Inspector's Report

ABP-310301-21

Development	Removal of excess gravel build up in the River Galey in the vicinity of Athea Bridge, Co. Limerick.
Location	Athea Bridge, Co. Limerick.
Local Authority	Limerick City and County Council
Type of Application	Application for approval made under Section 177(AE) of the Planning and Development Act, 2000 (local authority development requiring appropriate assessment)
Prescribed Bodies	An Taisce Dept Housing, Local Government & Heritage (Development Applications Unit) Geological Survey Ireland
Observer(s)	Liam Casey
Date of Site Inspection	5 October 2021
Inspector	Una Crosse

1.0 Introduction

1.1. Limerick City & County Council is seeking approval from An Bord Pleanála to undertake works comprising the removal of excess gravel build up within/adjacent to the Lower River Shannon SAC which is a designated European site. There are other designated European sites (SPAs and SACs) in proximity to the proposed works (see further analysis below). A Natura Impact Statement (NIS) and application under Section 177AE was lodged by the Local Authority on the basis of the proposed development's likely significant effect on a European site.

1.2. Section 177AE of the Planning and Development act 2000 (as amended) requires that where an appropriate assessment is required in respect of development by a local authority the authority shall prepare an NIS and the development shall not be carried out unless the Board has approved the development with or without modifications. Furthermore, Section 177V of the Planning and Development Act 2000 (as amended) requires that the appropriate assessment shall include a determination by the Board as to whether or not the proposed development would adversely affect the integrity of a European site and the appropriate assessment shall be carried out by the Board before consent is given for the proposed development.

2.0 Proposed Development

2.1. Context

By way of background to the proposed development, the applicant has outlined that in September 2019 Limerick City and County Council (LCCC) sought to undertake a flood relief scheme for Athea with extensive flooding having taken place in Athea in 2005 and 2008. Following these flooding events, reports and projects were undertaken which provided the initial estimation of flood extents for Athea which highlighted Athea as an Area of Further Assessment (AFA) and Community at Risk (CAR) area for the Catchment Flood Risk Assessment Management (CFRAM) study. It is noted that the Athea AFA is included in Unit of Management (UoM) 23 Tralee Bay-Feale in the Shannon CFRAM study. The purpose of the Athea FRS is stated as being the identification of the most viable FRS to alleviate flooding in Athea village. It is outlined, by way of hydrological context, that the River Galey, which is a tributary

of the River Feale, rises on the western slopes of Knockanimpuha Hill, in a steep-sided valley, and flows in a westerly direction through Athea before joining the Feale approximately 25km downstream of Athea village. It is stated that deposition of sediments, gravels and cobbles occurs in the River Galey at Athea bridge and a vegetated gravel bar has formed immediately up and downstream of the bridge which impacts on the conveyance capacity at the bridge and potentially increasing flood risk locally. The large silt and sediment deposits have built up within two arches of Athea Bridge and a stretch up and downstream of these arches. It is stated that historically, these deposits were removed as necessary by local landowners from the channel. It is also stated that following the extreme events of 2008, that the OPW agreed to carry out remedial works to remove debris and have done so on 4 occasions since then removing trapped debris from the bridge which was impeding available flow conveyance and alleviating flood risk.

2.2. Proposed Works

It is proposed that the OPW will undertake the works on behalf of LCCC to remove the silt and sediment deposit and associated vegetation from the effected arches of the bridge and up and downstream of the bridge. The proposal includes the removal of approximately 240m3 of silt, sand and gravel deposits, as well as vegetation, from the River Galey to 300mm above summer-low water levels in the vicinity of Athea Bridge.

It is stated that the works are considered essential in order to reduce the potential risk of flooding along the proposed section of the river on an interim basis until more robust measures are put in place as part of the Athea Flood Relief Scheme.

It is proposed that the works will be undertaken with a 6t excavator and 6t dumper and the material is proposed to be removed off-site using a tractor and dump trailer to a dedicated facility (subject to EPA approval) for ongoing treatment due to the presence of the invasive plant material Himalayan Balsam (I. glandulifera) within these sediments, which are qualified as occurring in small quantities.

2.3. Documents Accompanying Application

One report was received which includes the follows:

- Proposed Works (Section 2)

- Description of Potential Impacts (Environmental Impacts) which include
    - Ecology/Biodiversity
    - Biosecurity
    - Water Quality
    - Noise
    - Cultural Heritage
- Natura Impact Statement (Appendix B)
- Letter from LCCC Conservation Officer (Appendix C)
- Letters of Consent from land owners (Appendix D)

2.4. **Further Information**

Following a request for further information a report was received which includes the following documents:

- Index of Reponses to the Further information (Section 2)
- Reference to policies and objectives in the current Limerick City and County Development Plan (Section 3)
- Response to the Queries on the NIS (Section 4)
- Response to the Submissions and Observations (Section 5)
- EIA Screening (Appendix A)
- Drawings (Appendix B)
- NIS (Updated Version January 2022 - Appendix C)
- Underwater Archaeological Impact Assessment (UAIA) Report

3.0 Site and Location

3.1. Athea is located in west county Limerick close to the county boundary with County Kerry on the R523 between Rathkeale and Listowel. The R524 from Glin to Abbeyfeale also passes through Athea. The River Galey meanders through the town from the north going east south of the bridge and continuing south/south east. The

bridge provides a crossing point on the river for the R523 or Con Colbert Street. In more recent times a pedestrian bridge was constructed to the south of the original bridge.

3.2. The bridge and site area is adjoined to the northeast by a detached property on a large site on the river bank with the towns treatment plant and a handball alley further north. To the northwest, the riverbank is adjoined by a three storey property which adjoins the main street and its rear holding which adjoins the river bank. To the south of the bridge, the river is adjoined to the southeast by an open area of ground along the river bank within which a small single storey property is located. To the southwest an open area of amenity space with a small memorial shelter is located with a two-storey property further west.

3.3. Following a further information request detailed drawings of the site of the proposed works have been provided. The site of the proposed works comprises the area beneath Athea Bridge, which is a protected structure and within its arches. The area of the proposed works also includes an area of the riverbed up and downstream of the bridge.

4.0 Planning History

4.1. None of Note

5.0 Legislative and Policy Context

5.1. **The EU Habitats Directive (92/43/EEC):** This Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) and 6(4) require an appropriate assessment of the likely significant effects of a proposed development on its own and in combination with other plans and projects which may have an effect on a European Site (SAC or SPA).

5.2. **European Communities (Birds and Natural Habitats) Regulations 2011:** These Regulations consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in CJEU judgements. The Regulations in particular require in Reg

42(21) that where an appropriate assessment has already been carried out by a 'first' public authority for the same project (under a separate code of legislation) then a 'second' public authority considering that project for appropriate assessment under its own code of legislation is required to take account of the appropriate assessment of the first authority.

5.3. **National nature conservation designations:** The Department of Culture, Heritage and the Gaeltacht and the National Parks and Wildlife Service are responsible for the designation of conservation sites throughout the country. The three main types of designation are Natural Heritage Areas (NHA), Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) and the latter two form part of the European Natura 2000 Network.

5.4. European sites located in proximity to the subject site include:

- Lower River Shannon SAC
- Stack's to Mullaghareirk Mountains
- West Limerick Hills
- Mount Eagle SPA.

5.5. **Planning and Development Acts 2000 (as amended):** Part XAB of the Planning and Development Act 2000, as amended sets out the requirements for the appropriate assessment of developments which could have an effect on a European site or its conservation objectives.

