



An
Bord
Pleanála

Inspector's Report

ABP-306615-20

Development	Proposed repair works to Poorman's Bridge (Protected Structure)
Location	Poorman's Bridge, Abbeyleix, Co. Laois
Local Authority	Laois 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	Transport Infrastructure Ireland Department of Culture, Heritage and the Gaeltacht.
Observer(s)	None
Date of Site Inspection	15 June 2020
Inspector	Una Crosse

1.0 Introduction

- 1.1. Section 177AE of the Planning and Development Act 2000 (as amended) requires that where an appropriate assessment is required in respect of a proposed 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.
- 1.2. Laois County Council is seeking approval from An Bord Pleanála to undertake bridge remedial works within the River Barrow and River Nore SAC and the River Nore SPA which are designated European sites. There are several 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 with the Board by the Local Authority on 7th February 2020 on the basis of the proposed development's likely significant effect on a European site.
- 1.3. It should be noted that the Board previously refused permission for a similar development under ABP-300513-17 for two reasons which related to concerns regarding the NIS and in particular the Nore freshwater pearl mussel. The other reason related to the absence of an architectural heritage assessment of the bridge.
- 1.4. A consultation period for submissions on the proposed development closed on 25 March 2020.

2.0 Proposed Development

2.1 Context

- 2.1.1. Poorman's Bridge is a seven span masonry arch structure running in a north-south direction along a local road (L1656) over the River Nore. The bridge is a Protected Structure (RPS Ref. 645) and is listed on the National Inventory of Architectural Heritage (NIAH Ref. 12802338). The NIS noted that the stonework of the piers and

abutments has suffered mortar loss with areas of heavy mortar loss mainly concentrated at the upstream cutwaters. It is proposed to carry out remedial works on the bridge. It is anticipated that the works will be carried out in the Summer of 2021 when river flows are typically low and will take approximately 8 weeks to complete.

2.2. Proposed Works

2.2.1. The works proposed are described as follows:

- Clearance of vegetation on or attached to the bridge;
- Removal of tree stumps from upstream cutwaters and downstream face of piers by taking down sections of the piers and cutwaters, removing the tree stumps and rebuilding the pier and cutwater.
- Cleaning and repointing areas of the spandrel walls, parapets, piers, abutments and arch barrels, rebuilding top sections of upstream cutwaters, repairing parapet and spandrel walls and installing tie bars above each of the seven spans.
- Scour protection aprons are also proposed at the upstream end of piers 3 and 4 which consist of 250mm wide strips of concrete cast along the bottom of the piers, to protect them from further scour.
- Pressurised grouting is proposed in the piers and arch barrel up to the quarter points of the bridge after all pointing works have been completed. Entry holes are proposed to be drilled into the bridge for grouting at each pier and arch barrel.
- Additional work such as crack repair to the parapet, vegetation removal from the bridge itself, and installation of rubbing strips.
- Road resurfacing is also proposed which involves the surface dressing of the existing road surface by spraying hot tar onto the road and then spreading 10mm and 6mm stone chips onto the tar for 148m.
- To carry out the works, dry access is required to the footprint of the bridge. This is proposed in a phased manner by damming two of the five in-river arches at a time, by way of an aqua barrier system, allowing repair works to be carried out in the dry with the remaining three in-river arches having the

hydraulic capacity to take normal summer flows. Settlement tanks and pumps are proposed to facilitate storing the water from the dammed area.

- Scaffolding access is also necessary to work on the upstanding bridge fabric.
- A temporary site compound (c.0.1ha) is proposed in a green field location approximately 60m south east of the River.

2.2.2. A detailed account of the proposed development is provided in Section 4.2 of the NIS. Appendix 5 provides the methodology of the proposed works.

2.3. **Accompanying documents:**

2.3.1. The application is accompanied by two documents as follows.

Natura Impact Statement (NIS)

2.3.2. This document includes the NIS but a range of appendices attached to this include a number of other documents as follows:

- Stages of Appropriate Assessment (Appendix 1)
- Screening Report (Appendix 2)
- Aquabarrier User's Manual and Working Example (Appendix 3)
- Details of Settlement Tanks (Appendix 4)
- Works Method Statement (Appendix 5)
- Poorman's Bridge Bat Survey (Appendix 6)
- A survey of the Nore Freshwater Pearl Mussel in Nore River in vicinity of Poorman's Bridge (Appendix 7)
- White Clawed Crayfish Survey (Appendix 8)
- Archaeological Impact Assessment Report (Appendix 9)
- Architectural Heritage Impact Assessment Report (Appendix 10)
- Hydraulic Analysis Report (Appendix 11)

Other Document

2.3.3. A separate Document includes the cover letter and the following:

- Cover Letter

- Drawings detailing the works (Appendix 1)
- Copy of Public Notice (Appendix 2)
- List of Prescribed Bodies Notified (Appendix 3)
- Copies of the letters issued to the Prescribed Bodies (Appendix 4)

Public Notice

- 2.3.4. A copy of the public notice published in the Leinster Express on 11 February was received by the Board on 9 March 2020.

3.0 Site and Location

3.1. As described in the previous Inspectors Report, Poorman's Bridge is located on the L1656 road approximately 2.9km north-west of the town of Abbeyleix, Co. Laois. The bridge crosses over the River Nore in the townland of Cappanaclough. The L1656 road forms a crossroads with the R430 Abbeyleix to Mountrath Road c.1.7km to the east of the bridge. The area is rural in nature with a small number of scattered dwellings in the vicinity of the bridge. The road is typical of tertiary roads – it is narrow but in reasonable condition. The area is gently undulating. Large electricity pylons are visible to the south. The M7 motorway lies c.4.3km to the north-west.

