



An
Bord
Pleanála

Inspector's Report ABP-302267-18

Development	R312 Road Re-alignment.
Location	Muckanagh and Kilgarve, Glenisland, Castlebar, Co.Mayo.
Planning Authority	Mayo County Council
Planning Authority Reg. Ref.	
Applicant(s)	Mayo County Council
Type of Application	Strategic Infrastructure Development under S.177AE(4)(b)
Observer(s)	None
Date of Site Inspection	27/11/18
Inspector	John Desmond

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1.0 Site Location and Description

- 1.1. The application relates to a site located in the rural countryside in mid County Mayo, c.9km northwest of Castlebar, within the townlands of Muckanagh (south and east of Glenisland River) and Kilgarve (north and east of Glenisland River). This linear site extends to 0.525km in length and has a stated area of 3.55ha (the land acquisition area) and extends from north to south between (and encompassing part of) the existing R312, as part of a proposed realignment of a section of that regional road.
- 1.2. The majority of the site comprises greenfield lands, traversing 4no. agricultural fields and the Glenisland River which bisects the application site, flowing from southeast to northwest and entering Beltra Lough about 280m downstream, forming part of the Newport River catchment.
- 1.3. The surrounding area is characterised by mountains, hills and lakes, with enclosed agricultural grazing lands at lower elevations and rough commonage at higher levels, interspersed with broadleaf woodlands, plantation forestry, scrub and hedgerows.

2.0 Proposed Development

2.1. Summary of nature and extent of development

This is an application for approval under 177AE of the Act of 2000, as amended, concerning the Appropriate Assessment of certain development carried out by or on behalf of local authorities.

It is proposed to realign an existing section (c.623m in length) of the R312 regional road (which extends from the R311 Castlebar to Westport road in the south, to the N59 Ballina to Crossmolina national secondary road to the north), to replace the existing route which is of unfavourable horizontal and vertical alignment. The proposed development entails the construction of new length of carriageway of 0.525km stated length, details of the which are as follow:

- Single carriageway road of 8.0m width, comprising 2no. 3.5m lanes and 2no. 0.5m hard-shoulders and 2no. 3.0m wide grass verges;
- An embankment varying in height from 0.5m to 2m above ground level;
- Single-span bridge structure, with in-situ concrete wing / abutment walls (13m X 6.5m), totalling 30m in length and 17m cross-section inclusive across

abutments, 13m width road and 3m deep (from soffit of precast beams to top of the concrete bases), with the abutments constructed in the dry on the existing river bank;

- Installation of safety barriers, signage and road-lining;
- Northern end of existing replaced section of R312 to be closed, with southern end realigned to accommodate local access only;
- Permanent timber post and rail fence to be erected at field level, with white thorn hedge planted on roadside of fence.

**2.1.1. Summary of amendments to nature and extent - FURTHER INFORMATION
16/04/19**

- The proposed bridge span is indicated as 19m in the revised plans (an increase from 17m)
- revised foundation design for the proposed abutments / wing walls (piled supported in lieu of excavated) supporting the clear-span structure
- revised surface water drainage proposals (comprising largely use of grassed surface water channels in the verges / swales in lieu of interceptor ditched / piped drains)
- reduction from 4no. to 2no. SW discharge points, one each either side of the water course, with surface water drained via a petrol interceptor (sized according to PPG3 guidelines)
- revised design proposals for the 2no. drainage discharge points which differ either side of the river, with rock armour supported pipe discharge to the south (in lieu of a concrete headwall) and a graded interceptor ditch (to accommodate very low velocity flow) to the northern bank
- omission of rock armour scour protection element (as was proposed to replace river bank) beneath bridge
- no works are proposed outside the redline boundary at the northern end of the scheme, with only tie in works within the existing carriageway, with change in level ranging from 124mm to 0mm

2.2. Summary of road construction works – initial submission

- Site preparation works, silt ponds and riverbank fencing;
- Erection of temporary stock-proof fence 2m outside line of permanent fence;
- Setting out of road footprint and stripping back of topsoil by track excavator and storage of stripped soil onsite;
- Provision of hardstand to site compound located off site off the R312 within southeast corner of the application site;
- Removal of unsuitable material, to suitable sub-grade material, for disposal to nearest approved landfill;
- Laying of starter layer of quarry stone from approved supplier, with subsequent layers to a depth of fill of stone varying as necessary to create 0.5m to 2.0m road embankment, placed by excavators and rolled in layers by vibrating rollers;
- No works to be carried out, or machinery or materials storage, within 2.5m exclusion zone maintained between works area and the Glenisland River.;
- Verges and embankment to be top-soiled (with stored topsoil) and grass seeded once carriageway level achieved;
- Final layers of carriageway will be macadam, with road surface dressed with bitumen and chip;

2.2.1. Summary of amendments to road construction - FURTHER INFORMATON 16/04/19

- Bullet point 1 of the NIS amended to include reference to the erection of silt fencing erected 10m from river bank (where space allows), checked by ecologist / ecological clerk of works prior to commencement of development;
- Bullet point 1 of NIS amended to include reference to silt ponds to be located within temporary land acquisition boundary as shown in plan drawings 5642/16/03a in Appendix A of the SWMP;
- Bullet point 8 of NIS amended to include reference to quarry stone and all proposed fill which will complement the underlying geology of the study area (i.e. parent materials comprising sandstone, mudstone and siltstone);

- Bullet point 10 of NIS amended to include reference to total quantity of Class C1 fill material at 10,900m³;

2.3. Summary of bridge construction works

- Preparation for site works including silt ponds and silt fencing installed along river bank, with river bank exclusion zone and related signage erected;
- Construction of 13m X 6.5m abutment / wing wall bases at a distance of at least 2.5m from the south of the river and 5.5m from north of the river, with a clear-span of 17m over the 8.5m wider river;
- Foundation type to be determined by ground investigations - Excavate down to formation level for abutment / wing walls, at maximum 1m below the river bed, assuming a high-strength sub-grade with excavated material removed off site; in the case of poor-strength sub-grade, pile design will be utilised to avoid foundations deeper than 1m below the river bed, with two pile design options considered – precast piles or bored (and poured) piles – to transfer bridge load to bedrock;
- Seepage to excavated areas to be pumped to 4 silt ponds, allowed to settle and overflow will further filter through ground back into the river;
- 150mm deep lean mix concrete binding to be placed at bottom of excavation to provide clean working surface for wing wall bases;
- Reinforcing steel to be fixed in place and foundations shuttered for the 500mm deep concrete bases, with concrete poured to the required level;
- Once the bases are complete, wing and abutment walls will be shuttered, reinforced steel placed in position and 40N concrete poured to correct level for 500mm thick walls, to be waterproofed on internal surfaces once cured;
- Abutment / wing walls will be backfilled in layers up to road level and then 16no. precast beams and two edge beams will be lifted into position to span the river creating a seal to the bridge deck from the river below;
- An infill concrete slab on the deck of the bridge will tie the structure together and prepares the surface for a road finish;

- A safety parapet is fixed to the precast edge beams and bridge deck is waterproofed and prepared for the layers of macadam to complete the road surface;
- Surface water drainage will be at field level at the foot of the embankment, with an open drainage ditch parallel to carriageway on both sides, with 4no. headwalls constructed 10m from the river and surface water piped through 4no. petrol interceptors before draining directly to the river.

2.3.1. Summary of amendments to bridge construction works - FURTHER INFORMATION 16/04/19

- Bullet point 1 of the NIS amended to include reference to the erection of silt fencing erected 10m from river bank (where space allows), checked by ecologist / ecological clerk of works prior to commencement of development
- Bullet point 4 NIS amended to refer to 19m rather than 17m single span bridge;
- Bullet point 5 & 6 NIS amended to include reference to proposal to provide piled foundation to eliminate need for large excavations on both sides of the river, and details of same, including proposal to pump any potential (although not expected) seepage from the river into the proposed silt ponds as per SWMP;
- Bullet point 7 NIS amended to refer to piled foundations proposal and to the details of the proposed use of concrete in the piles through use of controlled sealed units and pumping of concrete at a slow, controlled rate to ensure compaction within the pile structure;
- Bullet point 8 NIS amended to refer to use of piled foundations and to clarify that pile cap will occur at ground level.
- Bullet point 9 NIS amended to refer to proposed use of piled foundations;
- Bullet point 11 NIS amended to refer to the proposed revised design for surface water drainage details for the scheme;

2.4. Supporting documents

- Cover letter

- Prescribed bodies notified, and copies of notification letter issued
- EIA Screening Determination concluding that the proposed scheme does not require EIA
- AA Screening Determination concluding that the proposed scheme should proceed to Appropriate Assessment Stage 2 to consider whether the proposed development, alone or in combination with other projects or plans, will have adverse effects on the integrity of the Newport River and Clew Bay SAC
- Memo from Iain Douglas, Senior Planner, Mayo County Council, opining that the proposed development is consistent with Mayo County Development Plan 2014-2020 and in particular its Infrastructure Strategy Policy RD-02 and table 3 of the Plan which identifies the *R312 Castlebar – Bellacorrick Road at Glenisland* as a priority infrastructure project for the Plan period.
- S.177AE Planning Report prepared by RPS. Includes as appendices, also prepared by RPS:
 - Appendix A Natura Impact Statement (with Stage 1 Screening Report appended thereto)
 - Appendix B Mayo County Development Plan Provisions
 - Appendix C Ecological Impact Assessment
- Surface Water Management Plan – detailing principal avoidance (s.1.6) and control measures (s.1.7), earthworks (s.2 – s.2.2 excavation, s.2.3 transportation and s.2.4 stockpiles), waterbodies (s.3.2 waterbodies crossings), concrete works (s.4), construction compounds (s.5 – s.5.2 location), monitoring and evaluation (s.6 – s.6.2.1 monitoring and audit including pre-construction and construction monitoring, s.6.2.2 contractor’s role, s.6.3 ecologist’s role), emergency procedures (s.7 – s.7.2 resources, s.7.3 spill response)
- Flood Risk Assessment
- Justification Report
- Method Statement

2.4.1. **Amended supporting documents - FURTHER INFORMATION 16/04/19**

- Appendix A - Revised drawings
- Appendix B - Revised NIS (Addendum)
- Appendix C - Updated Surface Water Management Plan (with Appendix A Drawings, and Appendix B Turbidity Investigatory Levels) – s.3.2 is amended taking account of reduced area works to river bank and provision of rock armour; s.6.2 is amended with pre-construction monitoring reduced from weekly monitoring for 6 months to weekly monitoring for 2 months prior to commencement
- Appendix D - Time Schedule for Proposed Project – From July 2019 through to October 2020
- Appendix E - Landowner Agreements for Temporary Land Acquisition (Alfred Geraghty; Michael Barrett)

3.0 **Consultees**

3.1. **Department of Heritage, Culture and the Gaeltacht (Development Applications Unit)**

Observations on the initial submission

The **NPWS** of the Department was consulted on the current proposal in March 2018 and attended a meeting with the Council and RPS consultants on 12/04/18. Many of the issues that follow, raised in respect of the previous application to the Board, were raised and discussed at the meeting.

European sites

- Proposed development located within and adjacent to European site, Newport River SAC (site code 002144).
- The river and its margins, including narrow strips of alluvial / riparian woodland, are within the SAC at this location.

- The SAC has been selected for the conservation of Annex II species, Salmon (*Salmo salar*) and Freshwater Pearl Mussel (*Margarita margaritifera*), as the qualifying interests of the site.
- Generic conservation objectives apply to this European site.
- The conservation condition of the Freshwater Pearl Mussel is unfavourable in this SAC at present, meaning the conservation objective is 'to restore' the favourable conservation condition of the species.
- Both Salmon and Freshwater Pearl Mussel could be affected by the proposed development at site preparation, construction and operation stages.
- No other European site could be at risk of significant effects arising from the proposed development, alone or in combination with other plans and projects.

Matters relating to the project

There are uncertainties and/or incomplete information regarding the following:

- The full extent of the overall proposed development, including temporary elements, with no defined 'application area' or complete scheme drawings provided.
- The full extent of the lands covered by the current application, which will define or delimit areas where any integral elements of the works and development may occur.
- Details of water protection measures.
- Extent and nature of riverbank works, including, e.g. for installation of drainage outfalls and continuous turbidity monitors (SWMP section 6.2.1) in the SAC.
- Need for scour and erosion protection measures at/under the bridge, due to risk arising from permanent shading of riverbank and associated alteration of vegetation, including loss of trees and shrubs which stabilise and strengthen the banks. The removal and loss of riparian vegetation (during operation) are considered (sections 5.2.4 and 5.4.2 of Appendix A), but not specifically in context of permanent shading effects.