- 177(AE) sets out the requirements for the appropriate assessment of developments carried out by or on behalf of local authorities.
- Section 177(AE) (1) requires a local authority to prepare, or cause to be prepared, a Natura impact statement in respect of the proposed development.
- Section 177(AE) (2) states that a proposed development in respect of which an appropriate assessment is required shall not be carried out unless the Board has approved it with or without modifications.
- Section 177(AE) (3) states that where a Natura impact assessment has been prepared pursuant to subsection (1), the local authority shall apply to the

Board for approval and the provisions of Part XAB shall apply to the carrying out of the appropriate assessment.

- Section 177(V) (3) states that a competent authority shall give consent for a proposed development only after having determined that the proposed development shall not adversely affect the integrity of a European site.
- Section 177AE (6) (a) states that before making a decision in respect of a proposed development the Board shall consider the NIS, any submissions or observations received and any other information relating to:
    - The likely effects on the environment.
    - The likely consequences for the proper planning and sustainable development of the area.
    - The likely significant effects on a European site.

6.0 The Natura Impact Statement

6.1. Limerick City and County Council's application for the proposed development was accompanied by a Natural Impact Statement (NIS) which scientifically examined the proposed development and the European sites. The NIS identified and characterised the possible implications of the proposed development on the European sites, in view of the site's conservation objectives, and provided information to enable the Board to carry out an appropriate assessment of the proposed works.

6.2. Following the request for further information an Updated NIS, dated January 2022, was submitted and it is the updated NIS which I propose to assess.

7.0 Consultations

7.1. The application was circulated to the following bodies:

- Department of Communications, Climate Action and Environment
- Department of Culture, Heritage and the Gaeltacht
- Department of Housing, Planning and Local Government

- Inland Fisheries Ireland
- Development Applications Unit
- Geological Survey of Ireland
- The Heritage Council
- An Chomhairle Ealaíon
- Fáilte Ireland
- An Taisce

Responses were received from the following which I have summarised:

7.2. **An Taisce**

The submission is summarised as follows:

- In relation to water quality monitoring, two proposed measures are outlined which relate to visual inspection of the river with the NIS stating that works will be halted if there is any decrease in water quality detected.
- Observed that given sensitive nature of the SAC site, the use of subjective visual assessment to determine if the levels of siltation are increasing is not of sufficient scientific rigour.
- Further exacerbated as expertise of person carrying out the visual assessment is not defined/not a particular level of scientific expertise required.
- Standard scientific methodology for assessing siltation should be employed, and carried out by appropriately qualified staff, as failure to implement robust mitigation measures could lead to a deterioration in the SAC site.
- Well established in law that approval can only be granted for plans and projects when it has been established beyond all reasonable scientific doubt that proposal will not adversely impact and Natura 2000 sites with reference to Case C-258/11 and requirement that no reasonable scientific doubt remains.

- Decision maker must have full confidence in the mitigation measures proposed to prevent and adverse impact on the SAC and the monitoring proposed cannot provide that level of certainty.

7.3. **Development Applications Units (Department of Housing, Local Government & Heritage)**

The submission is summarised as follows:

Archaeology

Noted that proposed silt removal works will be at a protected structure with bridge shown on first edition OS maps which may indicate that it was built over an earlier bridge or fording point with potential that works could impact the protected structure or impact/reveal previously unrecorded underwater cultural heritage.

National Monuments Services requires that an Underwater Archaeological Impact Assessment (UAIA) be carried out in advance as further information.

The format of the UAIA should be as follows:

- Carried out by a suitably qualified and suitably experienced underwater archaeologist;
- Licenced by the Department of Housing, Local Government and Heritage and a detailed method statement accompanies the licence application;
- Include bank and foreshore visual survey accompanied by hand held metal detector survey (Licence as required)
- Detailed descriptive, photographic and geo-referenced UAIA report should be submitted with an Impact Statement and should include recommendations for further archaeological mitigation that may be considered necessary to protect UCH, if required based on results of UAIA.

Further recommendations may issue by NMS based on result of the UAIA.

Nature Conservation

- Accepts conclusion of NIS that with implementation of specified mitigation measures that proposed project will not give rise to significant negative effects on the integrity of the European sites.

- In relation to biosecurity measures, department recommends that in addition to inspection for visible biosecurity threats that all machinery to be used is power washed and allowed dry before arriving on sites – tracks, inner wheels and other areas with complex structures capable of holding biological material should be power washed and allowed dry prior to going on site and particularly important for machinery coming from another catchment or used at other water bodies.
- Proposal to clear vegetation as early as possible prior works – this should either take place prior to bird nesting season or as late as possible to allow nesting birds to fledge.
- If works can be delayed until September this would negate any requirement for separate vegetation removal works.

7.4. **Geological Survey Ireland (Dept of Environment, Climate & Communications)**

The submission is summarised as follows:

- GSI encourage use of and reference to their datasets with list attached of publicly available datasets which may be useful to environmental assessment and planning process.
- Process for designating County Geological Sites (CGS's) as adopted under National Heritage Plan outlined with Geological heritage county audit for Limerick not yet published but records show no CGS located within vicinity of proposed sites and no envisaged impact on integrity of CGS's but if proposal is altered further consultation required.
- Role of GSI Groundwater and Geothermal Unit outlined. Proposals need to consider any potential impact on specific groundwater abstractions and on groundwater resources in general and recommend using the GSI's groundwater maps on Map viewer. Data viewer indicates a locally important aquifer - bedrock which is generally moderately productive only in local zones underlies the site with high to extreme vulnerability and recommends use of datasets to assess potential impacts to groundwater.
- Online datasets of bedrock and subsoil are available and encourage use of same.

- Baseline geochemistry data provided for Ireland as part of Tellus programme which can be used to assess chemical status of soil and water.
- Should development proceed, GSI would apricate a copy of reports detailing any site investigations carried out to add to the national database.

7.5. **Public Submissions:**

No submissions received from members of the public.

8.0 Further Information

8.1. **Request & Response**

8.1.1. **Item 1 - Request - Information to Address Section 177AE(6)(a) & (b)**

Section 177AE of the Planning and Development Act 2000, as amended requires at subsection (6) that the Board in their consideration of the application for approval, take the following into account:

(a) The likely effects on the environment,

(b) The likely consequences for the proper planning and sustainable development of the area, and

(c) The likely significant effects of the proposed development on any European sites.

While parts of (a) & (c) are addressed separately in the next sections and while some matters are addressed in Section 3 of the report the application documentation submitted to the Board fails to satisfactorily address parts (a) & (b) above and you are requested to provide information to facilitate the Board in its consideration of this requirement of the approval application.

8.1.2. **Item 1 – Response**

Part (a)

Addressed in updated NIS

Part (b)

Works are proposed to reduce flood risk in the village and supported by polices in the County Development Plan outlined in Section 3 of the report.

Part (c)

Addressed in updated NIS

8.1.3. **Item 2 - Request - Drawings**

Please provide the following drawings at an appropriate scale:

- Site location plan
- Scaled site layout plans
- Plans, elevations and sections as appropriate of the bridge and its arches.

8.1.4. **Item 2 – Response**

Following drawings submitted:

- Site Location Plan
- Site Layout Plan
- Plan and Elevation

8.1.5. **Item 3 Request - Natura Impact Statement**

An updated NIS has been submitted (Appendix C). The response to the matters arising are specifically addressed in Section 4 of the report and summarised as follows:

Request - Methodology for Water Quality Monitoring

Observations made by An Taisce (1st July 2021) consider that in relation to water quality monitoring, the visual inspection of the river proposed to detect if there is any decrease in water quality cannot provide that level of certainty required to ensure that the mitigation measures proposed would prevent any adverse impact on the SAC. You are requested to address this matter and respond accordingly.