3.2. To the north and south of the bridge there are two relatively sharp bends along the road. Boley Lower Quarry is located c.600m to the west and south of the L1656 road. The bridge crosses over the River Nore in a north-south direction and while the bridge itself at 7 spans is a considerable length it has little profile from the public road other than the relatively short walls which adjoin the roadside. As outlined above, Poorman's Bridge is a seven span masonry arch structure running in a north-south direction along a local road (L1656) over the River Nore. Five of the spans/arches, 1 - 5 and four of the piers, 1 – 4, are within the river. The north and south abutment in addition to piers 5 and 6 and spans/arches 6 and 7 are outside of the river bed with spans 6 and 7 now blocked. It is noted that while the spans/arches are uniform in height they vary in span across the bridge. The bridge roadway is 6m wide with parapet walls topped with limestone cappings standing to 1m. There are five cutwaters on the upstream side of the bridge with the widening of the bridge, documented above likely to have removed the cutwaters on the downstream side.

The bridge is a Protected Structure (RPS Ref. 645) and is listed on the National Inventory of Architectural Heritage (NIAH Ref. 12802338).

4.0 Planning History

4.1. **ABP-300513-17** – Proposed repair works to Poorman’s Bridge (protected structure). The previous application for approval of the proposed development was refused by the Board for the following reasons:

1. Having regard to the conservation objectives for the River Barrow and River Nore Special Area of Conservation (site code: 002162), to the 2014 survey of the Nore freshwater pearl mussel (*Margaritifera durrovensis*) which is a qualifying interest of the site, to the sensitivity to water quality and, particularly to sedimentation, and to the poor conservation status of this critically endangered species, which is only known to occur along a short stretch of the River Nore below Poorman’s Bridge, and to the absence of adequate water level data and turbidity survey data in circumstances where works are proposed to commence in summer 2018, and where the local authority has confirmed that the collection of such data only commenced in February 2018, the Board is not satisfied, based on the information submitted, that the proposed development would not adversely affect the integrity of this European Site, a conservation objective of which requires that the distribution of this qualifying interest be maintained at 15.5 kilometres, from Poorman’s Bridge (S407859) to Lismaine Bridge (S442660), and that suitable habitat is to be restored, rather than maintained.

2. Having regard to the absence of an architectural heritage assessment of Poorman’s Bridge and an archaeological appraisal of this river crossing point, the Board is not satisfied that the proposed remedial interventions to the Protected Structure are appropriate and that the proposed development would not have an unacceptable impact on archaeological heritage. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

In deciding not to accept the Inspector's recommendation to approve the proposed development, the Board considered the Natura impact statement to be deficient, and, therefore, was not satisfied that the proposed development would not adversely

affect the integrity of the European Site. Furthermore, the Board was not satisfied that the proposed development would not adversely impact on the cultural, archaeological and architectural heritage of the area.

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. Articles 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

5.3.1. 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:

- River Barrow and River Nore SAC (Site Code 002162) - 0km
- River Nore SPA (Site Code 004233) – 0km
- Lisbigney Bog SAC (Site Code 000869) – 7.75km south-east

- Knockacoller Bog SAC (Site Code 002333) – 10.4km north-west
- Slieve Bloom SPA (Site Code 004160) – 13.5km north-west
- Slieve Bloom Mountains SAC (Site Code 000412) – 14.5km north-west
- Coolrain Bog SAC (Site Code 002332) – 14km north-west

5.5. Planning and Development Acts 2000 (as amended)

5.5.1. Part XAB of the Planning and Development Acts 2000-2017 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 Statement 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.*

5.6. **Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities:** Guidance is provided for the competent authority to assess any plan or project. The impact of any plan or project alone or in combination with other projects on the integrity of the Natura 2000 site is considered with respect to the conservation objectives of the site and the structure and function.

5.7. **Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes** (National Roads Authority).

5.7.1. Chapter 5: Examination of buildings and other built structures.

- Bridges are potential roost sites and should be examined properly for evidence of the presence of bats.

5.7.2. Appendix 3: Appropriate Survey Timetable for bats affected by roads schemes

- Bridge: 4 survey rounds per season required to confirm species presence and activity.

Potential species in bridges: Brown Long-eared, Daubenton's, Natter's, Whiskered, Brandt's, Lesser horseshoe's.

5.8. **Guidelines on Protection of Fisheries During Construction works in and adjacent to Waters** (Inland Fisheries Ireland, 2016)

5.8.1. Chapter 3: Issues of concern

- Pollution of waters: silts and solids, cementitious residues, oils and greases, wood preservative.
- Introduction of invasive species: plants, algae, fish and shellfish.
- Interference with upstream and downstream movements of aquatic life: improperly designed crossing structures, insufficient water depth and physical alteration of stream channels (characteristics and stream profile).

5.8.2. Chapter 4: Timing of instream works

- Works should normally be carried out during the period July- September to minimise impact on salmon and trout spawning.

5.8.3. Chapter 7: Construction Impacts

- Uncured concrete can kill fish etc. pre-cast concrete should be used.
- Silt can clog spawning beds and damage juvenile fish.

- Discharge of fuels and oils can be toxic to aquatic life.
- Best Practice measures should be used in construction.

5.8.4. Chapter 10: Repairs to existing bridges, culverts and scour slabs.

- During grouting of the bridge trained staff should monitor for grout losses and use portable pH monitoring.
- A secure flume arrangement or piping may be used so grouting is undertaken in the dry. Screening shall also be used.
- A sealed and secure decking should be used during repointing and masonry works.
- Perching should not occur where new concrete slabs are poured. Extensive guidance is provided for the recommended depth etc. for scour slabs.

5.9. **Laois County Development Plan 2017 – 2023**

5.9.1. The site is located within a rural area north-west of Abbeyleix with no specific zoning objective. Section 6 of the Plan refers to Infrastructure, and section 7 refers to Heritage, including policies relating to the protection of European sites from the impact of plans and projects. Section 6.1.2.3 of the Plan refers to County Roads and Urban Roads/Streets. It is stated that '*Laois County Council has responsibility for the carrying out of maintenance and improvement works on these roads, financed from their own resources and supplemented by state grants*'.

5.9.2. Policies include TRANS 20 and TRANS 21 which are as follows:

TRANS 20: *Encourage and facilitate investment in the local road network;*

TRANS 21: *Subject to availability of resources, provide for and carry out improvements to sections of local roads that are deficient in respect of realignment, structural condition or capacity, and to maintain that standard thereafter;*

5.9.3. Section 7.5 refers to Protected Structures. The Poormans Bridge is listed in Appendix 1 of the Plan as RPS Ref. 645 and NIAH Ref. 12802338.