- The volumes, nature and likely source(s) of fill to form the embankment, which should match the geology and avoid limestone material in order to avoid impacts on hydrochemistry.
- The extent of water quality monitoring carried out upstream and downstream of the proposed development to establish current baseline and to form basis for monitoring.
- Possible cumulative or in combination effects, noting in particular the recent development of marina nearby.

Matters relating to the appropriate assessment

- In carrying out appropriate assessment, the NIS, among other things, must be taken into account.
- To reach complete, precise and definitive findings and conclusions, the full extent of all relevant aspects of the proposed development, including construction stage works, must be known.
- There are gaps in the assessment of likely short-term and long-term effects of the proposed development on Glenisland River and its banks, being habitat of Salmon and Freshwater Pearl Mussel.
- The gaps in assessment includes effects on water quality and hydro-morphology as aspects of habitat structure and function.
- Regarding Freshwater Pearl Mussel, the Board's assessment should be carried out with respect to the conservation objective to restore to favourable conservation condition of the species in the site, noting the already deteriorating water quality trends in the Glenisland River which is at risk of failing to achieve the WFD objectives for water quality (i.e. high status in Lough Beltra and the Newport River downstream).
- The NIS analysis is not ultimately undertaken with regard to the obligations for the conservation objectives and integrity of the site.
- The overall findings or conclusions (NIS table 7.1) lack a scientific and reasoned basis.

Matters relating to other ecological effects

Lack of clarity about some aspects of ecological surveys carried out and findings, including the significance of likely effects of the proposed development on natural habitats and protected species, including:

- Details of Otter (Habitats Directive, Annex IV species survey) – areas surveyed and survey findings.
- Scientific basis for excluding local / nearby presence of Annex I habitats and potential for negative effects thereon. In this regard:
 - Lough Beltra contains at least 1 no. Annex 1 lake habitat;
 - Woodland fringing the lake and river is identified as wet woodland potentially corresponding to Annex I habitat, *Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Silicion albae*).

This is discounted in the NIS and EclA without description and analysis of relevant data and without scientific justification.

In this regard, there is a difference between habitat type and habitat condition assessment, the latter apparently being reported on in the NIS and EclA.

The habitats and vegetation present, including the wooden margins of the river, these are better portrayed in 'images 3-6' of the FRA that in the NIS or EclA photographs.

- No figures given for full extent (area and/or length) of riparian habitat, woodland, treeline and hedgerow that will be lost on a temporary or permanent basis as a result of the development.
- Bat survey details are unclear, including number of surveyors, survey effort, survey duration and areas surveyed.

Matters relating to compliance with the County Development Plan

Consideration should be given to extent of compliance with natural heritage objectives, including e.g. objective NH-01 '*to protect, enhance, conserve and, where appropriate restore*' (a) a range environmental designated sites, including, *inter alia*, European sites, (b) protected habitats and species and (c) features of natural interest and amenity.

3.2. Department of Heritage, Culture and the Gaeltacht (Development Applications Unit)

Observations on FURTHER INFORMATION

'The observations are intended to assist the Board in its review and evaluation of the current proposal in the context of, among other things, obligations and commitments in relation to European sites, biodiversity and environment protection, proper planning and sustainable development, and the appropriate assessment and screening for EIA which have yet to be carried out. The main points may be summarised as follow:

European sites

- As per initial submission but omitting sentence: *'Both Salmon and Freshwater Pearl Mussel, and their habitats, could be affected by the proposed development at site preparation, construction and operation stages.'*

Matters relating to the project

- It remains that there are no specific details of the locations of the two turbidity monitor, or of the works involved in their installation (SWMP S.6.2.1). At least one will be outside the application area for the project, but within the Newport River SAC, and will not be covered by the grant of permission for the road. Baseline water quality monitoring data are not available at this stage.
- The need for intrusive ground or site investigations and archaeological testing should be included among the Board's considerations.
- Re FI Item 13 response, the majority of the mitigation measures refer to obligations being place on a contractor, not the Council. There should be no doubt as to the applicability of all NIS mitigation measures, and other protective measures, to the project as a whole, at all stages.
- Where there is variation in the details of the mitigation measures specified (e.g. whether the setback distance from the river for certain works is 5m or 25m, any associated uncertainties as to the likely effects that could result should be taken into account. The more conservative or protective option should take precedence, but a precautionary approach should be adopted in the assessment of potential residual effects.

- The SWMP indicates that the NPWS will be supplied with risk assessments and method statements for comment when works are about to commence on site or in the vicinity of sensitive watercourses. The Board should be mindful of any possible consent or overseeing role being placed on the department, which would be inappropriate.

Matters relating to the appropriate assessment

- On carrying out the AA the NIS and NIS addendum should be taken into account, supplemented by an assessment of implications of the proposed development for the conservation objectives and integrity of Newport River SAC.
- The Board must be satisfied that the information, regarding the scientific basis for the findings and conclusions reached and summarised in table 7.1 of the NIS report, is complete and robust, including full consideration of potential in combinations effects of other plans and projects.
- To reach complete, precise and definitive findings and conclusions, the full extent of all relevant aspects of the proposed development and the likely efficacy of the propose mitigation measures must be known.
- In respect of the FWPM, the Board's assessment should be carried out with respect to the objective of restoring the favourable conservation condition of the species in the site.
- It should be noted that trends in water quality are already deteriorating and the Glenisland River is 'at risk' of failing to achieve WFD objectives for water quality (i.e. high status in Lough Beltra and the Newport River downstream).

Matters relating to other ecological effects

- Some of the woodland habitats along the Glenisland River may correspond with the Annex I woodland habitat *Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*). The Board must satisfy itself in relation to the impacts to this habitat type, including the scientific basis for discounting the presence of this habitat type.

Matters relating to compliance with the County Development Plan

- As per initial submission.

3.3. Third Party Observations

None received to file.

4.0 Planning History

On site

JP0044 – Decision by the Board to **REFUSE** to approve (31/08/17) application under 177AE for the proposed R312 road re-alignment at Muckanagh and Kilgarve, Glenisland, Castlebar, Co. Mayo, for reason that the Board was not satisfied that the proposed development would not adversely affect the integrity of Newport River SAC (site code 002144).

In this regard, the Board was not satisfied the LA had demonstrated the proposed development would not adversely affect the integrity of the SAC in view of its conservation objective on that basis that the proposed development '*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 replication the habitat thus removed and which would alter the hydrology / hydrodynamics of the river passing through it.*'

The Board also considered the consequences for the qualifying interests, in particular Atlantic Salmon, had not been sufficiently addressed and noted the deteriorating water quality and low fish numbers recorded for the Glenisland River, a spawning river, in recent years, and that additional pressures may have a disproportional impact on this species.

Within vicinity

Reg.ref.12600 – Permission **GRANTED** for construction of a pontoon development at Kilgarve, within the boundary of Newport River SAC (site code 002144) to the west of the north end of the proposed road realignment project. Condition no.3 stated:

'The proposed development shall be carried out in consultation with the National Parks and Wildlife Service.

Reason: In the interests of proper planning and development.'

The development has been carried out.

Reg.Ref.16945 – Application at Glenisland, Castlebar, to construct a detached dwelling house, domestic garage, proprietary treatment system and all associated site works. This application is referred to in the Section 177AE Planning Report submitted by the planning authority but could not be located on the Council's online planning search facility and Mayo County Council is not yet currently covered by the national planning search facility.

5.0 Policy Context

5.1. Development Plan

Mayo County Development Plan 2014-2020

Section 1 The Core Strategy and Settlement Strategy

Map 1 *Core Strategy Conceptual Map* – R312 is a strategically important regional road within structurally weak rural area.

The Core Strategy recognises that *'the peripherality of the County, in national and international terms, is exacerbated by continued deficiencies in the strategic road infrastructure. In this regard, priority projects considered necessary to support the Core Strategy are listed in Table 3 (Infrastructure Strategy)'*

The R312 is include on Table 3 listing of national roads and strategically important regional roads.

Section 3. Infrastructure Strategy

Map 2 *Strategic Transport Network*: R312 does not form part of the mapped strategic transportation network. The R312 is identified as a strategically important regional road on Table 19 in Appendix 4 *Nationally and Strategically Important Regional Roads in Co. Mayo*.

Infrastructure Strategy – Table 3: Other Roads – R312 Castlebar – Bellacorrick Road at Glenisland.

Policy PY-02; general infrastructure objectives – I-01, I-02, I-03; land use integration & sustainable transport objectives – LS-01, LS-02, LS-03; roads objectives – RD-01, RD-02.

Section 4. Environment, Heritage & Amenity Strategy

Map 3A *Landscape Protection Areas: Policy Area 3 – Uplands, Moors, Heath or Bog. Development Impact – Landscape Sensitivity Matrix*: Road projects are identified as having *medium* to *low* potential to create adverse impacts on the existing landscape character, where *medium* potential is defined as ‘*likely to be clearly discernible and distinctive, however with careful siting and good design, the significance and extent of impacts can be minimised to an acceptable level*’; and *low* potential is defined as ‘*likely to be widely conceived as normal and appropriate unless site and design are poor*’.

Landscape Protection objectives – LP-01, LP-02 and LP-03.

Map 4 *Views and Prospects*: R312 is a scenic route from Glenisland (including the section to be realigned) northwards.

Views and Prospects objective – VP-01;

Natural Heritage objectives – NH-01; NH-03.

5.2. Other plans and reference documents

Project Ireland 2040, National Planning Framework

National Development Plan 2018-2027

Regional Planning Guidelines for the West Region 2010-2022

Draft Regional Social and Economic Strategy (2018)

5.3. Natural Heritage Designations

Newport River SAC (site code 002144) is on site but extends from the north through to southwest.

Bellacorrick Bog Complex SAC (001922) 13.85km north-northwest at nearest point.

Moy River SAC (002298) extending from north-northwest through to east-southeast, within 6km to east at nearest point.

Lough Conn and Lough Cullin SPA (004098) 12.46km northeast at nearest point.

Clew Bay Complex SAC (001482) to southwest through to west, within 8.24km west.

Owenduff / Nephin Complex SAC (000534) extending west through to northwest, within 10.6km west-northwest at nearest point.

Owenduff / Nephin Complex SPA (004098) extending west through to northwest, within 11.42km west-northwest at nearest point.

6.0 Further information

- 6.1.1. In response to the Board's request for further information on 13no. points (copy of memo attached to this report) the applicant submitted a report and accompanying drawings detailing its response of 17/04/19.

Item no.1 – The detailed drawings of the proposed scheme, including detailed drainage layout, have been submitted at a scale of not less than 1:500, with proposed works indicated relative to the Newport River SAC boundary and relative to the permanent and temporary land acquisition boundaries.

Item no.2 – The applicant confirms that all permanent structures associated with the proposed structure will be contained within the land acquisition area and that any such structure that had been shown outside the said area were shown in error and should have been terminated within the acquisition line.

The applicant also confirms that agreement has been received from the relevant landowners (signed agreements and horizontal layouts contained in Appendix E to the response) for temporary land acquisition beside the river on both sides of the proposed road to facilitate settlement ponds and topsoil storage.

Item no.3 – It is confirmed that the only works at the end of the main scheme will be an overlay to tie the new realigned carriageway into the existing road pavement. This change in level in the existing carriageway will range from 124mm to 0mm at the tie in point. No alterations will be made to the existing sod bank north of Ch531, the point at which the civil engineering element of the scheme will conclude, and there will be no associated works required with the adjoining verge, layby, recasting embankments, etc.

Item no.4 – The applicant has submitted detailed drainage drawings (plans, elevations and sections) of the proposed drainage outfalls at a scale of 1:50 or greater (they would appear to be at a scale of 1:25). The detailed drawings reflect the proposed amendments to drainage design in response to item no.1, the updated surface water management plan (included in Appendix C) and design updates proposed in the FI response.

The drainage design has been amended to consist of grassed surface water channels (to CC-SCD-00104) in both verges of the carriageway, which, it is submitted, have many benefits over traditional piped systems, providing attenuation function and help to reduce pollutants by trapping particles and sediment within the grass structure. By providing grassed channels in the verge in lieu of interceptor ditches at the toe of the embankment, it raises the level of drainage outfall to petrol interceptors and, in turn, reduces the risk of petrol interceptors being inundated with water during periods of flood.

