce and the DoAHRRGA draw attention to the need to ensure that the timing of any construction phase is consistent with the needs of fauna. The Local Authority has indicated both its awareness and acceptance of these constraints.

7.1.2.12 I conclude that the proposal would have significant effects upon the habitat and one of the two qualifying interests of the Newport SAC, which encompasses the Glenisland River, the Atlantic Salmon. These effects will be considered further under the third heading of my assessment. Insofar as the submitted EcIA provides insufficient information/mitigation measures on other protected species, e.g. otters and bats, the proposal would potentially have significant effects upon these species, too.

(iii) Water

7.1.3.1 During the construction phase, the Local Authority proposes to temporarily divert the Glenisland River to facilitate installation of the proposed pre-cast box culvert bridge. The Authority has submitted a Method Statement (MS), which outlines how this diversion would be carried out and the precautions that would be undertaken to minimise the risk of pollutants entering the river.

7.1.3.2 Following a request for further information from the Board, the Authority has outlined its rationale for the selection of a pre-cast box culvert type of bridge, partly on the basis that it would not entail the need to cast insitu concrete abutments in the riverbanks, thereby negating the risk of spillages.

7.1.3.3 The IFI and DoAHRRGA draw attention to this selected type of bridge. The former consultee expresses concern that, as the Glenisland River is prone to flash flooding, the culvert would introduce a constriction and so, during such floods, the velocity of water would increase with possible adverse implications for the passage of Atlantic Salmon upstream. The latter consultee expresses concern that the selection in question has not been self-evidently undertaken in the light of information with respect to the hydrology/hydrodynamics of the Glenisland River and so the implications of this selection for these aspects of this River have not been explicitly traced out.

7.1.3.4 Following the same request for further information, the Authority also submitted a Surface Water Management Plan (SWMP), which outlines the mitigation measures that would be undertaken during the construction and operational phases to minimise the risk of pollutants entering the river.

7.1.3.5 With respect to the former, good construction practice would be followed in relation to the siting of mounds of excavated material and the refuelling of vehicles and

machinery. Surface water run-off from these mounds would be directed to silt ponds, the overflow from which would discharge to the land rather than the river. Bunds would be employed in conjunction with immoveable machinery. Additionally, the IFI requests that an Emergency Response Plan be prepared to address the eventuality of a spillage. The DoAHRRGA advises that the SWMP should be elaborated upon to demonstrate that it would be robust during periods of high rainfall and raised levels within the river.

7.1.3.6 With respect to the latter, the completed road would be served by ditches on either side of it. Surface water run-off within these ditches would drain to the watercourse via pipes fitted with petrol interceptors. The point of discharge from these pipes would be accompanied by rock armour to protect against river bank erosion.

7.1.3.7 I conclude that the Local Authority has submitted insufficient information to enable the impact of the proposed box culvert bridge upon the hydrology/ hydrodynamics of the Glenisland River to be established. Thus, a potential significant effect could arise in this respect. I conclude, too, that the proposed mitigation measures for the construction and operational phases would minimise the risk of pollutants entering this watercourse.

(iv) Landscape and visual

7.1.4.1 Map 3A of the CDP shows the site as lying within Landscape Protection Policy Area 3 (Uplands, Moors, Heath or Bog). Figure 3 sets out a Development Impact – Landscape Sensitivity Impact Matrix, which identifies road projects as having a low – medium impact within this Policy Area.

7.1.4.2 The submitted plans indicate that the topography of the site is of open gently undulating form, across which the Glenisland River passes within an incised cutting that flattens out towards the north where it flows into Lough Beltra. The proposed new road would be constructed on an embankment that would itself be subject to a

gentle downwards gradient in a northerly direction. This embankment would vary in height from being a little over the existing ground level to being over 2m above this level. Its sides would be planted with grass seed.

7.1.4.3 The proposed new road and bridge would entail the introduction of a man-made form into the landscape. The presence of the road would be eased once planting to the sides of the embankment becomes established. The presence of the bridge within its riverside setting would be less susceptible to designed-in mitigation.

7.1.4.4 Map 4 of the CDP shows the R312 within the vicinity of the site as being a scenic route with scenic views to the south west and to the south east. Policy VP-01 states that “It is an objective of the Council to ensure that development does not adversely interfere with views and prospects worthy of preservation and protection as outlined on Map 4, or on the views to and from places and features of natural beauty or interest (e.g. coastline, lakeshores, protected structures, important historic sites) when viewed from the public realm.”