5.9.4. Policies include **OBJ4** which seeks to:

Protect all structures listed in the Record of Protected Structures, that are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical character or interest in County Laois;

5.9.5. Natural heritage policies include:

NH9: No projects giving rise to significant cumulative, direct, indirect or secondary impacts on Natura 2000 sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this plan (either individually or in combination with other plans or projects);

NH10: Assess, in accordance with the relevant legislation, all proposed developments which are likely to have a significant effect (directly or through indirect or cumulative impact) on designated natural heritage sites, sites proposed for designation and protected species;

NH13: Support and co-operate with statutory authorities and others in support of measures taken to manage designated nature conservation sites in order to achieve their conservation objectives;

NH37: Protect the Nore Pearl Mussel through the measures set out in the Freshwater Pearl Mussel Nore Sub-Basin Management Plan (2009).

6.0 The Natura Impact Statement

6.1. Laois 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. The NIS was accompanied by the following documents:

- Stages of Appropriate Assessment (Appendix 1)
- Screening Report (Appendix 2)
- AquabARRIER User's Manual and Working Example (Appendix 3)
- Details of Settlement Tanks (Appendix 4)
- Works Method Statement (Appendix 5)
- Poorman's Bridge Bat Survey (Appendix 6)

- A survey of the Nore Freshwater Pearl Mussel in Nore River in vicinity of Poorman's Bridge (Appendix 7)
- White Clawed Crayfish Survey (Appendix 8)
- Archaeological Impact Assessment Report (Appendix 9)
- Architectural Heritage Impact Assessment Report (Appendix 10)
- Hydraulic Analysis Report (Appendix 11)

6.3. I would also note for the Board's information that Section 2.5 and Table 1 of the NIS provide a response to the concerns expressed by the Department of Culture, Heritage and the Gaeltacht in the previous application which was refused by the Board. The main concerns outlined related to the preservation of water quality and the aquatic fauna of conservation interest in the SAC particularly the presence of the Nore Freshwater Pearl Mussel. It contends that the ambiguities highlighted by the Board have been clarified in Section 3.4.8 of the NIS with some of the additional information required to address the reasons for refusal set out in Appendix 5 which contains a Works Method Statement/Methodology.

6.4. The response to the further information request provides clarification in respect of the matters addressed by the Department of Culture, Heritage and the Gaeltacht which are detailed in Section 7.3. It should also be noted that the response to the further information did not introduce any significant further information.

7.0 Consultations

7.1. Consultation Process

7.1.1. The application was circulated to the following bodies:

- Department of Culture, Heritage and the Gaeltacht
- Department of Environment, Community and Local Government
- Department of Agriculture, Food and the Marine
- Inland Fisheries Ireland
- The Heritage Council

- An Chomhairle Ealaíon
- Fáilte Ireland
- An Taisce
- Irish Water
- Transport Infrastructure Ireland

7.1.2. Responses were received from Transport Infrastructure Ireland (TII) and the Development Applications Unit of the Department of Culture, Heritage and the Gaeltacht.

7.2. Transport Infrastructure Ireland (TII):

7.2.1. TII acknowledged receipt of the referral but advised there are no national road interactions and therefore TII have no specific observations to make on the proposed development.

7.3. Department of Culture, Heritage and the Gaeltacht:

7.3.1. The department made a submission in respect of Nature Conservation and Underwater Archaeology which I will address in turn:

Nature Conservation

7.3.2. The submission is set out under the following headings:

Role of the Minister

7.3.3. Repeated references in documentation including NIS to on-going consultation with the NPWS during the works including a requirement for NPWS approval before commencement of various works/activities with statement (page 5 NIS) in relation to project mitigation that '*consultation with NPWS and IFI throughout the project with both parties included in a sign off register for each stage of works to commence*'. Minister has a formal role as a prescribed authority under s.177AE in respect of submissions to assist ABP in carrying out its consent functions and where permission granted, duty to comply with relevant conditions/mitigation measures.

- 7.3.4. Department, including NPWS, does not have a direct role in ensuring compliance and cannot agree or approve changes or alterations to the project or associated conditions/mitigation measures after approval and any reference to consultation or approval by NPWS of any aspect of this project should not be taken into consideration by the Board in making a decision on the proposal.

Requirement for complete project details

- 7.3.5. Advice of Department is that complete project details including detailed mitigation measures need to be provided to allow an adequate AA be undertaken. NIS acknowledges risk that it will not be possible to pump out the work areas due to infiltration from riverbed (Item 29 of works methodology) and NIS states that methodology will be revised to clarify this point (pg 12 NIS) with other details undecided including Emergency Response Actions/Method Statements, locations of physiochemical monitoring points and physiochemical trigger values for cessation of operations. Clarification required to conclude Appropriate Assessment.

Works Supervision and Project Ecologist Roles

- 7.3.6. Good management and communication vital to ensuring that the proposed project does not have adverse effects on the integrity of the SAC and Department is concerned that the Works Supervision and Project Ecologist roles and duties have not been clearly and adequately defined in s.5.6.1 & 5.6.2 of NIS and duties appear to overlap in monitoring checklist (Appendix C). NIS states that LCC chartered engineer will be appointed to supervise and monitor the work on a daily basis and ensure it is carried out in accordance with agreed procedure and ensuring Schedule of Works Operation Record (SOWOR) will be continually verified as a minimum. The Project Ecologist is to be responsible for the upkeep of the SOWOR (pg 5) indicating a supervisory role by the LCC Engineer but role not clearly defined. NIS states trigger levels from an essential part of operation of SOWOR and would appear from description of roles that suitably qualified Ecologist should have primary responsibility for monitoring and reading these trigger levels including physiochemical readings while LCC Engineer should have a supervisory role and notwithstanding any supervisory role of LCC engineer, Project Ecologist must have authority to cease works (point 12 Table1 – response to DCHG concerns) states a Project Ecologist will be present at all times whilst work is undertaken. This should

be repeated in Appendix 5 (Methodology of Proposed Works) and meaning of 'work' should be defined. Department recommends that ABP seek clarity on management structure of project and roles and responsibilities of Project Engineer and Ecologist.