The number of outfalls to the Glenisland Rive have been reduced from 4no. to 2no. to limit the potential construction effects on the river bank and riparian area, both located downstream of the bridge, either side of the river. On the southside, the road drainage will discharge via a carrier pipe to a petrol interceptor from where it will outfall to the Glenisland River via a carrier pipe, at which point rock armour will be used to protect against scour on the bank as a more sensitive solution than a concrete headwall. It will entail less construction work and lessen the risk of a concrete spill into the river, as well as assimilating more naturally into the surrounding environs. On the northside the road drainage will pass through a petrol interceptor at the northern tie-in of the scheme c.210m north of the Glenisland River, before discharging to an interceptor ditch which will grade gently (c.1:400) into the edge of the river bank, accommodating very low velocity flows comparable to the greenfield runoff rates of the existing ditch scenario and which removes the risk of scouring and erosion from runoff entering the river. The revised design also reduces the impact of construction works on the river as there are no in-situ elements required and the shallow excavation required at the edge of the riverbank will be done by using hand digging equipment after a silt fence has been erected.

Item no.5 – The applicant indicates that petrol interceptors are sized using PPG3 (Pollution Prevention Guidelines 3) issued by the SEPA, the EPA and the Environment and Heritage Service. As the carriageway has a risk of infrequent, low-

level hydrocarbon contamination and potential for small hydrocarbon spills, it is proposed to discharge to a Class 1 bypass interceptor as a full retention interceptor is only suitable for areas of high spillage probability such as fuel forecourts, etc. The sizing of the interceptor is based on their NSB number which denotes the maximum flow (l/s) at which the separator treats liquids and is calculated based on PPG3 formula $NSB=0.0018 \times A$ (total area in m^2). The applicant calculates the NSB number for the southern area (2,865 m^2) at 5.2 and that for the north (2,380 m^2) at 4.3. As interceptors are only available in standard sizes the units are selected based on NSB values rounded up to the next available NSB from the standard size ranges in a conservative approach. Based on Kingspan Technical Guidance Document, the most suitable product for both is NSBP006. This, or the equivalent from another manufacturer, will be provided at both outfalls.

Both interceptors will be fitted automatic warning devices, giving audible warning when 90% capacity is reached and which *'can also send a warning to a remote monitoring point'*, and the petrol interceptors will be inspected routinely every six months.

Item no.6 – The petrol interceptor on the south of the river is located 8m from the riverbank and that to the north is 210m away. The applicant sets out the proposed finished levels of the carriageway, edge of carriageway, invert to manhole prior to petrol interceptor and the petrol inlet and outlet levels (north and south of the river) against the 1 in 100 and 1 in 1000 years flood event) levels (19.410 and 19.470mOD, respectively, inclusive of climate change). As the southern petrol interceptor has an inlet level of 19.807mOD and an outlet of 19.707mOD, the applicant submits it falls outside the 1 in 1000-year flood event, therefore significant effects are avoided through design and no mitigation measures are proposed for the outfall.

The northern petrol interceptor has an inlet level of 18.655mOD and an outlet level of 18.555m OD, which is 915mm below the 1 in 100-year flood event. The applicant submits that, as the outfall is 210m distant from the Glenisland River, potential for significant effects on the Newport River SAC will be mitigated by the installation of a flap valve fitted to the outfall pipe from the petrol interceptor into the adjacent interceptor ditch. Due to the flashy catchment upstream, characterised by steep slopes and exposed rock encouraging rapid water runoff, the flood events on Glenisland River occur over relatively short time period and levels recede quickly

after storm events. The period of time a flap valve would remain potentially closed is short and would not cause operational difficulties for the drainage system.

Item no.7 – Colour drawings of the riparian corridor at the proposed bridge location are presented in drawings 5642/16/14a and 5642/16/14b submitted as further information. The details are informed a tree, shrub and vegetation survey of the riparian area undertaken in March 2019, and which identified 9no. trees and shrubs within the land acquisition zone. Replacement tree planting of alder and willow is proposed and will be established on completion of bridge construction (drawing 5642/16/03a refers).

Item no.8 – The proposal has been amended to reduce the number of outfalls to the Glenisland River from 4no. to 2no. (drawings 5642/16/11a, 5642/16/11b, 5642/11c, 5642/12a and 5642/12b refer). The applicant has provided a detailed methodology for the construction of both outfalls.

Outfall 1 (southern outfall) – On southern bank of Glenisland River, consisting of a 300mm diameter piped outfall into the river from the adjacent petrol interceptor. A rock armour headwall is proposed to be constructed around and beneath the carrier pipe. Mitigation measures are proposed as follows:

- The rock armour is proposed as mitigation by design, being a less invasive headwall solution than construction either a pre-cast concrete or in-situ concrete headwall.
- Silt fencing will be erected along the edge of the scheme and silt settlement ponds constructed to treat any runoff from the site during construction period.
- The drainage system will be constructed in reverse, beginning with the outfall structures connecting back to the road drainage system to ensure no runoff from the road enters the river in an uncontrolled manner.
- The rock armour headwall will be constructed of 300mm clean round stone which corresponds to the study area's underlying geology (no calcareous aggregates to be used) and it will not contain fine aggregate materials.
- The detailed methodology for construction of the headwall is set out in pages 11 and 12, but to summarise: the 300mm pipe will be set in a trench between interceptor to top of riverbank at which point it will be surrounded by rock armour; the bank will be excavated first, with a shallow localised excavation

above river water level (300mm deep (H), 1m in width and extending 1m back from the river bank; the layer of rock armour will be secured in place, without the need of concrete as its self-weight keeps it in place; the pipe laid as per TII Road Construction Details, Drainage drawing ref.CC-SCD-00521, Type S; the remainder of rock armour will be laid; and the rest of the pipe from outfall to interceptor will then be constructed;

- The change in drainage layout from interceptor ditches at toes of embankment level to grassed surface water channels in the verge enabled the petrol interceptor to level to be raised so that it will now be constructed within the road embankment rather than below the original ground level, eliminating the need for excavation adjacent the river and reducing risk of sediment run off entering the river;
- The petrol interceptor requires a concrete surround for protection. A proposed 10m setback will provide a buffer zone to reduce the potential risk from wet concrete spillage entering the river and the construction of a protective concrete surround will be completed using shuttering to retain all concrete used to the works footprint / target area and to avoid release to the surrounding environment. The edge of the new road embankment will be excavated to allow the interceptor be installed and subsequently surrounding in concrete.
- No instream works are proposed.

Outfall 2 (Northern Outfall) – on northern bank of Glenisland River, consisting of an interceptor ditch running for 210m from the road drainage outfall CH530 to the north-eastern bank of the river. At CH530 the road drainage discharges through a petrol interceptor prior to out-falling to the interceptor ditch.

- Minimal construction is required to outfall the interceptor ditch to the Glenisland River, which will be constructed at a gradient of 1:400 from CH530 to the river over topography that is already very flat. At the northern bank the interceptor ditch will be widened from a base width of 600mm to 2m to dissipate the flow across a large area and to reduce the velocity of the water.
- It is proposed to excavate the ditch to the edge of the riverbank which is staggered, with an outer bank c.2.5m away from the main channel of the river,

with the intervening area, across which the water will discharge, supporting improved grassland vegetation. Discharge will reflect greenfield runoff rates.

- The ditch gradient, its widened outfall point and the low velocity flow will ensure that no erosion occurs with discharge. The ditch and grassed surface water channels will also attenuated flow from peak discharge rate that would have occurred with a piped drainage system.
- Once the ditch is constructed a silt fence will be erected across the outfall point and remain in place until the ditch has been top-soiled and seeded and the channel stabilised through grass growth which will then ensure no sediment will reach the river.
- Any sediment from road runoff will be removed by the petrol interceptor prior to out-falling to the ditch.

No instream works are proposed for either outfall to the Glenisland River.

Item no.9 – The applicant responds that the proposed bridge design provides for setbacks from the Glenisland River, stated as 2.5m from the south river bank and 5.5m from the north-eastern side (drawing 542/16/09a dated 25/01/8 and 5642/16/13a dated 09/04/19 refer) which, it is submitted, will ensure there will be no excavations at or in the immediate proximity to the river banks, with the exception of the drainage outfall works and therefore ensure no direct or indirect removal, disturbance or disruption of riverbank during the bridge construction. It is also submitted that the proposed design corresponds to accepted good practice design for river crossing as detailed in '*Engineering in the water environment good practice guide – river crossings*' guidance document (SEPA, 2010) which (the applicant quotes) includes setting back of '*bridge abutments as wide as possible and maintain bank habitat, maximising the riparian corridor and allowing the river some space to move*'.

The applicant also refers to TII guidelines for crossing of watercourses, which advises that internationally or nationally important watercourses be bridged rather than culverted, wherever possible, ideally of clear-span design, leaving a natural bank-path of at least 3m wide each side for mammals and anglers and to facilitate natural recolonisation of natural vegetation.

The abutments are proposed to be constructed on piled foundations, using a boring technique, which will eliminate the need for large excavations on both riverbanks. The piles will extend above ground and a pile cap will be formed on top (as a foundation for abutments, wing walls and bases), above ground, to eliminate the need for large excavations beside the river. The disadvantage is the risk from use of in-situ concrete in close proximity to a watercourse. Concrete will be poured into the bored casings at a slow, controlled rate to ensure compaction within the pile structure. The use of concrete for the abutment foundations will be undertaken in controlled sealed units (formwork) to ensure no release of concrete outside formwork.

Regarding vegetation, the stumps and root systems of trees proposed to be removed from under the line of the proposed bridge will be retained to facilitate stabilisation of the riparian corridor, and the orientation of the bridge will allow the area beneath the bridge to receive some sunlight which will allow vegetation growth to be sustained within this area during the operational phase, assisting stabilisation of and avoiding future risk of collapse of the riverbanks.

Item no.10

Regarding the excluding (in the NIS and EclA) of the lakeside and riverside woodland habitats from the definition of Annex I priority habitat *Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Silicion albae) [91E0], the applicant has submitted no further information about the lakeside woodland habitat, or the scientific basis for excluding it from the definition of the said priority habitat, but refers the Board back to s.3.3 of the EclA and to the woodland relevé results appended to same and defines the said area as wet-willow-alder woodland (WN6) and (WS1). The applicant points out that the Annex I priority habitat concerned is not a qualifying interest / feature of interest of the Newport River SAC or the Clew Bay Complex SAC.

The applicant has confirmed that the proposed development will not intersect with the lakeside habitat but will terminate with a tie-in with the existing R312 without interacting with this wet woodland adjacent Beltra Lough and, submits, therefore there will be no impact on the lakeside woodland habitat.

Regarding the riverside woodland habitat, the applicant refers to the contextual habitats within and outside the proposed project boundary to explain why this

riverine woodland and surrounding woodland habitats do not correspond to Annex I Alluvial Forest with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Silicion albae) [91E0], having regard to the indicator species checklist for assessment of 91E0 habitat sourced from Perrin et al. (2008). The applicant clarifies the details set out in the EclA (s.3.3) regarding the location and description of existing areas of defined woodland habitat and confirms that the woodland habitat upstream and downstream along the banks of the river corresponds to WN6 (wet willow-alder-ash woodland) and WS1 (scrub), rather than the Annex I priority habitat concerned. It also states that '*the riverbank is lined by semi-mature and in parts widely spaced, discontinuous alder treeline*' and that this '*is also the case on the western bank of the river, north of the river crossing*', with the details of the treeline and woodland habitats within the scheme footprint and its immediate environs detailed in image 10-1 to Image 10-6.

Item no.11

Regarding full details of Otter surveys, the applicant reiterates the details already outlined in sections 2.3.1.2, 3.4.2 and 3.5 of the EclA report including that the footprint and immediate environment of the bridge crossing did not support signs of otter activity or potential habitat for couches or holts; with the steep vertical faces and comparable lack of woodland and shrub-type vegetation on the upstream riverbank making it unsuitable to establish an otter holt; and with the downstream riverbank being shallow and without high quality otter breeding habitat. Figure 11-1 indicates the area covered by the otter surveys.

It notes the potential for temporary of disturbance to otter commuting pathways during construction and submits that the EclA (s.4.1.4.1) identified that the surrounding landscape provides suitable alternative corridors and foraging habitats for the mammals that may occur in the area. No permanent impact on commuting habitat will occur within the immediate riparian corridor due to the proposed setting back of bridge abutments (stated as at least 2.5m from the river bank on the south-western side and 5.5m on the north-eastern side of the river). And the area will be fenced off, thereby impeding access by construction machinery and personnel to the riverbank footprint.