7.1.4.5 The Local Authority has not submitted any Visual Impact Assessment (VIA) of the proposal. Thus, there are no photomontages or other visual aids to hand to assist in any assessment of its visual impact. As there is a formal viewing point to the north of the site, on the eastern side of the mouth to the Glenisland River, this omission is, potentially, of significance. During my site visit, I attended this viewing point and, while the majority of the views would be over Lough Beltra to the north, there are views to the south, which encompass the River within its setting. The proposed new bridge would cross this River over 200m upstream. Its visibility, and that of the new road on either side, would be affected by the meandering form of the River and the accompanying retained bankside tree cover. Thus, natural mitigation would be available.

7.1.4.6 I conclude that the proposal would not have significant effects upon the landscape and visual amenity of the area.

(v) Architectural heritage and archaeology

7.1.5.1 The Local Authority's EIA Screening Report advises that there are no national monuments or protected structures either on the site or within the vicinity of this site. Likewise, there is no known archaeological remains within the site or its vicinity. Nevertheless, this Report advises that, prior to the commencement of any construction phase, archaeological testing be undertaken. The DoAHRRGA advises that an Archaeological Impact Assessment (AIA) should be prepared, too.

7.1.5.2 I conclude that the proposal would not have significant effects upon the architectural heritage and known archaeology of the area.

7.2. Likely consequences for proper planning and sustainable development

7.2.1 The proposal would by-pass an existing section of the R312, including a bridge that crosses over the Glenisland River, which is inherently hazardous, due to its variable horizontal and vertical alignment that limits forward visibility. By contrast, the new section of road would be of straight horizontal alignment with a very slight downward gradient in a northerly direction over its full length. It would thus enjoy good forward visibility and so it would improve road safety.

7.2.2 Under Table 3 of the CDP, the current proposal to improve the R312 is identified as an "other roads" priority infrastructure project for the plan period, i.e. 2014 – 2020. Policy RD-02 states that this proposal is an objective of the Plan, provided it can be demonstrated that "it will not have significant adverse effects on the environment, the integrity of the Natura 2000 network or visual amenity." Thus, the CDP supports this

proposal in principle. These effects are discussed under the other two headings to my assessment.

7.2.3 I conclude that the proposal would, in principle, accord with the CDP and it would improve road safety on the R312.

7.3. Likely significant effects upon a European site

Preliminaries

7.3.1 The proposal would entail a new bridge crossing of the Glenisland River, which lies within the Newport River SAC (site code 002144). Between these two Rivers lies Lough Beltra, which also lies within this SAC. The two qualifying interests for the SAC are the Freshwater Pearl Mussel (FPM) and the Atlantic Salmon.

7.3.2 The Local Authority has submitted a Natura Impact Statement (NIS). In the Introduction to this Statement the preceding Stage 1 Screening Exercise is referred to. At this earlier Stage, the Planning Authority concluded that progression to Stage 2 Appropriate Assessment was necessary, due to a lack of detail with respect to water quality and the range of potential impacts on Atlantic Salmon (migration issues, habitat loss, and pollution) and subsequent potential adverse effects on the sensitive aquatic interests of the Newport River SAC.

7.3.3 The aforementioned Introduction also refers to the type of bridge that the Local Authority has selected, i.e. one of pre-cast box culvert form. The consulting ecologist expresses the view that the selection of this type of bridge is “not considered to be the best solution from an ecological perspective”, as, due to its status, the Glenisland River should be left insitu and not disturbed during the construction phase. Instead, a clear span bridge would be preferable, as it would facilitate the realisation of these objectives. Furthermore, if the supporting structure for such a bridge were to be sited at least 5m from the River, then its banks would be capable of being retained, too.

7.3.4 The DoAHRRGA echoes the ecologist's concern in this respect. Thus, the type of bridge selected would be the only one that would have lasting effects upon the river bed, the river's banks, and the river's hydrodynamics. Additionally, it would be the only one that would necessitate a temporary diversion of the river. Consequently, the selection is in need of a robust justification.