Bats

- 7.3.7. Daytime visual inspection and night-time bat survey carried out in September 2014 (differing dates provided in NIS). Daubenton's bats observed roosting in crevices under three separate arches within the bridge. Department concerned that level of surveying of the roost is inadequate to assess significance and allow full consideration of the impacts of the project on bat species. Survey is 6 years old and no detailed mitigation or compensation measures included in the NIS or Bat report. Unclear why derogation licence which it is proposed to be applied for, has not been sought in advance of submission of application in accordance with Department Circular 2/07. Department advises that further bat surveying is undertaken, suitable mitigation/compensation measures put in place including post construction monitoring prior to decision being made. Report should include detailed measures to be put in place should a bat be found during construction including having a licensed, vaccinated specialist on hand to handle bats. Evidence of any derogation licence from the Department should be included.

Bryophytes

- 7.3.8. Old walls are now a threatened habitat in their own right, as outlined in Red list of Irish Bryophytes, and Irish populations of some bryophyte species are entirely dependent on walls. The Flora (Protection) Order 2015 (SI 356/2015) gives legal protection to 65 species of bryophytes in ROI. Noted that habitat survey was conducted in September 2014 and given that proposal involves stripping walls dating from 18th century of vegetation and survey has taken place outside recommended lifespan of such surveys, recommended that bridge structure is subject to a botanical survey prior to commencement of development and should any protected species be found then a licence (S.21 of Wildlife Act 1976) from the Department is required.

Silt Fences

- 7.3.9. Methodology of Proposed Works (Pg5) states silt fences will remain in place for a number of months after work has finished however NIS (pg76) states that silt fences

will remain in place post works until waters in the settlement area have percolated to ground. Clarification required.

Herbicide Use

- 7.3.10. Methodology of Proposed Works (Pg7 point 25) states that no herbicide can be used for removal of vegetation given sensitivity of the site however Drwg 15234-1004 (east downstream elevation) states 'tree stumps to be poisoned'. Clarification required.

Nesting Birds

- 7.3.11. As works proposed during summer months, works area must be surveyed for nesting birds prior to commencement of the project and suitable mitigation put in place, if required, should active nests be found.

Underwater Archaeology

- 7.3.12. Review of Archaeological Assessment and other documentation associated with the Scheme, Department states that predicted impact of proposal on archaeological heritage and relevant mitigation measures are detailed in Sections 5 and 6 of Archaeological Assessment report and recommended that these mitigation measures are carried out in full.

7.4. Public Submissions

- 7.4.1. No submissions from members of the public were received.

8.0 Further Information Request

A Further Information Request was sent to Laois County Council dated 21 July 2020. A response to same was received by the Board on 12 October 2020. The request was issued under the following headings with the response underneath each one and summarised as follows:

8.1. Bat Survey

- 8.1.1. Request

The Department of Culture Heritage and the Gaeltacht reference the daytime visual inspection and night time bat survey which was carried out in September 2014 noting that differing dates provided in NIS. Concern has been expressed that the level of surveying of the roost is inadequate to assess significance and allow full consideration of the impacts of the project on bat species given the time that has elapsed since in the survey was undertaken and that no detailed mitigation or compensation measures have been included in the NIS or Bat report.

It is further stated that it is unclear why a derogation licence, which it is proposed shall be applied for, has not been sought in advance of submission of application in accordance with Department Circular 2/07.

It is therefore requested that a new bat survey is undertaken and submitted to the Board with suitable mitigation/compensation measures put in place including post construction monitoring prior to decision being made. The report should include detailed measures to be put in place should a bat be found during construction including having a licensed, vaccinated specialist on hand to handle bats. Evidence of any derogation licence from the Department should also be included.

8.1.2. Response

A new Bat Survey was undertaken and is included as Appendix 1 of the response. An email dated 29 September 2020 applying for a derogation licence is attached as Appendix 2 of the response.

8.2. **Bryophytes**

8.2.1. Request

Having regard to the length of time which has elapsed since the habitat survey of the bridge structure was conducted in September 2014 you are requested to submit an up to date botanical survey of the bridge structure.

It should also be noted that if any protected species are found that a licence (S.21 of Wildlife Act 1976) from the Department is required.

8.2.2. Response

The applicant includes a new Botanical Survey of the Bridge the results of which are presented in Appendix 3 of the submission.

8.3. Other Matters

8.3.1. Request

(a) The NIS acknowledges the risk that it will not be possible to pump out the work areas due to infiltration from the riverbed (Item 29 of works methodology) and the NIS states that the methodology will be revised to clarify this point (pg.12 NIS) with other details undecided including the Emergency Response Actions/Method Statements, locations of physiochemical monitoring points and physiochemical trigger values for cessation of operations. You are required to provide clarification on these matters.

(b) You are requested to provide clarification on the proposed management structure of the project and roles and responsibilities of the Project Engineer and the Ecologist as per the concerns highlighted regarding same in the submission received from the Department of Culture, Heritage and the Gaeltacht.

(c) The Methodology of Proposed Works (Pg.5) states that silt fences will remain in place for a number of months after work has finished however the NIS (pg.76) states that silt fences will remain in place post works until waters in the settlement area have percolated to ground. Please clarify this matter.

(d) The Methodology of Proposed Works (Pg.7 point 25) states that no herbicide can be used for removal of vegetation given the sensitivity of the site however Drwg 15234-1004 (east downstream elevation) states 'tree stumps to be poisoned'. Please clarify this matter.

(e) You are requested to address the concerns expressed by the Department of Culture, Heritage and the Gaeltacht in respect of references made in the documentation to ongoing consultation and approval of the NPWS as part of the proposed development.

8.3.2. Response

A response to all of the above is provided at Section 4 (pg. 2-7) of the document submitted.