Item no.12

Regarding bat survey details, the applicant responds that the details are set out under s.3.4.2.2 of the EclA. Further details are outlined in the response, which clarified that the survey took place from the evening of 2nd through to the morning of 3rd May 2018, rather than being limited to 2nd May, and that it was carried out by two ecologists (details of the ecologists and their qualification contained in the submission). The details of the survey are also outlined. The applicant reports that no evidence of roosting bats in neighbouring trees was found, but that dense ivy growth on some trees may offer potential for bat roosts and acknowledges that the removal of semi-mature alder trees adjoining the river will result in loss of bat foraging habitat, as will the removal of hedgerows along the route alignment where it merges with the R312, with the potential impact affecting Soprano pipistrelle, Common pipistrelle and Leisler's bat. This will be a localised, permanent impact. The locations of bat surveys are identified in figure 12-1 of the FI response.

Item no.13

Regarding the proposed time schedule for commencement, carrying out of and completion of each stage of the proposed project, the applicant submits that the project programme is detailed in appendix D of the response.

Summary of relevant Appendices:

Appendix B - Natura Impact Statement Addendum - Changes to the document are set out in red font, to highlight the changes in the proposed development that are considered, including duration of the proposed construction phase (July 2019 to September 2020). The amendments may be summarised as follow:

S.3.2.1 Road Construction Works

- a) Bullet point 1 amended to include reference to the erection of silt fencing erected 10m from river bank (where space allows), checked by ecologist / ecological clerk of works prior to commencement of development;
- b) Bullet point 1 amended to include reference to c silt ponds to be located within temporary land acquisition boundary as shown in plan drawings 5642/16/03a in Appendix A of the SWMP;

- c) Bullet point 8 amended to include reference to quarry stone and all proposed fill will complement the underlying geology of the study area (i.e. parent materials comprising sandstone, mudstone and siltstone);
- d) Bullet point 10 amended to include reference to total quantity of Class C1 fill material at 10,900m³;

S.3.2.2 Bridge Works

- a) Bullet point 1 amended to include reference as per a) above;
- b) Bullet point 4 amended to refer to 19m rather than 17m single span bridge;
- c) Bullet point 5 & 6 amended to include reference to proposal to provide piled foundation to eliminate need for large excavations on both sides of the river, and details of same, including proposal to pump any potential (although not expected) seepage from the river into the proposed silt ponds as per SWMP;
- d) Bullet point 7 amended to refer to piled foundations proposal and the details of the proposed use of concrete in the piles through use of controlled sealed units and pumping of concrete at a slow, controlled rate to ensure compaction within the pile structure;
- e) Bullet point 8 amended to refer to use of piled foundations and to clarify that pile cap will occur at ground level.
- f) Bullet point 9 amended to refer to proposed use of piled foundations;
- g) Bullet point 11 amended to refer to the proposed revised design for surface water drainage details for the scheme;

S.5.2.1 Suspended Solids and Fine Sediments

Amended to refer to proposed amended design with 2no. drainage;

S.5.2.3 Noise and Vibration

Amended to include reference to proposed piled foundations design and reduction in vibration and noise levels during installation (but with disadvantages of use of in-situ concrete), but which can nevertheless have adverse impacts on salmonids from noise and vibration;

S.5.4.2.1 Atlantic Salmon

Amended to refer to 19m bridge span in lieu of 17m and suggesting that this, coupled with the SW-NE alignment will reduce adverse impact from shade effects on

the river habitat for salmon and facilitate sustain vegetation growth between the retained riverbank and bridge, and facilitate bank stabilisation and avoiding the risk of future and ongoing river banks collapse.

S.6.1.4.2 Excavation

- a) Bullet point 1 amended to clarify that the proposed use of piled foundations to secure abutment walls will obviate the need for excavations to foundation level for abutment or wing wall structures.
- b) Bullet point 2 amended to refer to proposed use of piled foundations obviating the need for open excavations and avoiding potential for continual ingress of water into the abutments works area, with any minimal ingress directed and attenuated in the proposed nearby settlement ponds.

S.6.1.6 Pollution with other substances

Addition of text providing outline methodology for cast in-situ, steel reinforce, high-strength concrete piles (6m depth to key into bedrock), including the details for over-pumping out of possible water ingress during piling or before concrete pouring (discharging to settlement / silt ponds), if necessary with reference to the SWMP and associated drawings, and stating 'should any of the over-pumped water support cement / concrete material then this water will be treated and pH corrected (reduce pH levels that may be highly alkaline) prior to the release to the surrounding environment.

S.6.1.7 Timing Restrictions

Amended to refer to proposed piling design and proposals to restrict piling works to July-September to avoid adverse impacts to salmon redds.

S.6.2.1 Surface Water Drainage Design

Amended to include reference to amended SW drainage design for the proposed road scheme, including use of grassed SW channels which will contribute to improved water quality by facilitating settlement and deposition of sediment and contaminants contained within the road runoff; to the proposals for 2no. petrol interceptors, one on each side of the river; the removal of sediment and particulate pollutants by grassed verge design, trapping them within the grassed structure in the channels; the detailing of temporary land acquisition for construction phase mitigation (including silt ponds) on drawings 5642/16/03a Appendix A of the FIR response; indicating that the specific details are set out in the SWMP, including

principal avoidance and control measures (s.1), management measures associated with earthworks (s.2), water bodies (s.3), concrete works (s.4), construction compounds (s.5), monitoring and audit (s.6) and emergency procedures (s.7).

S.6.2.2 Flooding and Hydrological Regime

Amended to refer to proposed revised SW road drainage design with use of grassed channels to attenuate flows, reduce outflow rates compared to traditional piped drainage, with reference to layout detailed in appendix A of the FIR.

Table 7-1 Integrity of Site Checklist

Regarding the potential to result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding), the comment (on impacts) has been amended to refer to a reduced loss of tree line area from 419m² to 376m³ and the proposals for landscaping near the south-western extents of the scheme to cover an area of 1934m², with the said replanting to ensure no net loss of vegetation cover.

Appendix C – Updated Surface Water Management Plan (with Appendix A Drawings, and Appendix B Turbidity Investigatory Levels)

Appendix D – Time Schedule for Proposed Project

Appendix E – Landowner Agreements for Temporary Land Acquisition

7.0 Assessment

7.1. Introduction

7.1.1. Having regard to the Natura Impact Statement submitted pursuant to subsection S.177AE(1) of the Act of 2000, as amended, and to the submissions and observations submitted in accordance with subsection (4), I shall confine my assessment under subsection (6)(a) of the Act considerations 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.

7.1.2. **Further information** - For clarity, the Board should note that the proposed development, including supporting drawings and documentation, has been significantly amended in response (16/04/19) to the Board's request for further information. I've detailed the amendments under s.2.1.1. above, but, in summary the principal amendments comprise – increase in bridge span from 17m to 19m; the setting back of the southern abutment by an additional 2m to 4m; the foundation design of the bridge abutments has been revised to pile-driven support rather than excavated; surface water drainage is to comprise, primarily grass verges / swales in lieu of piped drains; surface water drainage to discharge via 2no. rather 4no. discharge point of revised design, with rock armour supported pipe discharge to the south and a graded interceptor ditch to the northern bank; and the rock armour scour protection design beneath the bridge has been omitted, with the river banks to be retained except at the southern bank discharge point where rock armour is proposed as scour protection (1m wide, 300mm deep and extending 1m back from the riverbank).

7.1.3. **Anomalies / errors** - There is an issue with the submitted drawings which continue to show the proposed span at 17m rather than 19m on the elevational drawings (e.g. no.5642/16/13a *Proposed Precast Bridge*), although the span does measure 19m on the detailed plans (e.g. 5642/16/11c *Stormwater Drainage Layout at Bridge*). The increased span appears to be achieved through the increased setback of the southern abutment only.

- 7.1.4. As a point of clarity, the clear-span bridge crosses the watercourse at an angle, with the abutments running parallel to the watercourse. Therefore, whilst the bridge spans 19m (in plan), this is measured on the oblique rather than perpendicular to the watercourse, and the distance between the parallel abutments actually measures 15.5m. This, in itself is not a significant issue in my opinion, however it has implications for the environmental assessments where the distance considered by the applicant is measured on the oblique and therefore artificially increases the setback distance from the watercourse and the extent of river bank to be retained - stated as 2.5m from the southern / left bank; and 5m from the north / right bank. The applicant does not indicate from where the abutment setbacks area measured, but it would appear from the initially proposed drawings (with which there were issues of scale and accuracy) that the measurements were taken from the oblique.
- 7.1.5. The abutment setback figures referred to in the further information submission do not appear to have been revised in view of the proposed increased bridge span. Having regard to drawing no.5642/16/14b (*post construction contours trees to be removed*) and measuring from drawing no. 5642/16/11c (*stormwater drainage layout at bridge*), the southern abutment would appear to be at least 4m from the edge of the watercourse and the northern abutment 4.5m (perpendicular distance).
- 7.1.6. Having regard to the foregoing assessment, I am satisfied that should the Board be inclined to grant permission it would be reasonable to address this issue by way of condition clarifying that the bridge span shall be at least 19m as indicated on proposed layout plans submitted by way of further information; and that the bridge abutments should be setback at least 4m and the northern abutment set back at least 4.5m from the edge of the watercourse.

7.2. Likely effects on the environment

Based on the information on file or otherwise available to me, I consider the potential for likely effects on the environment to concern the following environmental factors:

6.1.1 Water

6.1.2 Soil

6.1.3 Biodiversity

6.1.4 Population and human health

6.1.5 Landscape & cultural heritage

7.2.1. **Water**

- 7.2.2. *Hydromorphology & hydrological regime* - There is potential for significant effects from the proposed development on the hydromorphology¹ and on the hydrological regime² of the Glenisland River and on water quality in the Glenisland River, Beltra Lough and Newport River which are hydrologically connected to the application site and all of which fall within the Newport River SAC (site code 002144).
- 7.2.3. The design of the proposed bridge over the Glenisland River differs significantly from that concrete culvert insert design proposed previously under JP0044 (refused by the Board) and comprises a 1 clear-span bridge without entailing any support structures within the watercourse and it does not entail any instream works, as the bridge span was increased from 17m to 19m in the applicant's further information response.
- 7.2.4. The applicant's original Planning Report (p.5) and NIS (s.3.2.1 and s.3.2.2) indicated proposed bridge abutments are to be set back from the riverbank by a stated distance of 2.5m from the left (southern) bank and 5.5m from the right (north) bank. The revised documents (further information response (FIR) and NIS Addendum, etc.) do not refer to any increase associated with the proposed increase in bridge span and the revised elevational drawings of the bridge structure continue to show the originally proposed setbacks of the abutments. Measuring from the revised layout plans, the abutments, will actually be setback c.4m from the southern bank and 4.5m from the northern bank (perpendicular distance).
- 7.2.5. The revised proposals omit the provision of rock armour scour protection from the riverbanks, except for a limited section (1m X 1m X 300mm deep) at the proposed southern surface water drainage outfall. I do not consider that this limited intrusion on the riverbank would have a significant impact. Whilst it is proposed to remove trees and shrubs (9no. in total) from along the riverbank within the site, these will be cut to stump level, with roots retained and lower level vegetation will be retained and protected during construction (detailed measures are provided in the FIR). The applicant submits that the orientation of the bridge will enable a reasonable level of

¹ Physical characteristics of the shape, boundaries and content.

² Regularly repeating variations in state and characteristics of watercourse including quantity and dynamics of water flow.

access to light such as to allow riparian vegetation to regrow. I am satisfied that the revised proposals adequately address and mitigate the potential risk of collapse of the riverbanks.