Response

- Qualifications of proposed Ecological Clerk of Works outlined

- Additional mitigation to mitigate the suspension and transfer of sediment downstream comprising alarmed sondes to measure turbidity.

Request - Screening out of Qualifying Interests in Lower River Shannon SAC

Table 6-2 in the Screening for Appropriate Assessment (Section 6) of the Natura Impact Statement screens out a number of qualifying interests in the Lower River Shannon SAC at screening stage as follows:

- Sandbanks which are slightly covered by sea water all the time [1110]
- Estuaries [1130]
- Mudflats and Sandflats not covered by seawater at low tide [1140]
- Coastal lagoons [1150]
- Large shallow inlets and bays [1160]
- Reefs [1170]
- Perennial vegetation of stony banks [1220]
- Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]
- Salicornia and other annuals colonising mud and sand [1310]
- Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]
- Mediterranean salt meadows (Juncetalia maritimi) [1410]
- Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]
- Tursiops truncatus (Common Bottlenose Dolphin) [1349]

Therefore, only some of the sites qualifying interests are brought forward for consideration at appropriate assessment (stage 2). While the rationale for screening out each of the qualifying interests is provided, please provide reference to guidance/best practice material which supports screening out individual QI's from sites being brought forward for appropriate assessment.

Response

Rationale for screening out some of the QI's at Stage 1 which are within a site taken forward to Stage 2 is provided with no pathways arising.

Application of Correct Tests/Correct Terminology

The NIS must address the correct Appropriate Assessment test, the conclusion of which should enable the Board to ascertain whether the projects would adversely affect the integrity of the site concerned having regard to the site's conservation objectives. Sections 9.1.1 – 9.1.8 and Section 10 of the NIS consider whether the project could cause 'potential impacts' or 'cumulative impacts' on the qualifying interests/special conservation interests of the Lower River Shannon SAC and Stack's to Mullaghareirk Mountains SPA. In relation to Appropriate Assessment, Article 6(3) of the Directive requires that the assessment undertaken addresses if the project will 'adversely affect' the integrity of the European Sites in view of the sites conservation objectives.

Furthermore, the concluding paragraph of the NIS states that the proposal 'will not give rise to significant negative effects' on the qualifying features of the Natura 2000 site(s), alone or in-combination with other plans/projects. This is the test for stage 1 Screening for Appropriate Assessment and not stage 2 which, as outlined above, refers to 'adverse affects' on the integrity of the European Sites in view of the sites conservation objectives.

You are also advised that Section 10 of the NIS refers to cumulative impacts when Article 6(3) of the Habitats Directive refers to projects – 'in-combination with other plans or projects'.

You are requested to provide an amended NIS to reflect the amendments requested in sections 3.1 - 3.3 above.

Item 3 - Response

NIS updated to incorporate the languages within Article 6(3) of the Habitats Directive.

Item 4 – Submissions and Observations

- Response to An Taisce submission addressed in Section 4.1
- DAU submission addressed in Appendix D
- Geological Survey of Ireland submission noted.

8.2. **Further Consultation**

Two submissions were received which I have summarised as follows:

Development Applications Unit (Department of Housing, Local Government & Heritage)

- Monitoring Condition proposed which includes engagement of underwater archaeological to carry out monitoring of all works and the monitoring to be licensed by the Department with a detailed method statement to accompany licence application.

Liam Casey

- Welcome a speedy and positive decision to ensure gravel can be removed during the environmental window in the summer.
- Accumulated over 14 years reducing capacity of the river and threatening flooding causing damage to observers home and adjoining property and neighbours.
- Build up leads to diversion of waters towards observer's property eroding riverbank and home.
- Evidence of subsidence to the river bank, home and bridge abutment walls.
- Increased frequency of weather events presents constant risk of flooding.
- Home and adjacent properties flooded on various occasions in redent years with levels of flooding of 4 feet.

9.0 Assessment

9.1.1. The likely consequences for the proper planning and sustainable development of the area

This matter was not addressed in the documentation received by the Board and therefore was included in the further information request. While the response is not very detailed or comprehensive, there is reference to a number of policies and objectives in the County Plan including Objective IN O36 which seeks to minimise the threat and consequences of flooding. I would also note that the need and justification for the proposal in respect of addressing the threat of flooding on

properties within the area and the wider area of the village centre is addressed throughout the documentation. The drawings submitted also facilitate defining the extent of the scheme. While it may have been appropriate to address the recreational use of the river and potential implications of the existing gravel or proposed development on same but having regard to the overriding need to address the threat of flooding, I consider the response received can be accepted.

9.1.2. **The likely effects on the environment**

While the response to the further information request references the NIS, which is included in the next subsection of the Act in respect of Section 177AE and is addressed in the next section of this report, I would refer in particular to two documents submitted with the response to further information.

EIA Screening

The response to further information includes a screening determination. It is outlined that the proposal is not a project listed in either Part 1 or 2 of Schedule 5. While there is no reason provided within the covering letter to outline why a screening determination was then undertaken, I would note the following from the information submitted.

No cumulative impacts with other planned developments have been identified which I consider is reasonable. The possibility of water contamination from the instream works is outlined in respect of suspended solids and hydrocarbons. This is addressed separately below in relation to the information provided in the NIS. It is outlined that it is proposed that the works will be undertaken within a 2 week period between July and September to avoid salmonoid spawning period and comply with IFI Guidelines. The mitigation measures proposed including the CEMP are considered sufficient to ensure there is no significant negative impact and I agree with the conclusion reached that the proposed development would not be likely to have significant effects on the environment and an EIAR is not required.

Underwater Archaeology

In response to the submission from the Department, an Underwater Archaeological Impact Assessment has been undertaken. The report is attached as Appendix D of the further information response. This included a wade survey (given water is less

than 0.75m which is the depth at which dive surveys are required) and metal detection survey. The surveys were undertaken on 2 September 2021 in overcast but dry conditions. At the time of the survey the waterway was stated to be between 0.05-.045m in depth with an average of 0.15m with the river measuring between 11.37m and 15.9m in width. Visibility was noted as excellent. The survey area comprises the area 20m to the south and 35m to the north of the bridge and the bridge itself. It is noted that Athea Bridge which spans the area of the subject site is a protected structure (No. 955 in Limerick County Development Plan) and is included in the NIAH records (Reg. 21834011) and was built c.1820. Some metal debris and some parts of post medieval pottery material was found. While no structures or material of archaeological significance was found in either survey, the existing stone bridge is reputed to have replaced a wooden structure which may indicate importance as a fording points. It is outlined that the potential for uncovering archaeological material is low to moderate and recommended that mitigation is required by way of monitoring of all groundworks and instream excavations by an experienced underwater archaeologist. To avoid any impact on the bridge it is also proposed by the LCCC Conservation Officer that the works are supervised by a conservation architect.

I note the submission received from the Department in response to same which recommends a suite of conditions which should be included in any approval. I consider that this is reasonable as is the supervision of the works by a Conservation Architect to ensure the integrity of the protected structure is protected.

Water Quality

While this matter is addressed in the appropriate assessment below, in response to the further information the applicants have proposed to introduce an additional mitigation measure to address the concerns raised by An Taisce in respect of water quality. It is proposed to include alarmed sondes which are a standard scientific method to monitor turbidity and pollutants. This mitigation measure is included in the updated NIS and in my opinion is satisfactory.