8.4. Submissions and Observations

8.4.1. Request

Please respond to the submissions and observations received by the Board in respect of this application.

8.4.2. Response

At section 5.1 it is stated that mitigation measures recommended in sections 5 & 6 of the Archaeological Assessment Report will be carried out in full. Confirmed that works area will be surveyed for nesting birds prior to commencement of works and suitable mitigation put in place if required.

9.0 Further Submissions on Response to Further Information

9.1. The response received on 12 October 2020 to the further information request was circulated to the Development Applications Unit and TII. A response was received from the TII and the Department of Culture, Heritage and the Gaeltacht and are summarised as follows:

9.1.1. Transport Infrastructure Ireland

No comment

9.2. Department of Culture, Heritage and the Gaeltacht

A submission was received from the DAU on 11 November 2020 and is summarised as follows:

- Proposed works lie 100 metres upstream of the Nore Pearl Mussel, a sensitive qualifying interest species of the River Barrow and River Nore Special Area of Conservation (SAC) (Site Code 002162) and due to the sensitivity of the works

site, it is of utmost importance that work methodology is supported by scientific evidence with sufficient understanding of the hydrology and hydrogeology of the Nore at Poorman's Bridge and its rainfall response, flood behaviour and groundwater/baseflows to ensure that the river can be safely dammed and dewatered without risk of significant negative impacts to the downstream population of the Nore Pearl Mussel.

- Cessation of works trigger levels (Section 4.1) recommended that it should be clarified how the water level trigger (greater than or equal to 0.737 metres) and rainfall trigger (rainfall greater than or equal to 20 mm over 24 hours) were deduced. Clarified whether the rainfall trigger is antecedent rainfall or rainfall in any 24 hour period and noted that 20mm of rain in the summer is different to 20mm in the winter and queries how this was factored into trigger level calculations.
- Noted that the staff gauge will be installed and calibrated with reference to the known water level at the time of installation, using data from the website <https://waterlevel.ie>, which returns live water level data for the River Nore at McMahon's Bridge downstream of Poorman's Bridge and recommended that it is clarified that there is no lag between the OPW gauge at McMahon's Bridge and the staff gauge which could compromise risk management trigger levels.
- Agree with the physiochemical triggers but would heed caution with respect to the relative turbidity trigger as it is not a reliable surrogate for suspended solids and advised that devices such as a Sonde, that can take high resolution measurements in real-time, should be installed.

10.0 Assessment

10.1. Introduction

- 10.1.1. Under the provisions of Section 177AE(6) there are specific requirements for the Board to consider in assessing applications of this nature namely,
- (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.

10.1.2. I propose to assess the current application before the Board under these three broad headings. In addition to the initial submitted information, cognisance is given to the additional information submitted in response to the Further Information Request by An Bord Pleanála and submissions from Prescribed Bodies.

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

10.2.1. Repair and remediation works to a bridge is not a project type listed in Schedule 5 of the Planning and Development Regulations, 2001 as amended. Therefore, there is no requirement for the proposed development to be screened nor for the submission of an Environmental Impact Assessment Report (EIAR). The applicant has provided supporting documents assessing the potential impact on a number of environmental topics including Bats which I address in biodiversity and cultural heritage below.

10.2.2. The most likely impact of the proposed development on the environment arises from the impact of the remediation works on water quality, biodiversity, residential amenity and cultural heritage. Water quality and biodiversity are discussed in some detail in relation to the impact on the Natura 2000 sites in the appropriate assessment below, however the wider ecological impact and those species not listed as Qualifying Interest of the European Sites are addressed below in addition to other relevant areas as follows:

- Biodiversity
- Residential amenity
- Cultural, Archaeological and Built Heritage

10.2.3. **Biodiversity**

Impacts on the qualifying features of the designated sites are specifically addressed below in the Appropriate Assessment in section 10.7 below. This section addresses biodiversity outside of such interests and in particular addresses Bats and Bryophytes.

Bats

The 2014 Bat Survey stated that Daubenton's bats were observed roosting in crevices under three separate arches. It was stated that there are several cracks and crevices throughout the bridge which offer suitable roosting features for bats.

As outlined above, in their submission to the Board, the Department of Culture Heritage and the Gaeltacht expressed concern regarding the Bat Survey submitted which had been undertaken in 2014. It was considered that the level of surveying of the roost was inadequate to assess the significance and to allow full consideration of the impacts of the project on bat species given the time that has elapsed since the survey was undertaken and that no detailed mitigation or compensation measures have been included in the NIS or Bat report. A new bat survey with suitable mitigation/compensation measures put in place including post construction monitoring prior to decision being made was requested in the further information request to address this concern. It was also requested that the report should include detailed measures to be put in place should a bat be found during construction including having a licensed, vaccinated specialist on hand to handle bats.

In response to the request, a new Bat Survey of Poorman's Bridge has been carried out includes specialist surveys which were carried out on 25th September 2020, the methodology of which is detailed in section 5 of the report. The report outlines at section 4.1 the threats to bats in bridges which relates principally to unsympathetic bridge repair. It is stated that it should be possible to prevent damage to roost crevices if appropriate steps are taken at an early stage of the works, with bats and roosts particularly at risk from pressure grouting. The report states that it is often possible to retain relatively small crevices under the arch of a masonry bridge without compromising on stability and safety. It is stated that the vast majority of the crevices marked in the subject bridge are relatively small and away from any major fault lines or fissures in the arches. It is outlined that those crevices selected as being suitable for retention should be sealed with bubble wrap and careful hand grouting carried out around the entrance to the crevice and once the grout has set the bubble wrap removed so that the original depth of the crevice is retained. The report also outlines that it is always preferable to retain some original crevices rather than fit bat boxes.

The survey undertaken records a maternity roost of Daubenton's bats and numerous crevices containing smaller numbers of Daubenton's bats. The survey outlines each

of the seven arches and the bats found in each and crevices marked which I have tabulated as follows for ease of reference. The arches are numbered in the report from 1-7 from south to north.