7.3.5 The IFI also echoes the ecologist's concern. The proposed crossing would be at a diagonal and the culvert supporting the bridge would be rectangular in shape. Consequently, the footprint of the structure would be greater than with a clear span bridge, i.e. 126 sqm compared to 104 sqm. The pre-existing habitat of the river bed and river banks comprised under this footprint would be lost and the replacement simulated river bed would not be comparable to the one that pertains at present. Thus, for example, the lighting of this river bed would be radically reduced and the hydrology of the river passing through the culvert would be altered. The accompanying river banks would be permanently lost. While the relevant IFI Guidelines do refer to culverts, the proposed one would fail to adhere to the advice contained therein, e.g. the bottom of the proposed culvert would be placed 300 mm below the existing river bed, whereas 500 mm is normally required. Like the DoAHRRGA, the IFI expresses a preference for a clear span bridge.

7.3.6 In the light of the consulting ecologist's concern, the Board requested that the Local Authority set out, under further information, an ecological explanation for the type of bridge selected. The Local Authority's response combines ecological and practical construction considerations as follows:

- A simulated river bed of natural indigenous materials would be provided over the base of the culvert to a depth of 300 mm,

- Methodologies for the temporary diversion would virtually eliminate the risk of silt entering the watercourse and any fish trapped in the dammed section of the river would be removed by IFI personnel,

- The proposed pre-cast box culvert bridge, as opposed to a clear span bridge, would negate the risk of poured concrete being spilt into the watercourse.

- The installation of this bridge would take only a single day, whereas alternatives would take a good deal longer. Given the limited window of opportunity for any construction phase, i.e. between 1st July and 30th September, and the incidence of wetter summers and higher river levels, this is an important consideration.

Notwithstanding the foregoing justification, the Local Authority has intimated that, if the Board requires that a clear span bridge be constructed, then the current proposal can be revised accordingly, including the supporting documentation. Nevertheless, the proposal remains to be assessed as it was originally submitted.

Introduction

7.3.7 Turning to the Stage 2 Appropriate Assessment that I will now undertake. In doing so I will draw upon the Planning Authority's NIS, the consultee responses that have been received by the Board, and my site visit.

7.3.8 The relevant test is whether the project will adversely affect the integrity of the European Site(s), either individually or in combination with other plans and projects, in view of the site's conservation objectives.

(i) Identify potentially relevant European sites

7.3.9 The site includes that part of the Glenisland River that would be comprised in a new bridge crossing. This River forms part of the Newport River SAC (site code 002144). It lies upstream of Lough Beltra and the Newport River itself, which all form parts of this SAC. Given the overlap between the site and the SAC, there would be a clear source/pathway/receptor route between them.

7.3.10 There are other Natura 2000 sites within 15 km of the site. These sites are as follows:

- River Moy SAC (site code 002298),
- Lough Conn and Lough Cullin SPA (site code 004228),
- Owenduff/Nephin Complex SPA (site code 004098),
- Bellacorrick Bog Complex SAC (site code 001922), and
- Clew Bay Complex SAC (site code 001482).

In the case of the first four of these five Natura 2000 sites, I am not aware of any source/pathway/receptor route between these sites and the subject site, and, in the case of the two SPAs, I am not aware that the bird species that constitute their qualifying interests would be significantly affected by the proposal for the subject site. In the case of the fifth Natura 2000 site, the Newport River flows into Clew Bay and so there would be a source/pathway/receptor route between this site and the subject site. However, as the considerable water bodies of Lough Beltra and Newport River lie between Glenisland River and Clew Bay, I consider that any siltation that could arise from the proposal would be sufficiently diluted by these water bodies so as to not have any likely significant effects on the integrity of Clew Bay Complex SAC, either individually or in combination with other plans and projects, in view of the site's conservation objectives. I, therefore, consider that each of these five Natura 2000 sites can be screened out.

(ii) Identify the relevant Conservation Objective

7.3.10 The Conservation Objective of the Newport River SAC is "To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected, i.e. the FPM and the Atlantic Salmon.

7.3.11 The NIS advises that a FPM survey of the initial portion of the Glenisland River was undertaken in late May 2016, i.e. between the mouth of this River and c. 50m upstream of the existing R312 Bridge. This survey included the point on the River where the proposed bridge would be constructed. It revealed no evidence of FPMs. By contrast, a further survey of the Newport River found such evidence, i.e. downstream of the Glenisland River, albeit that Lough Beltra lies between these two Rivers. The NIS does not indicate if historically there is any record of FPMs in the Glenisland River.