9.1.3. **The likely significant effects on a European site:** The areas addressed in this section are as follows:

- Compliance with Articles 6(3) of the EU Habitats Directive
- The Natura Impact Statement and revised Natura Impact Statement
- Appropriate Assessment

9.2. **Compliance with Articles 6(3) of the EU Habitats Directive:** The Habitats Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) of this Directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site.

9.3. **The Natura Impact Statement:** The application for approval was accompanied by an NIS (dated May2021). As outlined above further information was requested which included details in respect of the NIS. A revised NIS was submitted with the further information response (dated January 2022) and it is this revised NIS which I intend to examine and use for the purposes of my assessment.

9.4. The NIS contains a Stage 1 Screening Assessment (Section 6) which concluded that a Stage 2 Appropriate Assessment was required. The NIS outlines the methodology used for assessing potential impacts on the habitats and species within several European Sites that have the potential to be affected by the proposed development. It predicts the potential impacts for these sites and their conservation objectives, it suggests mitigation measures and assess in-combination effects (cumulative assessment) with other plans and projects. While the further information request outlined the requirement to use the language in the Article 6(3) of the Directive, there are areas within the NIS document where this has not been done. However, the language in most of the NIS and in particular in the conclusion of the NIS is broadly correct so I consider that the document can be accepted.

9.5. The NIS was informed by the following studies, surveys and consultations:

- A desk top study undertaken.

- A number of walkover surveys of the site and upstream and downstream of the bridge were undertaken.
- Trees, derelict buildings and the bridge were examined for bat roosts.
- Banks of the river assessed for suitably for nesting site for kingfisher.
- Fisheries habitat assessment undertaken
- Consultations held with Inland Fisheries Ireland.

9.6. The revised NIS concluded that, subject to the implementation of best practice and the recommended mitigation measures, the proposed development would not adversely affect the integrity of the sites in view of their conservation objectives.

9.7. Having reviewed the revised NIS and the supporting documentation, I am satisfied that it provides adequate information in respect of the baseline conditions, clearly identifies the potential impacts, and uses best scientific information and knowledge. Details of mitigation measures are provided and they are summarised in Section 11 of the NIS. I am satisfied that the information is sufficient to allow for appropriate assessment of the proposed development (see further analysis below).

9.8. **Appropriate Assessment**

9.9. I consider that the proposed development comprising the removal of gravel is not directly connected with or necessary to the management of any European site.

9.10. Having regard to the information and submissions available, nature, size and location of the proposed development and its likely direct, indirect and cumulative effects, the source pathway receptor principle and sensitivities of the ecological receptors the following European Sites are considered relevant to include for the purposes of initial screening for the requirement for Stage 2 appropriate assessment on the basis of likely significant effects**.**

European sites considered for Stage 1 screening:

European site (SAC/SPA)	Qualifying Interests/Special Conservation Interests
Lower River Shannon SAC – Site Code 002165	• Sandbanks which are slightly covered by sea water all the time [1110] • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Coastal lagoons [1150] • Large shallow inlets and bays [1160] • Reefs [1170] • Perennial vegetation of stony banks [1220] • Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] • Salicornia and other annuals colonising mud and sand [1310] • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] • Mediterranean salt meadows (Juncetalia maritimi) [1410] • Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] • Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] • Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]

European site (SAC/SPA)	Qualifying Interests/Special Conservation Interests
	• Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] • Petromyzon marinus (Sea Lamprey) [1095] • Lampetra planeri (Brook Lamprey) [1096] • Lampetra fluviatilis (River Lamprey) [1099] • Salmo salar (Salmon) [1106] • Tursiops truncatus (Common Bottlenose Dolphin) [1349] • Lutra lutra (Otter) [1355]
Stack's Mountaiin To Mullaghareirk Mountains West Limerick Hills and Mount Eagle SPA – site code 004161	• Hen Harrier
Monaveanlagh Bog SAC **Site code 002351**	• Active Raised bogs; • Degraded Raised bogs still capable of natural regeneration; • Depressions on peat substrates of the Rhynchosorion
River Shannon & River Fergus Estuaries SPA **Site Code 004077**	• Cormorant (Phalacrocorax carbo) [A017] • Whooper Swan (Cygnus cygnus) [A038] • Light-bellied Brent Goose (Branta bernicla hrota) [A046] • Shelduck (Tadorna tadorna) [A048]

European site (SAC/SPA)	Qualifying Interests/Special Conservation Interests
	• Wigeon (Anas penelope) [A050] • Teal (Anas crecca) [A052] • Pintail (Anas acuta) [A054] • Shoveler (Anas clypeata) [A056] • Scaup (Aythya marila) [A062] • Ringed Plover (Charadrius hiaticula) [A137] • Golden Plover (Pluvialis apricaria) [A140] • Grey Plover (Pluvialis squatarola) [A141] • Lapwing (Vanellus vanellus) [A142] • Knot (Calidris canutus) [A143] • Dunlin (Calidris alpina) [A149] • Black-tailed Godwit (Limosa limosa) [A156] • Bar-tailed Godwit (Limosa lapponica) [A157] • Curlew (Numenius arquata) [A160] • Redshank (Tringa totanus) [A162] • Greenshank (Tringa nebularia) [A164] • Black-headed Gull (Chroicocephalus ridibundus) [A179] • Wetland and Waterbirds [A999]

The following table examines the proximity of the proposed development to the sites and the presence or not of a hydrological link or pathway.

Site Name	Distance	Hydrological Link/Pathway
Lower River Shannon SAC 002165	0m	Yes – proposed development within the site
Stack's Mountain to Mullaghareirk Mountains West Limerick Hills and Mount Eagle SPA – site code 004161	171m	Possible disturbance to potential nest sites given proximity of the site
Monaveanlagh Bog SAC Site code 002351	7.6km west	No pathway/substantive linkage exists
River Shannon & River Fergus Estuaries SPA - Site Code 004077	12.3 north	No pathway/substantive linkage exists.

9.11. Based on my examination of the NIS report and supporting information including the response to the further information request, the NPWS website, aerial and satellite imagery, the scale of the proposed development and likely effects, separation distance and functional relationship between the proposed works and the European sites, their conservation objectives and taken in conjunction with my assessment of the subject site and the surrounding area, I would conclude that a Stage 2 Appropriate Assessment is required for two of the four European sites referred to above. These are the Lower River Shannon SAC 002165 and Stack's Mountain to Mullaghareirk Mountains West Limerick Hills and Mount Eagle SPA 004161.

9.12. The remaining two sites can be screened out from further assessment because of the zone of influence of the proposed works, the scale of the proposed works, the nature of the Conservation Objectives, Qualifying and Special Conservation Interests, the separation distances and the lack of a substantive linkage between the proposed works and the European sites. It is therefore reasonable to conclude that on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on European Site No(s) Monaveanlagh Bog SAC Site code 002351 & River

Shannon & River Fergus Estuaries SPA - Site Code 004077 in view of the site(s) conservation objectives and a Stage 2 Appropriate Assessment is not therefore required for these sites.

9.13. Appropriate Assessment of Relevant European sites

The Conservation Objectives and Qualifying Interests, including any relevant attributes and targets for these sites, are considered in the following sections.

9.13.1. Lower River Shannon SAC - site code: 002165

Description of site

The site is described in the synopsis as a very large site which stretches along the Shannon valley from Killaloe in Co. Clare to Loop Head/ Kerry Head, a distance of some 120 km with the site encompassing the Shannon, Feale, Mulkear and Fergus estuaries, the freshwater lower reaches of the River Shannon (between Killaloe and Limerick), the freshwater stretches of much of the Feale and Mulkear catchments and the marine area between Loop Head and Kerry Head. Rivers within the sub-catchment of the Feale include the Galey.