Arch	Number of Bats Found	Number of Crevices Marked
1	2	4
2	0	0
3	0	2
4	5	2 (both maternity crevices)
5	3	3
6	0	0
7	2	7
Total	12	18

It was also noted that a soprano pipistrelle bat was recorded foraging in the vicinity of the bridge but had not emerged from the Bridge. Other soprano and common pipistrelle were also recorded foraging upstream and downstream. Section 7 of the report outlines the recommendations proposed and states in particular that all crevices marked for retention for bats in the present study must be retained with a survey repeated immediately prior to the works commencing. The process recommended for excluding the bats during the works is outlined and it is recommended that the works be supervised by an ecologist. No lighting on the bridge is recommended. On completion of the work it is recommended that a further survey is undertaken to ensure all marked crevices are intact and open for bats. Measures are also proposed for the avoidance of crayfish plague. While I note the recommendations outlined which appear to be comprehensive with the survey undertaken clearly articulated in the report, it is not clear whether the applicant proposes to implement these recommendations in the proposed development. This has not been clarified. I would recommend to the Board that a condition is attached,

should they be minded to grant permission, requiring that the recommendations of the bat survey are implemented in full.

Concern was also expressed as to why a derogation licence, which it was proposed shall be applied for, had not been sought in advance of the submission of the application in accordance with Department Circular 2/07. It was also requested that evidence of any derogation licence from the Department should also be included.

In relation to the requirement to seek a derogation licence from the Department, I note that the submission received includes a copy of an email sent from the applicants agent (Caroline Shiel) to the Licencing Department of the NPWS dated 29 September 2020 applying for a derogation licence. No response is included to this email however given the brief space of time between the email being sent (29 September) and the submission of the response to the Board (12 October) it is not unexpected that a response would not have been received. It is not clear why the application was not sent following receipt of the further information request which was dated 21 July 2020. Notwithstanding, the application has been sought and I consider that it is sufficient to address the concerns expressed.

In relation to mitigation I would note that the following measures are required:

Bryophytes

Similarly, in respect of bryophytes, the Department stated that while a habitat survey of the bridge was submitted, that given the length of time which had elapsed since it was conducted (September 2014), that an up to date botanical survey of the bridge structure was required. It was also requested that if any protected species were found that a licence (S.21 of Wildlife Act 1976) from the Department was required.

In response to this request the applicant have forwarded a new botanical survey of the bridge which was completed by botanist Michelle O'Neill with the results detailed in Appendix 3 of the submission. This is effectively a list of the dominant species providing their common name and scientific name. Moses and Liverwort present are also outlined. I would note that there is no reference to the location or abundance of any of the species. Section 3 of the report clarifies some of the habitats encountered

including narrow dry meadow and grassy verge, stone walls, and depositing river. It is stated that no Flora Protection Species were present but it is clarified that not all areas could be searched in full noting that floating river vegetation (Annex 3260) was present c.10-15m upstream of the bridge and is also present downstream. While some areas of the bridge such as upstream cutwaters could not be reached it is proposed that these areas can be checked when scaffolding is erected and if a licence is required one will be obtained at that time. Other areas covered in bramble were also unreachable and can be rechecked when the bramble is cleared. Having visited the bridge I concur with the difficulties encountered in accessing particular areas and particularly the overgrowth in some areas. I would suggest that if the Board are minded to approve the development that pre-construction surveys should be conditioned.

In conclusion, with the implementation of the mitigation measures outlined in the submission received and the proposal to resurvey for both bats and bryophytes prior to construction commencing, I am satisfied that there will not be a significant effect on biodiversity.

10.2.4. Residential and Visual Amenities

The road is a tertiary local road with scattered residential development in the vicinity. The duration of the works is stated as being 8 weeks only. The works are described as remedial works to the bridge. These works will secure the bridge for the benefit of the vehicular and pedestrian traffic users. I would note that Appendix 5 of the NIS document includes a Works Method Statement which outlines the work methodology and monitoring. During the works there is likely to be a short-term increase in traffic and noise. However, this is temporary and unlikely to be significant due to the scale of the works and character of the receiving environment. In relation to landscape or visual impact, there will be no impacts as a result of these works. The bridge has very little profile from the public road given the alignment of the road with only the relatively short walls currently covered in vegetation visible. I am satisfied that there will not be a significant effect on residential or visual amenities.

10.2.5. Cultural, Built Heritage and Archaeology

As outlined in Section 4 above, the second reason for refusal on the previous application related to the absence of an architectural heritage assessment of Poorman's Bridge and an archaeological appraisal of this river crossing point. It was stated as follows: *"having regard to the absence of an architectural heritage assessment of Poorman's Bridge and an archaeological appraisal of this river crossing point, the Board is not satisfied that the proposed remedial interventions to the Protected Structure are appropriate and that the proposed development would not have an unacceptable impact on archaeological heritage. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area"*.

I will address architectural heritage and archaeology in turn in the following sections.

Architectural Heritage

The bridge is a Protected Structure and is listed on the National Inventory of Architectural Heritage. It is described as a seven-arch limestone road bridge over the River Nore built c.1770 with triangular cutwaters, rubble limestone parapets and segment-headed arches with limestone voussoirs. The works proposed are stated to comprise remedial works which will secure the bridge and repair the obvious cracks and remove the vegetation growing on the bridge. The application documentation now includes an Architectural Heritage Impact Assessment Report prepared by Jack Coughlan Architects. It is included as Appendix 10 of the Natura Impact Statement.

The report notes that the NIAH record rates the structure as being of Regional importance with the categories of special interest architectural and social. The report details the issues affecting the condition of the bridge which require attention and have resulted in the current application. Loss of pointing leading to vegetation growth and subsequent structural issues are outlined. In respect of the potential visual impact on the structure it is stated that the removal of the vegetation growth would allow the restoration of the stonework and have a positive visual impact on the bridge. Other elements of the works would have minimal visual impact in some areas such as areas to be grouted and repointed. Rebuilding the cutwaters would restore the structure resulting in a long term positive visual impact. Visual impact of the scour protection proposed would be limited depending on water levels would be minimal when visible. Overall the works proposed are sought in order to protect the integrity

of the structure and I consider that the visual impact on same would be positive. In terms of the impact on the setting of the structure I would agree that there will be no impact on same given the works are focused on the structure itself. I note that the report outlines recommendations for the works and a methodology for rebuilding piers and cutwaters.