7.3.12 The NIS reports on the incidence of salmon fry in the Glenisland River. In 2014, assessments of numbers indicated that the threshold of 17 salmon fry per 5 minutes was not being met and so restrictions on angling were introduced. Since then this threshold has been met. However, the IFI advises of its continuing concern over these numbers.

7.3.13 The NIS reports on water quality in the Glenisland River. Thus, EPA sampling below the existing R312 bridge indicated that in 2014 and 2016 water quality was Q4 or of good status. The Final River Basin Management Plan for the Western River Basin District in Ireland (2009-2015) shows this River as being of good status, too, and it is identified in Map 4.9 as being the subject of an overall water surface objective to restore its status by 2015. The IFI advises that the EPA's results represent a deterioration in water quality as equivalent sampling in 2010 and 2012 returned high status results. Concern is thus expressed.

7.3.14 The NIS discusses the habitat requirements of the FPM and the Atlantic Salmon. In either case the young of both species need silt free conditions to thrive. Consequently, if the proposal were to result in the introduction of suspended solids into the Glenisland River, then this would potentially have a significant effect on the need, under the relevant conservation objective, to maintain or restore the conservation condition of these species.

(iii) Identify potential likely and significant effects of the proposal alone

7.3.15 The NIS makes the following impact predictions:

Direct impacts during the construction phase:

- Deleterious materials on water quality: moderate negative,
  - And consequently on FPMs: n/a as Lough Beltra would act as a buffer.
  - And consequently on Atlantic Salmon: moderate negative.

- Introduction of non-native invasive species: moderate negative,
  - And consequently on Atlantic Salmon: negative.

- Installation of culvert with simulated river bed: slight negative,
  - And consequently on Atlantic Salmon: imperceptible negative.

- Loss of existing habitat from within SAC: imperceptible negative.

Direct impacts during the operational phase:

- Hydrocarbons entering the river: moderate negative (at most).

Indirect impacts during the construction phase:

- Pollutants entering the river and affecting FPMs and Atlantic Salmon: significant.

Indirect impacts during the operational phase:

- No further ones anticipated.

(iv) Identify potential likely and significant effects of the proposal in combination

Cumulative impacts:

- In combination with commercial forestry tree felling and drainage/fertiliser applications on water quality: significant,
- And consequently on Atlantic Salmon: significant.

7.3.16 Table A4.3 of Appendix 4 to the NIS states that the threshold for a significant effect occurs with moderate impacts, which are ones wherein “A change in the ecology of the affected site which has noticeable ecological consequences outside the development boundary. These consequences are considered to significantly affect species or habitats of high conservation importance and to potentially affect the overall viability of those species or habitats in the wider area.”

7.3.17 I would comment on the aforementioned impact predictions as follows:

- The third and fourth direct impacts during the construction phase would continue into the operational phase, i.e. the culvert would continue to replace the existing river bed. In the absence of information concerning the effect of the culvert on the hydrology/hydrodynamics of the river, especially during flash floods, the implications of this structure for the passage of Atlantic Salmon upstream have not been traced out. The loss of existing river bed and river bank habitat would also have implications for this species. The NIS calculates that this loss would be infinitesimal when set within the context of the river systems comprised in the Newport River SAC. However, such quantification fails to acknowledge that, as a river within which spawning occurs, the Glenisland River is of relatively greater sensitivity/importance to the Atlantic Salmon. I thus am unpersuaded that the third and fourth direct impacts during the construction phase would only have an imperceptible negative impact upon this species and I am concerned over the omission of these impacts from the operational phase.

- The question of cumulative impact is approached on a different basis by the IFI, which draws attention to the existing pressures on the Glenisland River, which stem from low numbers of fish and poorer water quality. It contends that the additional pressure arising from a loss of existing habitat in favour of a simulated one should therefore be avoided. I consider that this analysis draws attention to the challenging baseline for the proposal and on this basis contends that the stated additional pressure would be unacceptable.

7.3.18 I conclude that the following potential likely significant effects would arise from the proposal alone on the Newport River SAC solely within the context of its conservation objectives in light of best scientific knowledge in the field:

Direct and indirect impacts during the construction phase:

- Deleterious materials/pollutants on water quality.
- Introduction of non-native invasive species.

Insufficient information available to establish that the installation of culvert with simulated river bed and loss of pre-existing habitat would not have significant effects.