Five species of fish listed on Annex II of the E.U. Habitats Directive are found within the site. These are Sea Lamprey (Petromyzon marinus), Brook Lamprey (Lampetra planeri), River Lamprey (Lampetra fluviatilis), Twaite Shad (Allosa fallax fallax) and Salmon (Salmo salar). The three lampreys and Salmon have all been observed spawning in the lower Shannon or its tributaries. It is stated that the Feale is important for both types. The River Feale is a designated Salmonid Water under the E.U. Freshwater Fish Directive.

This site is considered to be of great ecological interest as it contains a high number of habitats and species listed on Annexes I and II of the E.U. Habitats Directive, including the priority habitats lagoon and alluvial woodland, the only known resident population of Bottle-nosed Dolphin in Ireland and all three Irish lamprey species. A number of species listed on Annex I of the E.U. Birds Directive are also present, either wintering or breeding.

The qualifying interests for this site are as follows:

- Sandbanks which are slightly covered by sea water all the time [1110]
- Estuaries [1130]

- Mudflats and sandflats not covered by seawater at low tide [1140]
- Coastal lagoons [1150]
- Large shallow inlets and bays [1160]
- Reefs [1170]
- Perennial vegetation of stony banks [1220]
- Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]
- Salicornia and other annuals colonising mud and sand [1310]
- Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]
- Mediterranean salt meadows (Juncetalia maritimi) [1410]
- Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]
- Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]
- Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]
- Petromyzon marinus (Sea Lamprey) [1095]
- Lampetra planeri (Brook Lamprey) [1096]
- Lampetra fluviatilis (River Lamprey) [1099]
- Salmo salar (Salmon) [1106]
- Tursiops truncatus (Common Bottlenose Dolphin) [1349]
- Lutra lutra (Otter) [1355]

Conservation Objectives

The conservation objectives seeks to maintain the favourable conservation condition of the brook lamprey, river lamprey, sandbanks, estuaries, mudlfats and sandflats, large shallow inlets and bays, reefs, perennial vegetation of stony banks, vegetated sea cliffs of the Atlantic and Baltic Coasts, Salicronia, Bottlenose Dolphin, Water

courses of plain to montane levels, Molinia meadows on calcareous, peaty or clayey-silt-laden soils and restore the favourable conservation condition of the freshwater pearl mussel, sea lamprey, Atlantic salmon, coastal lagoons (priority habitat), Atlantic salt meadows, Otter, Mediterranean salt meadows and Alluvial forests

The applicant was asked at further information as to why they had screened out several the qualifying interests in this site given the site was being taken forward to Stage 2. They state that it is because of the distance of the proposal to the QI's in question. While it is the site that is subject to consideration for stage 2, I do note that even though they screen some of the QI's out at stage 1 there is sufficient information within the NIS to facilitate the Board in examining the matter at Stage 2.

Therefore, I will examine those QI's screened out in the NIS at Stage 1 first and then move onto the remaining QI's.

Sandbanks which are slightly covered by sea water all the time [1110]

While there is a hydrological link, the distance between the site and the QI is so significant coupled with the dilution provided in the downstream coastal waterbodies that the proposal would not result in any adverse affect. While the NIS does not provide any distance it is clear from the map associated with the Conservation objectives (Map 3) that there would be no affects. I am satisfied that the proposed development would not adversely affect the integrity of the European sites in light of the conservation objective for this qualifying interest.

Estuaries [1130]

Similar to the QI above, while there is a hydrological link, the distance between the site and the QI is so significant coupled with the dilution provided in the downstream coastal waterbodies that the proposal would not result in any adverse affect. As above there is no distance provided, but it is clear from the map associated with the Conservation objectives (map 4) that there would be no affects. I am satisfied that the proposed development would not adversely affect the integrity of the European sites in light of the conservation objective for this qualifying interest.

Mudflats and sandflats not covered by seawater at low tide [1140]

Again, similar to the QI's above, while there is a hydrological link, the distance between the site and the QI is so significant coupled with the dilution provided in the

downstream coastal waterbodies that the proposal would not result in any adverse affect. As above there is no distance provided, but it is clear from the map associated with the Conservation objectives (map 5) that there would be no affects. I am satisfied that the proposed development would not adversely affect the integrity of the European sites in light of the conservation objective for this qualifying interest.

Coastal lagoons [1150]

There is no hydrological link between the site and the subject QI's as the River Galey discharges into the estuary downstream of the four lagoon sites set out in Map 6 of the Conservation Objectives. Therefore, there could be no adverse affect on the integrity of the European sites in light of the conservation objective for this qualifying interest arising from the proposed development.

Large shallow inlets and bays [1160]

Similar to the QI's above, while there is a hydrological link, the distance between the site and this QI is so significant coupled with the dilution provided in the downstream coastal waterbodies that the proposal would not result in any adverse affect. As above there is no distance provided, but it is clear from the map associated with the Conservation objectives (map 7) that there would be no affects. I am satisfied that the proposed development would not adversely affect the integrity of the European sites in light of the conservation objective for this qualifying interest.

Reefs [1170]

Again, while there is a hydrological link, the distance between the site and this QI is so significant coupled with the dilution provided in the downstream coastal waterbodies that the proposal would not result in any adverse affect. As above there is no distance provided, but it is clear from the map associated with the Conservation objectives (map 8) that there would be no affects. I am satisfied that the proposed development would not adversely affect the integrity of the European sites in light of the conservation objective for this qualifying interest.

Perennial vegetation of stony banks [1220]

There is no hydrological link between the site and the subject QI, a terrestrial coastal habitat, the locations of which are set out in Map 10 of the Conservation Objectives. Therefore, there could be no adverse affect on the integrity of the European sites in

light of the conservation objective for this qualifying interest arising from the proposed development.

Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]

There is no hydrological link between the site and the subject QI, a terrestrial coastal habitat, the locations of which are set out in Map 11 of the Conservation Objectives. Therefore, there could be no adverse affect on the integrity of the European sites in light of the conservation objective for this qualifying interest arising from the proposed development.

Salicornia and other annuals colonising mud and sand [1310]

There is no hydrological link between the site and the subject QI's as the River Galey discharges into the estuary downstream of the six known locations of this habitat as set out in Map 12 of the Conservation Objectives. Therefore, there could be no adverse affect on the integrity of the European sites in light of the conservation objective for this qualifying interest arising from the proposed development.

Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]

While there is a hydrological link between the site and the subject QI's as the River Galey discharges into the Casheen Estuary, as set out in Map 12 of the Conservation Objectives the distance from the works to the locations of this subject QI are significant coupled with the dilution in the downstream coastal waterbody. Therefore, there could be no adverse affect on the integrity of the European sites in light of the conservation objective for this qualifying interest arising from the proposed development.

Mediterranean salt meadows (Juncetalia maritimi) [1410]

As above, there is a hydrological link between the site and the subject QI's as the River Galey discharges into the Casheen Estuary however, as set out in Map 12 of the Conservation Objectives the distance from the works to the locations of this subject QI are significant, coupled with the dilution in the downstream coastal waterbody. Therefore, there could be no adverse affect on the integrity of the European sites in light of the conservation objective for this qualifying interest arising from the proposed development.

Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]

There is no hydrological link between the site and the subject QI's as the River Galey discharges into the Casheen estuary which then discharges into the mouth of the Shannon downstream of the Cloon River which is the site of this habitat as set out in Map 15 of the Conservation Objectives. Therefore, there could be no adverse affect on the integrity of the European sites in light of the conservation objective for this qualifying interest arising from the proposed development.