- 7.2.6. The applicant submits (FIR item no.9) that the proposed design corresponds to accepted good practice design for river crossing as detailed in '*Engineering in the water environment good practice guide – river crossings' guidance document*' (SEPA, 2010) which includes setting back of '*bridge abutments as wide as possible and maintain bank habitat, maximising the riparian corridor and allowing the river some space to move*'. The applicant also refers to TII's '*Guidelines for the Crossing of Watercourses During Construction of National Roads Schemes*' (2008), which advises that internationally or nationally important watercourses (such as SACs) should be bridged rather than culverted, wherever possible, ideally of clear-span design, leaving a natural bank-path of at least 3m wide each side for mammals and anglers and to facilitate natural recolonisation of natural vegetation.
- 7.2.7. As the revised bridge design exceeds this standard and based on the information provided by the applicant, it would appear unlikely that there is any risk of a significant adverse effect on the hydromorphology of the river or its hydrological regime. This is supported by the detailed Flood Risk Assessment (initial submission) which found the proposed route and embankments would have negligible impact on the 100-year floodplain (extent not clearly indicated in plan at an appropriate scale) and would not compromise the existing river channel or affect hydromorphology, providing a freeboard of 590mm above the 100-year event (taking account of climate change) compared to a minimum OPW requirement of 300mm. Surface water runoff to the Glenisland River will be maintained at greenfield rates by the proposed design, as revised.
- 7.2.8. In addition, in the FIR the applicant submits that the proposed revised design, comprising grassed surface water channels (to CC-SCD-00104) in both verges of the carriageway have additional benefits over the initially proposed traditional piped systems, providing additional attenuation function, and can thereby be expected to ameliorate potential surface water runoff. Furthermore, the applicant submits that providing grassed channels in the verge, as proposed, in lieu of interceptor ditches at the toe of the embankment, the level of drainage outfall to petrol interceptors are increase which reduces the risk of petrol interceptors being inundated with water during periods of flood.

7.2.9. **Water quality**

7.2.10. Potential for significant effects on water quality from the proposed development must be considered within the context of the existing water quality. The water quality trends in the subject stretch of the Glenisland River (downstream of the existing R312 bridge) have deteriorated since 2007-2009 from *Good* to *Moderate* (2010-2012 and 2010-2015) and, according to the EPA, the entire sub-catchment is *At Risk* of failing to achieve the WFD objective for water quality (i.e. it is *at risk of deteriorating or being less than Good status*). The applicant's Planning Report incorrectly refers to Glenisland River as having *Good* status, which only applies only upstream of the R312 (albeit to the vast majority of the Glenisland River sub-catchment). Beltra Lough is rated as of *Good* status (stable since previous period, not recorded 2007-2009) and *Not At Risk* as indicated in the Planning Report. Newport River is rated *High* and *Not At Risk*, except at its uppermost reaches (in Derryloughan East) from outflow at Beltra Lough which is rated *Moderate* and *At Risk* (the Planning Report does not refer to the latter). Forestry is identified by the EPA as the main pressure on the catchment³, in addition to the extractive industry. Any adverse impacts on water quality arising from the proposed development has the potential to undermine the WFD water quality objective for the catchment.

7.2.11. The main risk to water quality will arise from construction stage (high risk of significant short-medium term impacts on water quality in the absence of appropriate mitigation), medium-long term risk of adverse water quality impacts from potential riverbank collapse, and risk of long-term low-level impacts on water quality from run off from the carriageway during the lifetime of the operational period in the absence of mitigation.

7.2.12. The potential for contamination of the watercourse habitat through discharge of suspended solids during construction has been significantly reduced through the revised design proposals submitted as further information, which omits the vast majority of works initially proposed to the riverbanks (omission of rock armour scour protection from beneath bridge) and through provision of an increased setback (to c.4m) of the southern abutment (inter alia, response to item no.9, refers). And medium to long-term risk of contamination by suspended solids through bank

³ From losses of sediment and / or nutrients during afforestation, tree felling and abstraction; losses of sediment from access roads and during road construction; losses of nutrients during aerial fertilisation; and impacts from public access.

collapse has also been addressed through revised / clarified proposals for vegetation removal along the river banks. 9no. trees / shrubs will be removed along the riparian corridor, with retention of stump and root systems in place and with measures to ensure protection of existing ground level vegetation included. This will ensure protection of the structural integrity of the riverbanks during development and operational phases, thereby reducing risk of increased suspended solids through riverbank collapse. The use of a limited area of rock armour to protect against scour on the bank at the southern drainage outfall is proposed as a more sensitive solution than a concrete headwall, entailing less construction work and lessening the risk of a concrete spill into the river. Mitigation measures for the construction of this element is addressed under FI response to item no.8.

7.2.13. In addition, the detailed measures to avoid and prevent adverse impacts on the water environment, including overall approach, measures for earthworks, concrete works and construction compounds are set out in the SWMP, as updated in the FIR, are comprehensive and sufficient to protect water quality. However, I would note that s.2.4 of the updated SWMP refers to the requirement that soil stockpiles be situated no closer than 25m from a sensitive watercourse, as would apply in the case of the Glenisland River which is within the Newport River SAC. The submitted drawings (SWMP Plan and Cross Section, drawing. No.5642/16/03a) show the proposed locations within 15m of the watercourse and the NIS (s.6.1.8 Stockpiling of Spoil and Land-Spreading) refer to stockpiles being located at least 10m from the edge of the river, which are contrary to the said requirements. In the event of an approval of the application, this issue would need to be addressed by condition.

7.2.14. In terms of impacts on water quality, the NPWS raised concern initially about possible uncertainty / incomplete information on the extent of water quality monitoring carried out upstream and downstream of the proposed development to establish current baseline and to form basis for monitoring. As set out in the initial SWMP (s.6.2.1), the applicant proposes to carry out weekly water quality monitoring in advance of construction to determine the baseline (Temperature, pH, Conductivity, Total Hardness, Dissolved Oxygen, Biochemical Oxygen Demand, Turbidity, Colour, Suspended Solids, Ammonia, Nitrate, Nitrite, Total Nitrogen, Phosphate, Total Phosphorus and Chlorophyll). In the FIR the applicant reduced the length of the period from 6 months to 2 months. The NPWS has not commented further on this issue in its observations on the FIR but has highlighted that at least one of the two

proposed turbidity monitors will be located outside of the site, which raises the question as to whether the applicant has sufficient interest to implement the necessary monitoring. The proposed pre-construction monitoring proposals would appear sufficient to determine the baseline; however, the Board may consider it reasonable to require by condition that the duration of baseline monitoring be agreed with the NPWS and completed prior to the commencement of development in view of the designation of the watercourse as a SAC. Regarding the turbidity monitoring, given that the site is an SAC, the Board may consider it reasonable that the applicant agree in writing (prior to the commencement of development) the location of the two proposed turbidity monitors with the NPWS and shall ensure that it has sufficient interest in the relevant land / location to install and access the said monitors.

- 7.2.15. The NPWS raised concern in its initial submission that potential impacts on hydrochemistry of the watercourse may arise from importation of unsuitable fill material for the proposed embankments. The applicant has clarified in the FIR (through, *inter alia*, the Addendum to the NIS) that quarry stone and all proposed fill will complement the underlying geology of the study area (i.e. parent materials comprising sandstone, mudstone and siltstone).
- 7.2.16. The applicant identifies potential for long term, on-going operational impacts on water quality from road run-off of pollutants and embankment loading; management of soft estate area within land-take, such as ditch clearance and mowing / strimming; disturbance of soft estate area through management, improvements or road safety strategies (provision of signage, lighting and/or ancillary equipment or services. The applicant proposes to avoid these impacts through adherence to best practice and the construction and operational mitigation measures detailed in the EclA and NIS. In the FIR the applicant submits that the proposed revised design, comprising grassed surface water channels (to CC-SCD-00104) in both verges of the carriageway have additional benefits over the initially proposed traditional piped systems, providing additional attenuation function and reducing pollutants by trapping particles and sediment within the grass structure. I am satisfied that potential for significant operational impacts on water can be avoided through the mitigation measures proposed, which are stated as complying with TII standards.
- 7.2.17. **Water conclusion** – I am satisfied, based on the revised details and drawings amending the proposed roads project submitted as further information, that subject to the implementation of the mitigation measures set out in the Planning Report, the

NIS as amended by the Addendum to the NIS, the EclA, the SWMP as amended by the Updated SWMP, and the conditions recommended above, that the proposed development will not significantly adversely impact on the water environment, including the hydromorphology and hydrological regime of the water course or the water quality of the watercourse/

7.2.18. **Soil**

7.2.19. Soil extraction will be carried out from within the footprint of the development, with excess / unwanted topsoil disposed at a licenced waste facility. The EclA does not address the significance, if any, of loss of soils. The Planning Report does not suggest that the soils concerned are of particular value and, having regard to the scale of the development and the potential to reuse soils in the covering of embankments within the development, the potential impact is not significant.

7.2.20. The Planning Report (and other reports) indicate that best practice measures during the project's construction phase will restrict soil contamination and therefore no significant impacts are anticipated in this regard.

7.2.21. Having regard to the revised proposals for works to the riverbanks, including retention of all but a discrete portion of the riverbanks, and the clarification of proposals for removal of vegetation and the methodology for same, and measures proposed to prevent compaction and to retain ground integrity (updated SWMP), I am satisfied that there is no potential for significant impacts on soil in this regard.

7.2.22. **Biodiversity**

7.2.23. The applicant submitted a detailed Ecological Impact Assessment Report with the application (Appendix C of Planning Report). It concludes that the main ecological impacts from the proposed project are related to the Glenisland River, designated under the Newport River SAC and the potential for environmental impacts through water pollution and runoff as a result of the construction phase of the scheme, but that with implementation of robust and effective mitigation measures and the SWMP there will be no potential for significant negative impacts on ecological receptors within or surrounding the Glenisland River.

7.2.24. The main animal species that are potentially at risk from the proposed development include Salmon and Freshwater Pearl Mussel (both Annex II Habitats Directive; the features of interest for which the Newport SAC has been designated), otter (Annex

IV of the Habitats Directive) and bat (all Irish bat species fall within Annex IV, except Lesser Horseshoe Bat which fall under Annex II). There is no potential for significant effects on Croaghmoyle Mountain NHA (peatland is the feature of interest) from the proposed project which is downstream.

7.2.25. The applicant's habitats survey (Habitat Map in appendix B to EclAR), carried out by RPS ecologists⁴ on 15/12/17 to classify terrestrial habitats and to record evidence of, or potential for, any rare or protected species of flora and fauna. Further botanical and mammal surveys – otter and bat - carried out 02/05/18. The habitats found within the proposed line of development and its environs area are reported to include (from south to north) building / artificial surfaces (BL3), wet grassland (GS4), improved agricultural grassland (GA2) comprising the majority of the site area, treeline (WL2), eroding upland rivers (FW1) and scrub (WS1). An area of wet willow alder and ash woodland (WN6) abuts, but appears to be just outside, the northern end of the project. The habitats are all rated local importance lower value, or local importance higher value (WL2 and WN6), except for the eroding upland river (FW1), located within the Newport River SAC boundary, which rated as of international ecological importance. Two other habitats of international ecological importance – lowland depositing rivers and acid / oligotrophic lake – are noted within the vicinity (not delineated on habitats map) forming part of the Newport River SAC.

7.2.26. The applicant confirmed in the FIR that the woodland habitat on site and within the environment does not correspond to *Alluvial forest with Alnus glutinosa and Fraxinus excelsior* [91E0] Annex I priority habitat, which was raised as a concern by the NPWS. The applicant further clarified that the proposed development would not directly impact on woodland within the SAC at the northern end of the site and I would also note that the revised drainage proposals will direct surface water runoff from the operational carriageway away from that area and therefore no indirect impacts on that area would be anticipated.

7.2.27. The EclA considers that no direct loss would occur to habitats of international ecological importance due to the clear-span bridge design and setback of supporting abutment structures from the watercourse. The EclA did not consider the potential for significant direct impacts on the watercourse habitat (FW1) through removal of unspecified lengths and depth/height of existing riverbanks to accommodate the

⁴ Qualifications of authors not stated.

proposed 4no. surface water discharge points to the Glenisland River and scour and protection replacing riverbank beneath and within the vicinity of the bridge. It also failed to consider the potential to impact on the Annex I lake habitat downstream (as raised by the NPWS). However, I am satisfied that the revised proposals submitted in the FIR overcome the potential for significant adverse impacts on both of those habitats and has satisfactorily addressed NPWS concerns regarding survey details through its submission of detailed contour levels and a tree / shrub survey have clarified the baseline environment.