Direct and indirect impacts during the operational phase:

- Hydrocarbons entering the river.

Insufficient information available to establish that the installation of culvert with simulated river bed and loss of pre-existing habitat would not have significant effects.

7.3.20 I conclude that the following potential likely significant effects would arise from the proposal in combination with other plans or projects on the Newport River SAC solely within the context of its conservation objectives in light of best scientific knowledge in the field:

- Baseline of poorer water quality and reduced fish numbers, on-going threat to water quality posed by forestry and farming practices, and the installation of culvert with simulated river bed and loss of existing habitat.

(v) Mitigation

7.3.21 The NIS sets out mitigation measures which would be designed-in to the proposal and which would be undertaken during the construction and operational phases.

- The majority of these measures would address the need to safeguard water quality. Thus,
  - The surface water drainage system would be designed to reproduce greenfield run-off rates.

- During the construction phase, a SWMP would address the need to avoid siltation, erosion, and accidental pollution events, a CWMP would address the need to store waste materials away from the river and to utilise geotextile fencing to establish buffer zones, the timing of instream works would avoid the salmonid spawning season and the early life stages of salmonid fish, and an ecologist would monitor water quality in the Glenisland River, upstream and downstream of the works, and in the Newport River.
- During the operational phase, the petrol interceptors would be maintained in accordance with the manufacturer's instructions, and on-going monitoring of water quality downstream of the discharge points from these interceptors would be undertaken.

- Other measures would address non-native invasive species, Thus,
- During the construction phase, precautions would be taken with respect to vehicles visiting the site and existing Japanese Knotweed on/near the site would be eradicated.

7.3.22 The NIS undertakes to explore the feasibility of introducing light opes/wells into the culvert to assist fish in their passage through this culvert and to inspect the simulated river bed within the culvert 1 year on from the construction phase in order to check on its stability and to look for signs of scouring/erosion. Remedial works would be undertaken as needed, e.g. where the base of the culvert is visible and/or where erosion is occurring, additional boulders would be introduced.

(vi) Examine and evaluate the potential effects on the Conservation Objective taking into account mitigation

7.3.23 In the light of the proposed mitigation measures, which would address the potential likely significant effects upon water quality and the introduction of non-native invasive species, I consider that these effects would be capable of being allayed sufficiently so as to be no longer significant.

7.3.24 The NIS's acknowledgement that the simulated river bed may be in need of remedial works raises further questions as to the appropriateness of this approach and its longer term durability.

Conclusion

7.3.25 I conclude that the identified potential likely significant effects of the proposal upon water quality and the introduction of non-native invasive species would be capable of being mitigated so as to be no longer significant. I conclude, too, that the Local Authority has submitted insufficient information with respect to the proposed culvert with a simulated river bed and the associated loss of existing habitat to enable me to establish that these works would not adversely affect the integrity of the Newport River SAC, either individually or in combination with other plans or projects, in view of the site's conservation objective.

7.4 EIA

7.4.1 The Local Authority has submitted an EIA Screening Report. Given this submission, I will review below whether or not the current proposal needs to be the subject of EIA.

7.4.2 In considering the likely effects of the proposal upon the environment, the question arises as to whether or not this proposal should be the subject of a mandatory EIA. Under Section 50(a) of the Roads Act, 1993 (as amended), and Article 8 of the Roads Regulations, 1994, an EIS must be prepared if the proposal would entail the construction of a motorway, a busway, a service area, the construction or realignment/widening of a four or more lane road, which is either 8 km long or more in a rural area or 500m long or more in an urban area, or the construction of a bridge/tunnel, which would be more than 100m long. The current proposal would not come within any of these categories and so a mandatory EIA is not required.

7.4.3 Consideration is herein therefore given as to whether or not the proposal should be the subject of a sub-threshold EIS, having regard to the provisions of Section 50(1)(b) and (d) of The Roads Act, 1993 (as amended) and noting that the Local Authority has not sought a formal determination of such under Section 50(1)(c) of this Act, on the basis of the conclusion of no significant effects on the environment arising. Under Article 27 of the European Communities (Environmental Impact Assessment) Regulations 1989 and Schedule 7 of the Planning and Development Regulations, 2001 – 2015, the relevant test in this respect is whether or not a proposal would be likely to have significant effects on the environment. Criteria are set out to enable this test to be run. The Local Authority's EIA Screening Report engages with these criteria and concludes that, subject to the mitigation measures proposed in the EcIA and the NIS, the proposal would not be likely to have significant effects on the environment.