Tursiops truncatus (Common Bottlenose Dolphin) [1349]

While there is a hydrological link between the site and the location of subject QI's (Map 16) as the River Galey discharges into the Casheen Estuary which then discharges to the mouth of the Shannon. However, given the significant distance from the works to the locations of this subject QI, coupled with the dilution in the downstream coastal waterbody. Therefore, there could be no adverse affect on the integrity of the European sites in light of the conservation objective for this qualifying interest arising from the proposed development.

The remaining QI's have been determined to have a potential source pathway receptor link which cannot be ruled out without further consideration or are known to be present in close proximity to the site and therefore must be given further consideration. I will address each in turn but prior to doing same I will outline the main potential adverse affects which might arise and which are referenced in respect of the examination of the QI's below.

Types of Impacts which could lead to Adverse Affects

Loss of Habitat

Potential for the loss and destruction of habitats suitable for breeding aquatic species or resting mammals and birds along the stretch of the River Galey due to the removal of the gravel deposit from the riverbed. The Galey was identified as a high-quality river with good holding pools for brown trout and good habitat for salmonids with evidence of redds within proximity to the bridge in a river habitat survey undertaken (June 2020).

Suspended Solids

Given the nature of the proposed works being the gravel and silt removal comprising cobble, gravel and fine sands, silts and mud there is the potential for the release of high levels of suspended solids due to disturbance posing a risk of silt mobilisation. It is noted in the NIS that small amounts of debris entering a section of river important for vulnerable life stages of salmonids and lamprey species can have negative impacts, even in the short term, on juvenile survival and habitat utility with potential for impacts on aquatic plants.

Hydrocarbons and pollutants

The release of hydrocarbons due to fuel spills have the potential to impact on water quality through the introduction of chemicals into the aquatic environment and could result in a reduction of oxygen, affecting salmon and lamprey populations that require good oxygen supplies.

Invasive Species and Biodiversity

Invasive species can quickly spread further downstream using the river as a pathway and colonise habitats and out-compete natural species at a faster rate. The NIS outlines that Himalayan balsam was identified growing on the gravel deposit proposed for removal during the 2020 growing season with the seeds which are viable for two years, assumed to be present and viable within the gravel deposit with the potential to spread this species to other locations. Furthermore, the use of equipment that has been used in other areas has the potential to spread new species into the works area.

Consideration of Direct and Indirect Effects on the Qualifying Interests.

Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]

As outlined in the NIS, there are three sub-types of high conservation value of this QI which are known to occur in this SAC namely: Opposite-leaved Pondweed (Groenlandia densa), Triangular Club-rush (Schoenoplectus triqueter) and Bryophyte-rich streams and rivers. The first two sub-types are associated with tidal reaches of rivers, while the latter sub-type is found in fast-flowing stretches of unmodified streams and rivers. In addition to these three sub-types, it is likely that other high conservation value sub-types exist within the site.

The conservation objective seeks to maintain the favourable conservation condition of this QI. While, as noted in the NIS, this habitat was not identified within the works area there is potential for it to occur downstream and therefore there will be no direct effect as there will be no loss of habitat associated with the proposal. In terms of potential indirect effects, there is the potential for an impact on water quality due to the release of sediments or hydrocarbons. Another indirect effect is the resultant increase in river flow due to the removal of the gravel however it is considered that the scheme design will mitigate any potential effect.

Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410]

Found mainly on moist, moderately base-rich, peats and peaty gley soils, often with fluctuating water tables this Annex I habitat usually occurs as components of wet pastures or fens, and often form mosaics with dry grassland, heath, mire and scrub communities. The site-specific conservation objective is to restore the favourable conservation condition of this habitat. While not found within the footprint of the works area and therefore there is no potential direct effect, there is a potential indirect effect given it could be present downstream of the works. In terms of potential indirect effects, there is the potential for an impact on water quality due to the release of sediments or hydrocarbons and the release of Himalayan Balsam seeds into the river from the gravel disturbance. Another indirect effect is the resultant increase in river flow due to the removal of the gravel however it is considered that the scheme design will mitigate any potential effect.

Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]

Alluvial woodlands occur along the Shannon, in the valley bottoms of the tributaries and on seepage zones on valley sides with periodic flooding or constant flushing essential for the maintenance of alluvial woodlands. The site-specific conservation objective is to restore the favourable conservation condition of this habitat. In terms of direct effects, there are sections of wet woodland upstream of the works area and along the left bank adjacent to Athea Bridge. It is outlined that physical works within the SAC will be during the period when the accumulated gravel is being removed from the bridge arches and there is no alluvial woodland is present in this section.

Therefore, there will be no loss or destruction of this habitat in the area covered or changes to its distribution within the SAC. In relation to indirect effects, there is the potential for an impact on water quality due to the release of sediments or hydrocarbons and the release of Himalayan Balsam seeds into the river from the gravel disturbance. Another indirect effect is the resultant increase in river flow due to the removal of the gravel however it is considered that the scheme design will mitigate any potential effect.

Petromyzon marinus (Sea Lamprey) [1095]

The site-specific conservation objective for is to restore to favourable conservation condition and while a 2005 assessment of the Feale catchment did not record any sea lamprey within the Galey, the river within the vicinity of the site is considered suitable habitat for this species during their freshwater phase.

In terms of potential direct effects, there is a potential for changes to Sea lamprey distribution and their composition in the vicinity of the proposed works area. The timing of the instream works will be undertaken outside the migration/spawning season with no resultant loss of spawning habitats as the gravel is removed to summer water levels. In terms of potential indirect effects the release of sediments or hydrocarbons may impact downstream water quality and/or an increase in silt levels in the water column. Another indirect effect is the resultant increase in river flow due to the removal of the gravel however it is considered that the scheme design will mitigate any potential effect. It is noted that upstream river access will not be affected for adults migrating upstream.

Lampetra planeri (Brook Lamprey) [1096]

The site-specific conservation objective is to maintain their favourable conservation condition. An assessment of Lamprey populations within the Feale catchment conducted in 2005 on behalf of NPWS did not record any Brook Lamprey within the River Galey but similar to the sea lampray, the area where the works are proposed is considered to provide suitable habitat for lamprey species. Direct Effects include the potential displacement of Brook lamprey and changes to their distribution and composition in the vicinity of the proposed works area. However, the works are proposed to be undertaken outside the spawning season. In terms of potential indirect effects the release of sediments or hydrocarbons may impact downstream

water quality and/or an increase in silt levels in the water column. Another indirect effect is the resultant increase in river flow due to the removal of the gravel however it is considered that the scheme design will mitigate any potential effect. It is noted that upstream river access will not be affected for adults migrating upstream.

Lampetra fluviatilis (River Lamprey) [1099]

River Lamprey reproduces in freshwater rivers and streams. The site-specific conservation objective is to maintain their favourable conservation condition. An assessment of Lamprey populations within the Feale catchment conducted in 2005 on behalf of NPWS did not record any River Lamprey within the River Galey but similar to the sea and brook lampray, the area where the works are proposed is considered to provide suitable habitat for lamprey species. Direct effects include the potential displacement of river lamprey and changes to their distribution and composition in the vicinity of the proposed works area. However, the works are proposed to be undertaken outside the spawning season. In terms of potential indirect effects the release of sediments or hydrocarbons may impact downstream water quality and/or an increase in silt levels in the water column. Another indirect effect is the resultant increase in river flow due to the removal of the gravel however it is considered that the scheme design will mitigate any potential effect. It is noted that upstream river access will not be affected for adults migrating upstream.