- 7.2.28. The potential for indirect impacts on habitats and species arising from physical changes to the riparian corridor, hydromorphological and hydrological regime changes, and changes to water quality, including hydrochemistry have been satisfactorily addressed in the applicant's FIR entailing significant amendments to the design of the scheme and clarification regarding the applicant's sufficient interest to implement the proposed construction mitigation measures outside the land acquisition boundary.
- 7.2.29. There is potential for impact on Otter (Annex IV). As no instream works are proposed and in view of the amended design proposals and the clarification of tree / shrub cutback extent and methodology submitted in the FIR, I am satisfied with the conclusion of the applicant's EclA that the potential impacts are negligible is reasonable. A similar conclusion has been reached for bird species.
- 7.2.30. There is potential for impact on bats through removal of trees and hedgerows along the riparian corridor and elsewhere on site, which may provide roosts for species, affecting migration / navigation corridors and foraging habitat during construction. Three species were recorded in applicant's surveys – Soprano and Common Pipistrelles and Leisler's Bat. Although no evidence of bat roosts was found in the applicant's survey, the EclA notes the potential for roosts where there is dense ivy on trees (which may be removed) but it is silent on the potential loss tree roosts through the development. Notwithstanding this, the EclA provides for standard mitigation measures to reduce the impact on bats through loss of roosts under s.5.1.10 Bats
- 7.2.31. All bat species are protected and under the European Communities (Natural Habitats) Regulations 1997 it is an offence to damage or destroy a breeding site or resting place of a bat, to deliberately disturb, capture or kill a bat, with the onus on

the developer satisfying themselves that the development will not result in same. Provision is made in the Regulations for the Minister to grant a derogation licence permitting these activities in strictly specified circumstances.

7.2.32. The EclA determined that as the development does not extend into optimum habitat for frogs, no significant direct impacts are anticipated, however indirect impacts during construction (e.g. sediment runoff into frog habitat) would be avoided through appropriate measures for any spawning areas downstream during construction.

7.2.33. The potential for direct, indirect and in-combination impacts on sensitive freshwater species, comprising Salmon and Freshwater Pearl Mussel, being Features of Interest of the Newport River SAC within the application site, are addressed under *Likely significant effects upon a European site*, below. On the basis that the two said species may act as proxies for the assessment of potential adverse impact on all other relevant freshwater species, where it is concluded that there is no potential for significant adverse impacts on the said species, it can also be determined that there will be no significant adverse impacts on other freshwater species arising from the proposed development, as revised by further information, and in view of the proposed mitigation measures proposed as revised by further information.

7.2.34. The EclA sets out in detail the measures proposed to avoid and prevent potential ecological or biodiversity impacts, relating to the Glenisland River within Newport River SAC, arising from water pollution and runoff during the construction phase. Subject to compliance with standard best practice construction measures and implementation of the proposed mitigation measures set out in the Planning Report, NIS and Addendum to NIS, the EclA, the SWMP and updated SWMP, I am satisfied that there will be no potential for significant adverse impacts on biodiversity.

7.2.35. **Population and human health**

7.2.36. The local area appears sparsely populated, but there are 4no. residential dwellings accessing directly onto the existing section of R13 proposed to be realigned ne-off and at least 1no. older / historic dwelling accessing onto the R312 and other 3no. accessing onto the R312 a short distance south of the southern end of the proposed scheme.

7.2.37. There is potential for impacts from the construction of the proposed development in terms of noise, vibration, dust emissions and surface water runoff arising from

construction works, but also arising from construction traffic to / from the site and from. Traffic disruption can also be expected during construction. The impacts will be temporary and short term in duration (no timeframe is stated). There are two sensitive receptors located adjacent the southern end of the proposed road scheme that would potential for greatest impact. Subject to implementation of standard best practice construction methods, the mitigation measures detailed in the Planning Report, NIS and Addendum to NIS, EclA and the detailed Surface Water Management Plan and updated SWMP, I anticipate no significant adverse impacts.

- 7.2.38. There is potential for indirect impacts in terms of traffic noise and air emissions from the operation of the proposed development. The area is highly rural, and the EPA records the current air quality for the rural west AQIH Region as '2 – Good' . The TII Traffic Data Site has no traffic count data for the R312 , however according to the Council's Justification Report (s.1.4) an AADT of 498, c.10% of which is HGV traffic, was recorded in the Roads Design Office's annual traffic census. Traffic is anticipated to grow on this route in line with national traffic growth trends, with no indication that traffic would be likely to divert to the realigned R312 route from other routes.
- 7.2.39. The proposed realignment is being promoted based on road safety grounds, providing a safer alignment and improving sight visibility at junctions rather than specifically to accommodate anticipated significant increase in traffic (note, only 1 no. minor accident is recorded on this section of road since 2014). Given the nature of this rural regional road, it would seem unlikely that the improved alignment of this relatively short section would significantly affect the level of traffic likely to be attracted along this route. No significant increase in noise or air emissions would therefore be anticipated from the generation of additional traffic. The realigned route would remove R312 traffic further from three existing dwellings (to the east) and a little closer to one dwelling (to southwest), resulting a significantly improved noise environment for two dwellings (to east), a moderate improvement to a third dwelling (to southeast) and a slight dis-improvement to the other dwelling (to the southwest). I would therefore not anticipate any significant adverse operational impacts.
- 7.2.40. Accordingly, no significant adverse impacts on population or human health are expected arising from the proposed development.

7.2.41. **Landscape & cultural heritage.**

7.2.42. The site is located within landscape policy area 3 *Upland Moors, Heath or Bog* under the County Development Plan. Under the Plan this landscape character area is of medium-low sensitivity to road schemes. The area is undoubtedly of some scenic value; however, I do not consider the proposed realignment scheme likely to have a significant adverse impact on the character of the area. There is no potential for significant impacts on cultural heritage, comprising archaeological heritage, due to the distance from existing verified RMP sites.

7.3. **Likely consequences for proper planning and sustainable development**

7.3.1. The existing road is a strategic regional road route within County Mayo. The proposed realignment can be expected to have road safety benefits due to the replacement of a section of road which is of poor horizontal and vertical alignment and of narrow width. The improvement of this section of the R312 is consistent with the provisions of the County Development Plan, which identifies the upgrading of this route to be necessary to facilitate the Core Strategy and the roads objectives (RD-01) supports the proposal subject to it not having significant adverse effects on the environment, or on the integrity of the network of European sites, or on visual amenity. The potential for significant effects is considered elsewhere in my report. The proposed development accords in principle with the provisions of the Development Plan for the area.

7.4. **Likely significant effects upon a European site**

7.4.1. **Stage 1 Screening** - A review of the applicant's AA screening (appendix A to NIS), shows that potential for significant effects was ruled out for five other European sites (River Moy SAC site code 002298, Bellacorick Bog Complex SAC site code 001922, Owenduff / Nephin Complex SAC site code 000534, Lough Conn and Lough Cullin SPA site code 004228, and Owenduff / Nephin Complex SPA site code 004098)

within 15km of the site, based on the source-pathway-receptor mode, due to absence of connectivity. Having regard to the distance of those sites from the proposed project, the absence of a pathway between those sites and the proposed project, I would concur that potential for significant effects on the said European sites, in view of their conservation objectives, can be ruled out.

- 7.4.2. The applicant's Screening Report concludes (p.58) that there is potential for indirect impacts on the Clew Bay Complex SAC (indirect connectivity 12km downstream of the project) from disturbance to qualifying interests through release of sediments and contaminants (e.g. hydrocarbons) during the construction and operational phases of the proposed road and bridge project. The 11no. features of interest are set out under table 3-5 of the Screening Report, comprising 7no. habitats including the priority habitat *Coastal Lagoons*, and three species - *Geyer's Whorl Snail*, *Otter* and *Common Seal*. Site specific conservation objectives have been set for the features of interest of the site. The Natura 2000 Standard Data Form lists '*urbanisation, residential and commercial development*' (including structures in the landscape and discharges from development) and '*pollution*' as threats and pressures (high and medium ranking, respectively) external to this site.
- 7.4.3. The potential for significant effects through release of sediments and contaminants can reasonably be assumed to be greatly diluted due to the distance between source and receptor and by the scale of the pathway, which includes a substantial lake (4-sq.km in area) to a negligible level. The report from the NPWS did not consider that this European site could be at risk of significant effects arising from the proposed development, alone or in combination. On the basis of the Screening Report and the report from the NPWS, I consider the potential for significant effects on Clew Bay Complex SAC, direct, indirect, alone or in combination, in view of that site's conservation objectives, can be ruled out.
- 7.4.4. The Screening Report considered the proposed development will result in direct impacts on Newport River SAC which has been selected for *Freshwater Pearl Mussel*, *Salmon* as its Features of Interest. No specific conservation objectives have been set for the site and only the generic conservation objective applies. The potential direct affects identified by the Screening Report as the reduction in terrestrial habitat within the European site (calculated by the applicant at 0.002% of the SAC), in addition potential for temporary direct and indirect disturbance to key species being features of interest of the site by way of deterioration of water quality

through emissions of suspended solids and accidental spillage of hydrocarbons during construction and operation, with implications for species diversity (Salmon) and for key conservation indicators.

7.4.5. Potential indirect effects are identified as increased risk of erosion due to loss of riparian zone to watercourse, loss of terrestrial habitat adjacent a watercourse and alterations to shade conditions to a watercourse. No fragmentation of habitat is anticipated but there is uncertainty as to whether Annex I Habitat may be lost through removal of terrestrial habitat, notwithstanding that no Annex I Habitats are designated as part of the SAC. No impact is anticipated on *Freshwater Pearl Mussel* due to the considerable body of water between the proposed project and the Newport River and the small scale of the proposed works. However, the NPWS highlights that the conservation objective of the SAC is to *restore* to favourable conservation condition the Annex II species for which the SAC has been selected. Therefore, the potential for significant adverse effects on the suitability of the Glenisland River to accommodate *Freshwater Pearl Mussel*, which cannot be ruled out at screening stage, needs to be assessed. Potential for significant effects on Newport River SAC cannot be ruled out and, accordingly the consideration of potential effects should proceed to a stage 2 AA.

7.4.6. **Stage 2 Appropriate Assessment** – The applicant submitted an NIS with the application. Notwithstanding the conclusion of the applicant’s Screening Report that Newport River SAC and Clew Bay Complex SAC be subject of a stage 2 Appropriate Assessment, there are some contradictory statements concerning which are subject of the submitted NIS. For example, section *1.1 Scope* indicates that the proposed project has the potential to significantly affect only one European site, Newport River SAC, and section *3.4 NIS Objectives* states:

‘this NIS considers the potential direct, indirect and cumulative impacts of the proposed [project]...on the conservation objectives of the Newport River SAC.’

The NIS does, however subject both sites to Appropriate Assessment. As I have screened out potential for significant effects on Clew Bay Complex SAC, I shall confine my stage 2 appropriate assessment to Newport River SAC.

7.4.7. *Direct effects* - The main difference between the current proposal and that previously refused permission under ref.PL16.JP0044 is that a clear span bridge structure is

proposed over the Glenisland River, in lieu of a pre-cast box culvert inset within the watercourse and there are no instream works proposed. There is no potential for direct effects on unrecorded populations of FWPM from works instream works. There is no potential for direct impact on migrating Salmon, through obstructions or obstacles through any instream structures from the proposed clear-span bridge structure. The potential for direct effects on the SAC, having regard to its conservation objectives, are therefore significantly reduced compared to the previous proposal.

- 7.4.8. Proposed extensive works to the riverbanks were largely omitted by revised design submitted as further information, reducing the removal of riverbank to a small part of southern bank (1m X 1m X 300mm) which will be excavated and replaced with rock armour to support a drainage discharge point; and regrading a section of the northern river bank (c.25-sq.m at 1:400) to provide for greenfield runoff rate discharge from the scheme. The NIS (s.3.2.1) refers a setback of abutments of between 5.5m and 2.5m from the Glenisland river⁵, which was not amended in the updated NIS notwithstanding an increase from stated bridge span from 17m to 19m. The abutments, as amended by further information, will actually be setback c.4m from the southern bank and 4.5m from the northern bank (perpendicular distance). The southern abutment and the proposed drainage discharge structures are located within the SAC; however, the SAC boundary does not follow the watercourse and its riparian corridor faithfully and it would be reasonable for the Board to view the SAC boundary to generally follow the fence-line and the riparian corridor at the location of the application site⁶. This approach is supported by the NPWS's contention that the riparian woodland is within the SAC at the proposed bridging point to the Glenisland River. It is on this basis that I will make my assessment.^{7 8}

⁵ This distance is on an oblique line parallel to the proposed carriageway, not the perpendicular distance from the watercourse.