7.4.4 The Local Authority's conclusion alludes to the fact that it considers that a NIS is necessary and so it has submitted one as part of the current application. In making a distinction between EIA and NIS, the Authority is reflecting the advice set out in Paragraph 5.25 of the Department's "EIA: Guidance for Consenting Authorities on Sub-threshold Development", which states the following:

> *It is clear that the term "significant effects" has a more global meaning under the EIA Directive than under the Habitats Directive. As a consequence, where an assessment is considered necessary under the latter, it does not automatically mean that an EIA is the necessary form of assessment. In determining if an EIA is necessary in the context of sub-threshold development, all of the other criteria listed in the Appendix must be considered alongside the significance of the effects on an SAC or SPA.*

In the light of this paragraph, I consider that, where a NIS addresses the impacts upon any relevant SACs and SPAs and all other environmental impacts screen out as not being significant effects, then no EIS/EIA is needed.

7.4.5 In the light of the Local Authority's EIA Screening Report and my assessment of the current proposal, under Section 177AE(6)(a) of the Act, I consider that the significant effects that would arise from this proposal would be confined to those affecting the Glenisland River, which forms part of the Newport River SAC. Accordingly, the Local Authority's reliance on the submitted NIS to address these effects is appropriate and the need for an EIS/EIA does not arise.

8.0 **Conclusion and Recommendation**

On the basis of the information provided with the application, including the Natura Impact Statement, and in light of the assessment carried out above, I am not satisfied that the proposal, either individually or in combination with other plans and projects, would not adversely affect the integrity of the European Site No. 002144, in view of the site's Conservation Objective. In such circumstances, the Board is precluded from granting approval.

Notwithstanding the submission of insufficient information, *prima facie*, if a clear span bridge were to be proposed, then such a bridge would be unlikely to adversely affect the integrity of the SAC, as it would allow the river bed and accompanying river banks to be retained insitu.

If the Board is minded to refuse the current proposal, then the Local Authority invites it to request further information, by means of which a clear span bridge would be proposed, along with revisions to accompanying documentation.

I have considered this request. However, I consider that, as it would entail a substantial change to the current proposal, it should properly be the subject of a new application.

I, therefore, recommend that the current proposal be refused.

9.0 **Reasons and Considerations**

The Board agreed with the screening assessment and conclusion carried out by the inspector's report that the Newport River SAC (Site Code 002144) is the European site for which there is a likelihood of significant effects.

The Board considered the Natura Impact Statement and all other relevant submissions and carried out an appropriate assessment of the implications of the proposal for the Newport River SAC (Site Code 002144) in view of the Site's Conservation Objective to maintain or restore the favourable conservation condition of the Freshwater Pearl Mussel and the Atlantic Salmon.

In completing the assessment, the Board considered, in particular, the

(i) Likely direct and indirect impacts arising from the proposal both individually or in combination with other plans or projects, specifically upon water quality and river habitat,

(ii) Mitigation measures which are included as part of the current proposal,

(iii) Conservation Objective for this European Site, and

(iv) View of the Department of Archaeology, Heritage, the Gaeltacht, Regional and Rural Affairs.

In completing the AA, the Board accepted and adopted the Appropriate Assessment carried out in the inspector's report in respect of the potential effects of the proposal on the aforementioned European Site, having regard to the site's Conservation Objectives.

Thus, the Board is not satisfied that the Local Authority has demonstrated that the proposal would not adversely affect the integrity of the European Site in view of the site's Conservation Objective, as this proposal would entail a type of bridge which would necessitate the loss of existing river bed and accompanying river banks and that in its place a pre-cast culvert would be installed, which would be incapable of replicating the habitat thus removed and which would alter the hydrology/ hydrodynamics of the river passing through it. The consequences for the qualifying interests of the European Site, particularly the Atlantic Salmon, have not been sufficiently addressed. Furthermore, as the water quality of the Glenisland River, a spawning river, has deteriorated and fish numbers have been low in recent years, additional pressures upon this species may have a disproportional impact upon it.

In overall conclusion, the Board is not satisfied that the proposal would not adversely affect the integrity of the European Site in view of the site's Conservation Objective.

Hugh D. Morrison
Planning Inspector

9th June 2017