Salmo salar (Salmon) [1106]

The site-specific conservation objective is to restore the favourable conservation condition. Suitable habitats for salmonids were identified within the footprint of the works area during the site walkover surveys. In terms of potential direct effects, the section of river channel is classed Rosgen Stream Order 3 at Athea and is considered an important spawning and nursery habitat for the species. The NIS states that there will be no decline in extent or distribution of spawning beds as the gravel will be removed to summer water levels and works will be undertaken outside the spawning season. In terms of potential indirect effects the release of sediments or hydrocarbons may impact downstream water quality and/or an increase in silt levels in the water column. Another indirect effect is the resultant increase in river flow due to the removal of the gravel however it is considered that the scheme

design will mitigate any potential effect. It is noted that upstream river access will not be affected for adults migrating upstream.

Lutra lutra (Otter) [1355]

The site-specific conservation objective for the Otter is to maintain the favourable conservation condition. The NIS details that suitable feeding and commuting habitat for otter occurs within proximity to and downstream of the proposed works, but given the urban nature of the area provides that breeding holts in the vicinity of the works is limited. Otter surveys conducted along the stretch of the Galey identified signs of otter using the area for commuting and foraging. It is stated that the level of use by otter in this part of the SAC is likely to be minimal given this area of the river is used for amenity purposes, which would cause a disturbance to otter. In terms of potential direct effects, while the works might result in increased levels of disturbance, but given the absence of resting places found in proximity of the works it is predicted that there will be no loss of otter holts or couches. In relation to indirect effects, the release of sediments or hydrocarbons may result in an increase of nutrients and/or pollutants could reduce downstream water quality and/or an increase in silt levels in the water column with the potential for the dispersion or reduction in the number of fish prey species available to otters along the river. Sufficient space will remain around the works to ensure that otter are not forced onto the R524 during works. In addition, given their nocturnal nature, they will be largely active outside of the working day.

9.13.2. **Stack's Mountain to Mullaghareirk Mountains West Limerick Hills and Mount Eagle SPA/site code: 004161**

Description of site

The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA is a very large site centred on the borders between the counties of Cork, Kerry and Limerick. The site consists of a variety of upland habitats, though almost half is afforested. The coniferous forests include first and second rotation plantations, with both pre-thicket and post-thicket stands present. This SPA is a stronghold for Hen Harrier and supports the largest concentration of the species in the country. A survey in 2005 recorded 45 pairs, which represents over 20% of the all-Ireland total. A similar number of pairs had been recorded in the 1998-2000 period. The mix of

forestry and open areas provides optimum habitat conditions for this rare bird, which is listed on Annex I of the E.U. Birds Directive. Hen Harriers will forage up to c. 5 km from the nest site, utilising open bog and moorland, young conifer plantations and hill farmland that is not too rank. The Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA is of ornithological importance because it provides excellent nesting and foraging habitat for breeding Hen Harrier and is one the top sites in the country for the species. The presence of three species, Hen Harrier, Merlin and Short-eared Owl, which are listed on Annex I of the E.U. Birds Directive is of note

Conservation Objectives

The generic conservation objectives seek to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: hen harrier.

Types of Impacts which could lead to Adverse Affects

The NIS outlines that Hen Harrier predominantly breed within heather and moorland and young forestry plantations, where they nest on the ground with the areas of the SPA within and adjacent to the works not containing suitable breeding habitats and are more likely to be used for foraging. It is considered that any increased noise generated during gravel removal works will not have any impact on breeding Hen Harrier within the SPA. While the species that may forage close to the proposed works might be temporarily disturbed due to increased noise, it is considered that any localised temporary disturbance to any foraging Hen Harriers will not have a significant adverse effect on maintaining or restoring their favourable conservation condition.

Consideration of Direct & Indirect Effects on the Special Conservation Interest.

In terms of potential direct effects, no works are proposed within 171m of the SPA. Any localised potential temporary disturbance to foraging will not have a significance adverse affect on the conservation condition with the building adjacent to the river providing a buffer to the noise generated during the works. No potential indirect effects are predicted due to the mitigation proposed.

9.13.3. **Potential in-combination effects (both sites)**

Section 10 of the NIS addresses in-combination effects with the County Plan, the River Basin Management Plan, the National Biodiversity Action Plan considered. In terms of other developments, a review was undertaken of other developments within the area which it is noted were screened out for AA. It is concluded in this respect that with the implementation of specific environmental protection and control measures to avoid/negate any potential adverse impacts, there will be no cumulative impacts arising in combination with any other plans or project which would be of significance in respect to impacts affecting the conservation objectives of integrity of the Lower River Shannon SAC.

9.13.4. **Mitigation measures related to both sites**

Mitigation measures are contained in Section 11 of the NIS. The mitigation measures are proposed under a number of headings from general mitigation to those specific to suspended solids and hydrocarbons, works in the channel, biosecurity measures, water quality monitoring and post construction works/reinstatement. The main ones are summarised as follows:

General Mitigation

- Suitably qualified Ecological Clerk of Works (ECoW) shall be appointed for part time attendance for the full duration of the works
- All personnel involved informed of the requirement for protection of designated habitats including the aquatic environment
- Access location clearly marked out prior to the commencement of works.
- Appropriate fencing installed and maintained.
- Clearance of vegetation from the gravel deposit shall be undertaken as early as possible prior to the commencement of works and maintained until work commences to prevent bird nesting.
- Works shall only be carried out in dry, low flow conditions.
- Works carried out during day time hours only (08:00-18:00).
- Excavated material not stored beyond the working day.
- Full method statements and Risk Assessments shall be provided and approved.

- All works undertaken in accordance with OPW's Environmental Management Protocols & Standard Operating Procedures.
- Guidelines provided by Inland Fisheries Ireland shall be adhered to.

Suspended solids and hydrocarbons

- Silt movement within the working area to be managed through the use of silt curtains and floating booms.
- Accidental release of hydrocarbons within the working area during refuelling or machinery working in the river channel will be managed through the use of silt curtains and floating booms
- Emergency-operating plan established.
- Fuels, oils, greases and hydraulic fluids will be fully bunded
- Spill kits made available close to the works area

Works in the channel

- Defined access route will be created and agreed by the relevant authorities
- Access along the defined route once silt curtains and floating booms are in place.
- Riparian vegetation near the access point should be left intact where possible.
- Removal of silts and sediments to a dumper vehicle with a toothless bucket excavator.
- No removal of gravel below the 300mm summer-low water levels.
- No works during the salmonid spawning season.
- River not to be completely dammed as a result of the works.
- No machinery left overnight in the river.
- All in-stream works to comply with current best practice, including Inland Fisheries Ireland Guidance.
- One week's notice to be sent to the NPWS and IFI of commencement of works.

Biosecurity measures

- Pre-construction survey for invasive species conducted at the earliest stage possible to update and inform on the status of invasive plant species in or near the works area.

- All plant machinery and construction related vehicles arriving and leaving site will be checked for the presence of plant material.
- Staff to be trained by the ECoWs in the identification of invasive species and noxious weeds.
- Non-native invasive species will be managed or avoided where they occur throughout the works area.
- Any Himalayan balsam identified during the site survey on the gravel deposit will be hand-pulled prior to the commencement of the works at appropriate time.
- Contaminated material stockpiled off site.
- Two-year programme of control, which will extend beyond the works period will be required

Water quality monitoring

In response to concerns raised by An Taisce the following mitigation measure is proposed:

- Alarmed sondes employed to measure turbidity in the river channel upstream and downstream of the works area during gravel removal works continuously measuring turbidity: for a suitable time ahead of the works to gather baseline data from the River Galey, throughout the gravel removal works period.