Archaeology and Underwater Archaeology

The application documentation now includes an Archaeological Impact Assessment Report prepared by Daniel Noonan Archaeological Consultancy and is included as Appendix 9 of the Natura Impact Statement. The report outlines the historical context and the view that the crossing point is an historic fording point with the suggestion that it may have been built as a replacement to a possible clapper bridge. Riparian and wading surveys of an area 10m wide on either side of the bridge when the river levels were low are outlined. No obvious archaeological structures, features or finds suggestive of a bridge present at the Poorman's Bridge crossing prior to the current standing structure were observed during the surveys undertaken. However, the report states that given that there is a question as to the actual construction date of the earliest phase of Poorman's Bridge the structure as well as its siting on a probable historic fording site then it should be regarded as being of archaeological interest. It is also outlined that the bridge was widened on its downstream side by c.3m. It is noted that no surface features or indicators of potential subsurface archaeological material were noted within the site of the proposed temporary compound on the southern bank of the river.

The proposed remediation works to the bridge involves phased draining of the riverbed to allow repairs to the angled cutwaters and base of the abutments and the addition of scour protection. The nature of the proposed works will involve disturbance to the riverbed with the potential to unearth buried evidence for any earlier structures and deposited objects. The Report outlines that the works proposed are a necessary intervention to support the structural integrity of the Bridge and its long-term survival but left unmitigated the works could have a direct impact on any archaeological material present on the site. The works therefore require mitigation which is outlined in Section 6 of the report which recommends that the works including the repair works be archaeologically monitored and carried out under licence to the National Monuments Service. With an appropriate archaeological

condition, I am satisfied that these works will have a positive impact on the bridge and will not detract from the character of the bridge.

10.2.6. **Conclusion**

Having regard to the scale of the proposed works and its location in a rural area and subject to the implementation of all mitigation measures in full, the proposed development is unlikely to give rise to significant environmental effects.

10.3. **The likely consequences for the proper planning and sustainable development of the area:**

- 10.3.1. The proposed development comprises the carrying out of remedial works on Poorman's Bridge which crosses over the Nore River. I have inspected the Bridge and can confirm to the Board that it is clear that remedial and repair works are required. Vegetation and cracks are clearly visible on the arches. Two of the arches are almost completely overgrown with vegetation (span 6 and 7), albeit these arches are outside of the river itself. Works to the public road are also proposed comprising resurfacing of c.148m of the road.
- 10.3.2. The Laois County Development Plan states in Section 6.1.2.3 of the Plan which refers to County Roads and Urban Roads/Streets that '*Laois County Council has responsibility for the carrying out of maintenance and improvement works on these roads, financed from their own resources and supplemented by state grants*'. There are a number of policies, TRANS 20 and TRANS 21 encourage and facilitate investment in the local road network and provide for and carry out improvements to sections of local roads that are deficient in respect of realignment, structural condition or capacity, and to maintain that standard thereafter. I consider that the remedial works to improve the bridge would comply with these policies.
- 10.3.3. The Development Plan also refers to Protected Structures. The bridge is a Protected Structure (ref. RPS 645) and the works proposed will help maintain and protect the structure in accordance with policy OBJ4 which seeks to protect all structures listed in the Record of Protected Structures. I note in this regard the assessment I have undertaken at section 9.2.5 above in respect of architectural heritage.
- 10.3.4. With respect to the remedial works to the bridge itself, I am satisfied that the remedial works are necessary and that the principle of the proposed works is

consistent with the Objectives and Policies set out in the Development Plan and is in accordance with the proper planning and sustainable development of the area.

10.4. **The likely significant effects on a European site:**

10.4.1. The areas addressed in this section are as follows:

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

10.5. **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.

10.6. **The Natura Impact Statement:** The application was accompanied by an NIS which describes the proposed development, the project site and the surrounding area. The NIS contains a Stage 1 Screening Report at Appendix 2. 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 predicted the potential impacts for these sites and their conservation objectives, it suggested mitigation measures, assessed in-combination effects with other plans and projects and it identified any residual effects on the European sites and their conservation objectives.

10.6.1. As outlined elsewhere in this report, the proposed development was previously refused by the Board for a number of reasons the first of which stated that "*having regard to the conservation objectives for the River Barrow and River Nore Special Area of Conservation (site code: 002162), to the 2014 survey of the Nore freshwater pearl mussel (Margaritifera durrovensis) which is a qualifying interest of the site, to*

the sensitivity to water quality, particularly to sedimentation, and to the poor conservation status of this critically endangered species, which is only known to occur along a short stretch of the River Nore below Poorman's Bridge, and to the absence of adequate water level data and turbidity survey data in circumstances where works are proposed to commence in summer 2018, and where the local authority has confirmed that the collection of such data only commenced in February 2018, the Board is not satisfied, based on the information submitted, that the proposed development would not adversely affect the integrity of this European Site, a conservation objective of which requires that the distribution of this qualifying interest be maintained at 15.5 kilometres, from Poorman's Bridge (S407859) to Lismaine Bridge (S442660), and that suitable habitat is to be restored, rather than maintained".

- 10.6.2. The NIS at Section 2.5 and Table 1 provides a response to the concerns raised in the previous application by both the DCHG as a prescribed body on the previous application and the Board in their decision as competent authority. In addition it is stated that additional information required has been attached as appendices including a Works Method Statement/Methodology, Schedule of Works Operation Record and Water Level and Turbidity Report. A hydraulic analysis report is provided at Appendix 11. Aquabarriers User Manual and a Working Example are provided in Appendix 3.
- 10.6.3. The report concludes that, subject to the implementation of best practice and the recommended mitigation measures, the proposed development would not have a significant effect either individually or in combination with other plans or projects on the conservation objectives of the River Barrow and River Nore SAC (Site Code 002162) and the River Nore SPA (Site Code 004233).
- 10.6.4. Having reviewed the NIS and the supporting documentation within same, I am satisfied that it provides adequate information in respect of the baseline conditions, clearly identifies the potential impacts, and does use best scientific information and knowledge. Details of mitigation measures are provided and they are summarised in Section 5.6 of the NIS. I am satisfied that the information is sufficient to allow for appropriate assessment of the proposed development (see further analysis below).