⁶ The SAC boundary doesn't accurately align with the Glenisland River and riparian corridor on the current OSI maps or aerial photography and it excludes the riparian vegetation on the northern side of the watercourse and much of the watercourse itself. The SAC boundary appears to align best with the watercourse on the Cassini 6-inch map.

⁷ The original submission of the NPWS noted that the full extent of the overall proposed development, including temporary elements, was not shown within a defined '*application area*' or complete scheme drawings. This has been more clearly indicated on the further information drawings (e.g. 5642/16/11a, /11b and /11c).

⁸ Were the Board to consider the SAC boundary to be exactly as drafted (in which case it would actually exclude part of the watercourse at the junction with the site, in addition to its vegetated riparian corridor at that point and include agricultural grassland) then the incursion on the SAC by structures (southern abutment) would be far more significant, measuring at least 120-sq.m with embankments, plus c.10-sq.m for petrol interceptor and associated pipes.

- 7.4.9. Basing the SAC boundary on (approximately) the existing fence-line separating the riparian corridor from the agricultural fields would remove the southern abutment from the SAC but place the northern abutment slightly within it. The applicant clarified by way of further information (drawing no.5642/16/14b) that it is proposed to remove 4no. trees / shrubs from the northern riverbank and 5no. from the southern riverbank, that is within the riparian corridor and SAC. This would constitute a direct impact on the habitats within the SAC and has potential for indirect effects (addressed below) on the Features of Interest within the SAC, although the woodland habitat concerned is not a Feature of Interest of the SAC. Trees and shrubs will be cut down to stump height along the riverbanks, both sides of the Glenisland River within the redline boundary, within the SAC.
- 7.4.10. The NIS (p.55) indicates that the site encompasses an area of 419-sq.m⁹ of the SAC at the centre of the project site, comprising treeline and scrub on the banks of the river. I measure the overlap between the site area and the European site at almost 700-sq.m. There would be only minor physical encroachment of the bridge structure (c.10-sq.m) on the SAC by the northern bridge abutment, in addition to the northern SW discharge points (c.1-sq.m and 25-sq.m, respectively) within the riparian corridor and SAC. The southern abutment would fall outside the SAC but the southern SW discharge point with its associated rock armour (c.1-sq.m) would fall within the SAC. The applicant's NIS (p.55) estimates the total loss of key features of the SAC to represent 0.002% of the total area of the SAC. The NIS does not provide the figures upon which this is based. The area of overlap between the proposed project and the SAC, at 0.07ha, represents c.0.005% of the total area (1402.5ha)¹⁰ of the SAC. However, the direct impact on habitat within the SAC would be far less is not a significant impact. As the proposal does not entail removal of the river habitat that could be used by Salmon and FWPM and provides appropriate mitigation to limit the impacts on the associated riparian corridor within the SAC, I do not consider this to be a significant impact.
- 7.4.11. Even assuming an upper level of 700-sq.m physical encroachment within the SAC, within the context of the overall SAC site area, the area that would be affected would be almost negligible and would not entail loss of habitat of the two Features of

⁹ I could find no details on file which make clear how the area was calculated and to where exactly it refers. A smaller area of 341-sq.m land-take is referred to in the Screening Report.

¹⁰ Natura 2000 Standard Data Form, s.2.4.

Interest of the European site. The bridge span will not directly affect the watercourse but has potential to result in some indirect effects (addressed below).

- 7.4.12. The applicant has confirmed that no works are proposed north of CH 531, except for tie in works within the existing carriageway, with change in level ranging from 124mm to 0mm including infilling. There will be no encroachment on habitat within the SAC at the northern end of the scheme, without or outwith the site boundary of the proposed project, and the northern end of the scheme will be distant to the watercourse, albeit connected thereto by roadside ditches
- 7.4.13. On balance, having regard to the amendments made to the proposed road scheme by way of further information, and the mitigation measures proposed, I am satisfied that the direct effects arising do not have the potential to significantly adversely affect the integrity of the SAC in view of its conservation objectives.
- 7.4.14. **Indirect effects** – The NIS recognises that the construction and operation of the proposed alignment has the potential to cause deterioration in water quality of the Glenisland River through introduction of suspended solids and other pollutants such as hydrocarbons and wastewater, resulting in indirect short term (construction runoff) and indirect long-term effects (operational runoff), respectively, on the Newport River SAC in view of its conservation objective, in the absence of mitigation measures. In addition, it recognises the potential for significant adverse effects on the Newport River SAC in view of its conservation objective arising from increased over shading of the watercourse by the proposed bridge. The NPWS submits that the Board's appropriate assessment should be carried out having regard to the conservation objective for the SAC to *restore* to favourable conservation condition of Freshwater Pearl Mussel (in addition to Salmon), which are currently absent from the Glenisland River, and in view of the Moderate and deteriorating status of the water course which is At Risk of not meeting the WFD objective for Good status.
- 7.4.15. Salmon are widely reported to require High water quality of at least Q4 and Freshwater Pearl Mussel are widely reported to require high water quality of Q4-5 or Q5 and clean gravel and sand substrate are essential to a healthy population, allowing oxygen to move freely to buried juvenile mussels. An adverse impact on water quality may therefore pose a risk to the integrity of the SAC in view of its conservation objective. The short-term indirect effects have the potential to have a significant impact on the two species, most particularly on any unrecorded FWPM

that might reside in the Glenisland River at and downstream of the proposed development site for which the impact would have to the potential to be long term. The NIS notes that a significant population of Freshwater Pearl Mussel was found in the Newport River (but not on the Glenisland River which is a tributary thereof) in 1995; that silt can clog the substrate suffocating juveniles and larger quantities of silt or coating of the riverbed with filamentous algae may cause adults to waste away and die; and that the potential introduction of suspended solids and fine sediment to the Glenisland River may impact on water quality and habitat conditions of FWPM within the Glenisland River. I do not consider there to be any risk to the known population of FWPM downstream of Beltra Lough due to the dilution that would be available from that lake waterbody.

- 7.4.16. The potential for contamination of the watercourse habitat through discharge of suspended solids during construction has been significantly reduced through the revised design proposals submitted as further information, which omits the vast majority of works initially proposed to the riverbanks (omission of rock armour scour protection from beneath bridge) and through provision of an increased setback (to c.4m) of the southern abutment (*inter alia*, response to item no.9, refers).
- 7.4.17. The medium to long-term risk of contamination by suspended solids through bank collapse has also been addressed through revised / clarified proposals for vegetation removal along the river banks. 9no. trees / shrubs will be removed along the riparian corridor, with retention of stump and root systems in place and with measures to ensure protection of existing ground level vegetation included. This will ensure protection of the structural integrity of the riverbanks during development and operational phases, thereby reducing risk of increased suspended solids through riverbank collapse. The use of a limited area of rock armour to protect against scour on the bank at the southern drainage outfall is proposed as a more sensitive solution than a concrete headwall, entailing less construction work and lessening the risk of a concrete spill into the river. Mitigation measures for the construction of this element is addressed under FI response to item no.8.
- 7.4.18. Major construction works outside, but within the vicinity of the SAC boundary, including surface water drainage have high potential for significant contamination of the Glenisland River from surface water runoff contaminated by suspended solids, in addition to potential for accidental hydrocarbon discharges. The detailed mitigation measures are set out under section 6 of the NIS, including s.6.1 Construction Stage

Mitigation and s.6.2 Operational Phase, as updated by further information submission (including amendment to, *inter alia*, s.6.1.6 Pollution with other substances; s.6.1.7 Timing Restrictions; s.6.2.1 Surface Water Drainage Design), which I consider to be reasonable, sufficient and appropriate to protect surface water quality during construction and operational phases. In particular, the complete redesign of surface drainage system is considered a more natural and sustainable approach that will integrate natural means of removing sediment and particulate pollutant by grassed verge design (trapping them within the grassed structure), in addition to the use of more traditional engineering elements such as petrol interceptors. On this basis I am satisfied that there will be no significant adverse effects on the integrity of the SAC, from contaminated runoff during construction and/or operational period, in view of its conservation objectives.

- 7.4.19. Potential for indirect adverse effects arising from changes in the hydrochemistry of the river to run off from imported fill for the development, within and outwith the SAC, are addressed in the further information response (item no.8 and updated NIS), which indicate that the fill material (including rock armour) will corresponds to the study area's underlying geology (no calcareous aggregates to be used) and the riverside rock armour will not contain fine aggregate materials.
- 7.4.20. There is potential for indirect effects on Salmon from shading effects, with light limitations possibly leading to a local reduction in primary production (organic matter) and in the other functions of aquatic vegetation including substrate cover for invertebrate species and food for herbivores. The NIS estimates the area affected to be 117-sq.m (9m river bed X 13m bridge width) against an estimated freshwater Salmon habitat of 493,143-sq.m in the Newport River catchment (McGinnity et al. (2003) is cited), accounting for only 0.02%, and therefore the NIS concludes that there will be no significant adverse effect on Salmon.
- 7.4.21. In addition, Salmon are essential to the life-cycle of Freshwater Pearl Mussel, playing host to their larval form and any consequential suspended solids of fine silts discharged to the river system during construction have the potential to adversely affect Salmon and therefore on Freshwater Pearl Mussels. According to the NIS, in the absence of mitigation measures the impact of suspended solids and fine sediment on Salmon and, subsequently, on Freshwater Pearl Mussel on the Newport River SAC, will be indirect and short-term during construction and long-term during the operational phase of the proposed project. As noted above, the revisions to the

proposed design and to mitigation measures made through further information submission will ensure that there will be no indirect impacts on Salmon or FWPM.

- 7.4.22. **Other construction / operation effects** - There is potential for the proposed new bridge structure to alter the hydrological regime of the Glenisland River, thereby impacting the structure and function of the Glenisland River and Newport River SAC. The NIS does not detail how this might affect the SAC, however I would assume the changes to the hydrological regime from loss of stabilising riverbank vegetation and creation of permanent overshadowing, have the potential to affect the Glenisland River's suitability to accommodate Salmon.
- 7.4.23. **Operational effects on habitats and species** – The NIS notes that the potential operational effects of the project include potential of the physical infrastructure to inhibit wildlife within the realigned section (i.e. habitat fragmentation); hydrological and water quality effects through road run-off of pollutants and embankment loading; management of soft estate area within land-take, such as ditch clearance and mowing / strimming; disturbance of soft estate area through management, improvements or road safety strategies (provision of signage, lighting and/or ancillary equipment or services; traffic related mortalities (fragmentation of commuting routes); change in air quality with increased nitrogen loading to natural and semi-natural ecosystems. In this regard, the NIS does not provide an assessment of the potential effects on the features of interest within the SAC, however these can be assumed to comprise indirect effects related largely from potential run-off of pollutants, run off from managed soft estate areas and ditch clearances. Subject to the implementation of operational water protection measures no significant adverse effects on the integrity of the SAC, in view of its conservation objectives, are anticipated.
- 7.4.24. **In combination effects** – According to EPA data the water quality of the catchment has declined over the WFD monitoring periods, with this section of the Glenisland River rated Moderate and At Risk of not achieving the WFD objective of Good status. The EPA data indicates that the main pressures on water quality within the catchment are primarily related to forestry plantation.
- 7.4.25. **In combination effects - Plans:** The NIS considered the potential for effects on the SAC arising from the proposed project in combination with the Mayo County Development Plan 2014-2020 (specified policies and objectives directly related to

conservation of the Natura 2000 network, including road infrastructure strategy, environment, heritage and amenity strategy, flooding and soil erosion, landscape protection, natural heritage and views and prospects), the River Basement Management Plan for Ireland 2018-2021, Inland Fisheries Ireland Corporate Plan 2016-2020, the Inland Fisheries Act 2010.