Post construction works/reinstatement

- Disposal of silt and sediment collected behind the silt curtain to be removed and disposed off site.
- Plant and machinery removed.

9.13.5. **Conclusion** on **Lower River Shannon SAC site code: 002165**

I consider that the potential direct and indirect effects on the qualifying interests identified as having the potential to be affected have been satisfactorily identified. The mitigation measures outlined are comprehensive and address the potential direct and indirect effects appropriately.

I am satisfied that the proposed development individually or in combination with other plans or projects would not adversely affect the integrity of this European site

in light of its conservation objectives subject to the implementation of mitigation measures outlined above.

9.13.6. **Conclusion** on **Stack's Mountain to Mullaghareirk Mountains West Limerick Hills and Mount Eagle SPA/site code: 004161**

I consider that the potential direct and indirect effects on the special conservation interests identified as having the potential to be affected have been satisfactorily identified. The mitigation measures outlined are comprehensive and address the potential direct and indirect effects appropriately.

I am satisfied that the proposed development individually or in combination with other plans or projects would not adversely affect the integrity of this European site in light of its conservation objectives subject to the implementation of mitigation measures outlined above.

9.14. **Appropriate Assessment Conclusions**

Having carried out screening for Appropriate Assessment of the project, it was concluded that the proposed development may have a significant effect on the following European sites;

- Lower River Shannon SAC (002165);
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161)

Lower River Shannon SAC (002165) and theStack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161)

Consequently, an Appropriate Assessment was required of the implications of the project on the qualifying interests/special conservation interests of those sites in light of their conservation objectives.

Following an Appropriate Assessment, it has been ascertained that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the Lower River Shannon SAC (002165) and theStack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161), or any other European site, in view of the site's Conservation Objectives.

This conclusion is based on a complete assessment of all aspects of the proposed project and there is no reasonable doubt as to the absence of adverse effects.

This conclusion is based on:

- A full and detailed assessment of all aspects of the proposed project including proposed mitigation measures.
- Detailed assessment of in combination effects with other plans and projects including existing, permitted and proposed projects and plans.
- The lack of reasonable scientific doubt as to the absence of adverse effects on the integrity of the Lower River Shannon SAC (002165) and theStack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161)

10.0 **Recommendation**

On the basis of the above assessment, I recommend that the Board approve the proposed development subject to the reasons and considerations below and subject to conditions including requiring compliance with the submitted details and with the mitigation measures as set out in the revised NIS.

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 objectives, qualifying interests and special conservation interests for the Lower River Shannon SAC (002165) and theStack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161)

(e) the policies and objectives of the Limerick City and County Development Plan 2010-2016,

(f) the nature and extent of the proposed works as set out in the application for approval including the response received to the further information request,

(g) the information submitted in relation to the potential impacts on habitats, flora and fauna, including the Natura Impact Statement,

(h) the submissions received in relation to the proposed development, 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 and adopted the screening assessment and conclusion carried out in the inspector's report that the Lower River Shannon SAC (002165) and the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161), are the European sites for which there is a likelihood of significant effects.

The Board considered the Natura Impact Statement and the revision to same and all other relevant submissions and carried out an appropriate assessment of the implications of the proposal for the Lower River Shannon SAC (002165) and the Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161), in view of the Sites Conservation Objectives. The Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment.

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

(i) Likely direct and indirect impacts arising from the proposal both individually or in combination with other plans or projects, specifically upon the Lower River Shannon SAC (002165) and theStack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (004161).

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

(iii) Conservation Objective for these European Sites,

In completing the appropriate assessment, the Board accepted and adopted the appropriate assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the integrity of the aforementioned European Sites, 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 Sites, in view of the site's conservation objectives.

Proper Planning and Sustainable Development/Likely effects on the environment:

It is considered that, subject to compliance with the conditions set out below, the proposed development would not have significant negative effects on the environment or the community in the vicinity, would not give rise to a risk of pollution, would not be detrimental to the visual or landscape amenities of the area, would not seriously injure the amenities of property in the vicinity, would not adversely impact on the cultural, archaeological and built heritage of the area, in particular the protected bridge structure or underwater archaeology and would not interfere with the existing land uses in the area. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Conditions

1. The proposed development shall be carried out and completed in accordance with the plans and particulars, including the mitigation measures specified in the Natura Impact Statement, submitted with the application to An Bord Pleanála on the 21st day of May, 2021 and in the Further Information Response submitted to An Bord Pleanála on the 26th day of January, 2022, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be prepared by the local authority, these details shall be placed on file prior to commencement of development and retained as part of the public record.

   Reason: In the interest of clarity and the proper planning and sustainable development of the area and to ensure the protection of the environment.

2. The mitigation measures and monitoring commitments identified in the Natura Impact Statement and revision to same, and other plans and particulars submitted with the application shall be carried out in full except as may otherwise be required in order to comply with other conditions.

Reason: In the interest of clarity and protection of the environment during the construction and operational phases of the proposed development.

3. Prior to the commencement of development, the local authority shall agree with the relevant statutory agencies a Construction Environmental Management Plan and Method Statement, incorporating:

   (a) all mitigation measures indicated in the Natura Impact Statement and revision to same;

   (b) Methods to be employed to sterilise the equipment and machinery:

   This Construction Environmental Management Plan shall be placed on file prior to commencement of development and retained as part of the public record.

   Reason: In the interest of protecting the environment.

4. A suitably qualified ecologist shall be appointed by the County Council to oversee the site set-up and works and the ecologist shall be present part time on site. Upon completion of works, an audit report of the site works shall be prepared by the appointed ecologist and submitted to the County Council to be kept on record.

   Reason: In the interest of nature conservation, to prevent adverse impacts on the European sites and to ensure the protection of the Annex 1 habitats and Annex 11 species and their Qualifying Interests/Special Conservation Interests for which the sites were designated.

5. Prior to the commencement of development, details of measures to protect fisheries and water quality of the river systems shall be outlined and placed on file. In-channel works shall adhere to the timing restrictions set out in the Natura Impact Statement and revision to same. Full regard shall be had to Inland Fisheries Ireland's published guidelines for construction works near waterways (Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters, 2016). A programme of water quality monitoring shall be prepared in consultation with the contractor, the local authority and relevant statutory agencies and the programme shall be implemented thereafter.

Reason: In the interest of the protecting of receiving water quality, fisheries and aquatic habitats.

6. The County Council and any agent acting on its behalf shall ensure that all plant and machinery used during the works should be thoroughly cleaned and washed before delivery to the site to prevent the spread of hazardous invasive species and pathogens.

   Reason: In the interest of the proper planning and sustainable development of the area and to ensure the protection of the European sites.

7. A suitably qualified conservation architect shall be retained by the local authority to oversee the site set up and works in the vicinity of the bridge. Upon completion of works, a conservation report of the site works shall be prepared by the appointed conservation architect to be kept on file as part of the public record.

   Reason: In the interest of cultural heritage.

8. The County Council and any agent acting on its behalf shall facilitate the preservation, recording, protection or removal of archaeological materials or features that may exist within the site. A suitably qualified underwater archaeologist shall be appointed by the County Council and the archaeologist shall be present on site during the removal works. The requirements of the Department of Housing, Local Government and Housing as set out in their response dated 11 March 2022 shall be complied with and a report on same shall be kept on record,

   Reason: In order to conserve the archaeological heritage of the site and to secure the preservation and protection of any remains that may exist within the site.

Una Crosse
Senior Planning Inspector

14 April 2022