- 7.4.26. The NIS would suggest that there is no potential for adverse in-combination effects with the County Development Plan. Whilst the R312 is identified in the Plan as a strategically important regional road in Table 19 of the Plan (Appendix 4), the only improvements to the route under the Plan (Table 3) is that proposed at Glenisland subject of this application. Many of the other policies and objectives referred to, including the Landscape Protection Policy and associated matrix, provide a level of protection to all European sites from potential significant effects from development. There is no potential for in-combination effects with the River Basin Management Plan, the Inland Fisheries Ireland Corporate Plan 2016-2020 or the Inland Fisheries Act 2020, although in the absence of site-specific mitigation there is potential for the proposed project to prevent the achieving of WFD objectives for the Glenisland River, Beltra Lough, Newport River and Clew Bay.
- 7.4.27. **In-combination effects – Projects:** The NPWS considered there to be inadequate and incomplete information concerning in-combination effects with other projects. The NIS considered existing waste facilities at Derrinumera, Newport Wastewater Treatment Plant, forestry in the area and local planning applications. It concluded that there is no potential from Derrinumera waste facility due to the nature of the facility (no longer a waste disposal facility but a public civic amenity for recycling and reclamation of materials since 2009), the procedures for removal of leachate from the site to Castlebar WWTP and the absence of any discharges to Glaishty River bordering the site and which flows to Beltra Lough. As Newport WWTP is located downstream of Newport River SAC, the NIS considered there to be no potential for in-combination effects on the SAC.
- 7.4.28. The NIS recognised that forestry activity can have a number of effects, such as nutrient enrichment, acidification and sediment pollution and alteration to habitats, arising from land drainage, clear felling, planting and establishment stages, and therefore, with 20% of the Newport River sub-catchment under plantation forestry, it considered there to be potential for in-combination effects on the SAC. However, on the assumption that forestry activity by Coillte adheres to the Irish National Forest

Standard and the Code of Best Forest Practice, it is reasonable to conclude that there is no potential for significant in-combinations effects on the SAC subject to implementation of the proposed site-specific mitigation measures.

7.4.29. The NIS refers to there being a number of recent planning permissions in proximity to the proposed project, however no details have been provided other than that those applications related predominantly to the construction of new dwellings (with on-site WWTS) or renovation of existing dwellings and to the development of a pontoon. A review of the Council's online planning maps would suggest that only the development of the pontoon associated with the angler's shelter, both located within the Newport River SAC, would have the potential to have in-combination effects. The potential for in-combination effects between the project and the said development is raised as a concern by the NPWS.

7.4.30. I estimate that the angler's facilities and pontoon development resulted in the loss of c.1431-sq.m of habitat from within the SAC. Based on the NIS habitat surveys and aerial photographs, the habitat impacted upon is possibly the Priority Annex I habitat, *Alluvial Forest with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Silicion albae)* [91E0]. The applicant has clarified in the FIR that there will be no works to or direct affects on lands outside the redline boundary at the northern end of the scheme and within the SAC, or the aforementioned woodland area. The submitted drawings provide for surface water to drain southwards away from that section of the SAC thereby omitting potential for significant direct effects in that location. In addition, the subject woodland habitat is not a feature of interest of the SAC and the loss of this limited area of habitat is not considered, in itself, to constitute a significant effect on the integrity of the SAC and therefore it cannot be considered a significant in-combination effect on the integrity of the SAC taken with the potential effects arising from the current proposed project. As the angler's facilities projects have been completed and are operational, there will be no in-combination construction effects with the proposed road realignment project. There is no potential for significant in-combination operational effects on the integrity of the SAC. I therefore do not consider there to be potential for significant in-combination effects on the SAC in view of its conservation objectives.

7.4.31. **Mitigation measures: Construction** - Section 6.0 of the NIS addresses detailed mitigation measures (as revised by the updated NIS submitted as further information). These largely comprise best practice approach to project construction

(section 6.1), with details outlined in a preliminary method statement. The principle control measures are set out under section 6.1.2 and include full time employment of a suitably qualified ecologist, being a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) as part of the Employer's Site Representative Team and reporting directly to the Local Authority and with power to stop works, to be present on site on a full time basis up until the main construction works have been undertaken, and subsequently attendance to be reduced to at least one visit per week. An Environmental Operating Plan shall be prepared by the contractor (to be certified by the employer's site representative staff and ecologist in consultation with the IFI) in accordance with TII guidance setting out the contractor's approach to managing environmental issues associated with the construction works, documenting the implementation of the environmental commitments set out in the SWMP and in the NIS and as may be stipulated in conditions attaching to the permission.

- 7.4.32. The bridge has been designed (as revised) so as not to interfere with the Glenisland River in any way during construction. Detailed construction mitigation measures are set out sections 6.1.4 to 6.1.11 and address site clearance (fencing and excavation), sedimentation and waterborne pollutants, other pollutants, timing restrictions on river works (relates to salmonid spawning activity, with works to be carried out between July to September except in exceptional circumstances with the agreement of the IFI), stockpiling of spoil and land-spreading, dust suppression and water abstraction, invasive species (Japanese knotweed is present in close proximity to the project area) and environmental incidents and accidents. The issue regarding implementation of mitigation measures outside the site boundary has been resolved by further information submission (letters of agreement from relevant landowners have been submitted).
- 7.4.33. There is, however, an issue with the proposed revised drainage discharge outfall on the northern bank which extends outside the redline boundary and land acquisition area and is not referred to in the letters of agreement from relevant landowners submitted as further information. The area concerned is very minor; possible 2-3-sq.m and it is unclear whether re-grading works are necessary within that area. Given the very minor extent of area concerned, it would appear feasible to revise the discharge area by extending the regraded area eastwards so that is wholly contained within the application site boundary. This issue can be addressed by condition.

- 7.4.34. The NPWS observations on the applicant's FI submission notes that the turbidity monitoring locations have not been indicated on the drawings and it submits that at least one of the turbidity monitoring points will be located outside the site boundary, suggesting that the applicant may not have sufficient rights to implement this monitoring which will be crucial to the implementation of mitigation measures necessary to protect the SAC in view of its conservation objective. I am satisfied that, given the nature of the issue concerned, it would be reasonable to attach a condition requiring the developer to provide details of the proposed turbidity monitoring locations to the NPWS for its written agreement prior to the commencement of any works on site.
- 7.4.35. I consider the measures proposed to be reasonable and comprehensive and sufficient to ensure that the proposed development will not adversely affect the SAC in view of its conservation objective.
- 7.4.36. **Mitigation measures: Operational** – These measures are set out under section 6.2 and relate to surface water drainage design and to the flooding and hydrological regime. The drainage system is designed to attenuate and treat carriageway run-off in accordance with TII standards. This will entail construction of a new surface water drainage system for the proposed road including 2no. new outfalls to the Glenisland River, with indirect discharge via grassed swales and hydrocarbon interceptors, as detailed in the SWMP.
- 7.4.37. The layout of the proposed road design, as informed by the Flood Risk Assessment submitted with the application, is designed to be above the maximum projected 0.1% AEP +CC flood event level, with in excess of the minimum 300mm freeboard requirement (OPW section 50 requirements) between the bridge and the 1% AEP event (590mm achieved). The NIS notes that an application for consent to the OPW will also be required under section 50 of the EU (Assessment and Management of Flood Risks) Regulations SI 122 of the 2010 and Section 50 of the Arterial Drainage Act, 1945. Surface water runoff will be maintained at greenfield rates and the project is not anticipated to impact on flood levels, hydrology or hydromorphology of the Glenisland River, with the area of floodplain affected negligible relative to the total area of floodplain.
- 7.4.38. **Conclusion** – It is concluded that all potential adverse significant direct, indirect and in-combination effects on the integrity of the Newport River SAC, in view of that site's

conservation objectives, will be avoided through the proposed design of the project as revised by further information submission, and by the implementation of best practice and mitigation measures outlined in the NIS (section 6.0), the revised SWMP and Planning Report submitted with the application.

8.0 Conclusion and Recommendation

On the basis of the above assessment, I recommend that the Board approve the proposed project subject to the reasons and considerations below and subject to the conditions requiring compliance with the submitted details and with the mitigation measures set out in the NIS, the Planning Report and the Surface Water Management Plan.

9.0 Conclusion and Recommendation

On the basis of the above assessment, I recommend that the Board approve the proposed project subject to the reasons and considerations below and subject to the conditions requiring compliance with the submitted details and with the mitigation measures set out in the Planning Report, the NIS and Addendum to NIS, the EclA, the Surface Water Management Plan and updated SWMP and the applicant's Further Information Response.

10.0 Reasons and Considerations

In coming to its decision, the Board had regard to the following:

- (a) the EU Habitats Directive (92/43/EEC),
- (b) the European Union (Birds and Natural Habitats) Regulations 2011-2015,
- (c) the likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely significant effects of the proposed development on a European Site,

- (d) the conservation interests and conservation objectives of the Newport River Special Area of Conservation site code 002144,
- (e) the policies and objectives of the Mayo County Development Plan 2014-2020, as varied,
- (f) the nature and extent of the proposed R312 road realignment scheme as set out in the application for approval,
- (g) the information submitted in relation to the potential impacts on habitats, flora and fauna, including the Natura Impact Statement, the addendum to the NIS, the Ecological Impact Assessment Report, the Surface Water Management Plan, the updated Surface Water Management Plan, the Planning Report and the Further Information Response Report
- (h) the submissions and observations received in relation to the likely effects on the environment, and on the likely significant effects of the proposed development on a European Site, and
- (i) the report and recommendation of the person appointed by the Board to make a report and recommendation on the matter.

Appropriate Assessment:

The Board agreed with the screening assessment and conclusion carried out in the Inspector's report that the Newport River Special Area of Conservation (site code 002144) is the only European Site in respect of which the proposed development has the potential to have a significant effect.

The Board considered the Natura Impact Statement and Addendum to the Natura Impact Statement and associated documentation and drawings submitted with the application for approval as amended by further information submitted 17 April 2019, the mitigation measures contained therein, the submissions and observations on file, and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development for the affected European Site, namely the Newport River Special Area of Conservation (site code 002144) in view of the site's conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment.

In completing the appropriate assessment, the Board considered, in particular, the following:

- i) the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,
- ii) the mitigation measures which are included as part of the current proposal, and
- iii) the conservation objectives for the European Site.

In completing the appropriate assessment, the Board accepted and adopted the screening and the appropriate assessments carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Site, having regard to the site's conservation objectives.

In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Site, in view of the site's conservation objectives

Proper Planning and Sustainable Development:

It is considered that, subject to compliance with the conditions set out below, the proposed development would not have significant negative effects on the community in the vicinity, would provide an improved road realignment to a strategically important regional route, would not seriously injure the amenities of property in the vicinity or adversely affect the local population, including human health, would not give rise to a significant risk of pollution to air or water and would not be detrimental to soil, landscape, or to the cultural heritage of the area. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application except where otherwise may be required in order to comply with the following conditions.

Reason: In the interest of clarity.

2. a) The clear-span bridge shall have a minimum span of 19m as measure along and parallel to the centre line of the carriageway.
b) The southern abutment shall be set back at least 4m perpendicular distance from the edge of the Glenisland River watercourse;
c) The northern abutment shall be setback at least 4.5m perpendicular distance from the edge of the Glenisland River watercourse.

Reason: In the interest of clarity.

3. The mitigation measures identified in the Natura Impact Statement, Addendum to the Natura Impact Statement, the Planning Report, The Ecological Impact Assessment Report, the Planning Report, the Surface Water Management Plan and the Updated Surface Water Management Plan, and the associated documentation, reports and drawings submitted with the application shall be implemented in full by the local Authority.

Reason: To minimise the impact of construction and operational activities on species of conservation interest, and associated habitats, in the interest of proper planning and sustainable development of the area.

4. Prior to the commencement of the development the local authority shall have acquired sufficient rights over the lands required to implement all proposed temporary and permanent mitigation and / or monitoring measures (including turbidity monitoring) detailed in documentation and drawings submitted with the application.

Reason: In order to minimise the impact of construction activities on species of conservation interest, and associated habitats, in the interest of proper planning and sustainable development of the area.

5. In the event that the developer is unable to obtain sufficient legal right to provide the northern surface water outfall (as proposed in further information) which falls partly outside (west of) the indicated Land Acquisition Area boundary, the regraded area shall be extended eastwards commensurate with the proposed area that falls external to the said boundary.

Reason: In the interest of clarity.

6. Prior to the commencement of development, the applicant shall have agreed in writing with the National Parks and Wildlife Service:
 - (i) The location of pre-construction weekly baseline water quality parameter monitoring and the duration period of that monitoring:
 - (ii) The location of the two proposed turbidity monitoring locations.

Reason: To ensure the adequate protection of water quality for the duration of the construction works.

7. Any removal of trees that support bat populations, as advised by the onsite Ecologist employed by the developer, shall be carried out only under licence from the National Parks and Wildlife Service.

.Reason: In the interest of wildlife protection.

8. Stockpiling of topsoil shall be located no closer than 25m from the Glenisland River.

Reason: To ensure the adequate protection of water quality for the duration of the construction works.

.John Desmond
Senior Planning Inspector

28th June 2019