10.7. Appropriate Assessment

STAGE ONE SCREENING ASSESSMENT

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

10.7.2. In order to determine the zone of influence of the proposed development, I have reviewed the Natura 2000 sites located within the wider area of the site, of which there are seven, which 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. I note that the screening report submitted with the NIS outlines the potential impacts at section 4.5. I consider that it is a robust and comprehensive consideration of the potential effects of the proposed development on the sites in question. These are as follows:

Habitat Loss or Alteration – it is stated that the works are confined to the existing footprint of the bridge with habitat loss of 4.75m² due to the insertion of a scour wall at both sides of the upstream section of two of the piers. There is the potential for construction material entering the river and altering the habitat if there was an impact on water quality.

Habitat or Species Fragmentation – impact to aquatic habitats or species downstream due to input of sediments, concrete, grouts or other pollutants.

Disturbance and/or displacement of Species – construction noise, presence of materials within the river such as dam/pumps and construction workers

Water Quality – Potential risk to water quality from entry of pollutants and sediments into the watercourse during construction phase.

Hydrology (Flow) – works proposed involve damming of two of five river arches at a time.

10.7.3. Based on my examination of the NIS report and supporting information, the NPWS website, aerial and satellite imagery, the scale of the proposed development and likely effects, the proximity and potential 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 have examined the following sites and the potential pathways and potential effects in order

to determine if the site can be screened out or if it is necessary to carry it forward for Stage 2 AA:

European site (SAC/SPA)	Site Code	Distance
River Nore SPA	004233	0m
River Barrow and River Nore SAC	002162	0m
Lisbigney Bog SAC	000869	7.75km SW
Knockacoller Bog SAC	002333	10.25km NW
Slieve Bloom SPA	004160	13.25km NW
Coolrain Bog SAC	002332	14km NW
Slieve Bloom Mountains SAC	000412	14.4km NW

10.7.4. River Nore SPA (004233)

The subject site is located within this SPA. The special conservation interests for this site are as follows:

- Kingfisher [A229]

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.

The site is within and hydrologically linked to the proposed development site.

Potential Effects relevant to this site are addressed as follows:

- Habitat Loss or Alteration – loss of c.4.75 sq.m of habitat in vicinity of two piers to facilitate insertion of a scour wall at both sides of the upstream sections.
- Habitat or Species Fragmentation – while Kingfisher mobile, potential impact to species from impact on aquatic habitats or species downstream of the bridge.

- Disturbance and/or displacement of Species – potential for noise and physical presence of materials from construction to impact on species.
- Water Quality – potential risk from pollutants entering water during construction phase to impact species.
- Hydrology (Flow) – minimal loss during construction when arches are dammed in turn to facilitate works. Insertion of scour wall on upstream side of two of the piers (total area 4.75m²) reduces available cross section area for flow through the bridge by 0.75% which is not a significant change to the flow of water under the bridge.

Special Conservation Interest to be carried forward to Stage 2 - Kingfisher.

Site to be carried forward to Stage 2 – Yes.

10.7.5. River Barrow and River Nore SAC (002162)

The subject site is located within this SAC. The qualifying interests for this site are as follows:

- Desmoulin's whorl snail [1016]
- Freshwater Pearl Mussel [1029]
- White-clawed crayfish [1092]
- Sea Lamprey [1095]
- Brook Lamprey [1096]
- River Lamprey [1099]
- Twaité shad [1103]
- Atlantic Salmon [1106]
- Estuaries [1130]
- Mudflats and sandflats not covered by seawater at low tide [1140]
- *Salicornia* and other annuals colonizing mud and sand [1310]
- Atlantic salt meadows [1330]
- Otter [1355]
- Mediterranean salt meadows [1410]

- Kilarney Fern [1421]
- Nore Freshwater Pearl Mussel [1990]
- Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation [3260]
- European Dry Heaths [4030]
- Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]
- Petrifying springs with *tufa* formation [7220]*
- Old sessile oak woods with *ilex* and *Blechnum* in the British Isles [91A0]
- Alluvial Forests with *Alnus glutinosa* and *Fraxinus excelsior* [91E0]*

Priority habitat denoted by *

The conservation objectives seek the following:

Maintain the favourable conservation condition of the following:

- Desmoulin's whorl snail [1016]
- White-clawed crayfish [1092]
- Estuaries [1130]
- Mudflats and sandflats not covered by seawater at low tide [1140]
- *Salicornia* and other annuals colonizing mud and sand [1310]
- Kilarney Fern [1421]
- Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation [3260]
- European Dry Heaths [4030]
- Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]
- Petrifying springs with *tufa* formation [7220]*

Restore the favourable conservation condition of:

- Sea Lamprey [1095]
- Brook Lamprey [1096]
- River Lamprey [1099]

- Twaite shad [1103]
- Atlantic Salmon [1106]
- Atlantic salt meadows [1330]
- Otter [1355]
- Mediterranean salt meadows [1410]
- Nore Freshwater Pearl Mussel [1990]
- Old sessile oak woods with *ilex* and *Blechnum* in the British Isles [91A0]
- Alluvial Forests with *Alnus glutinosa* and *Fraxinus excelsior* [91E0]

In relation to the Freshwater pearl mussel [1029] the conservation objective states:

- The status of the freshwater pearl mussel (*Margaritifera margaritifera*) as a qualifying Annex II species for the River Barrow and River Nore SAC is currently under review. The outcome of this review will determine whether a site-specific conservation objective is set for this species. Please note that the Nore freshwater pearl mussel (*Margaritifera durrovensis*) remains a qualifying species for this SAC. This document contains a conservation objective for the latter species.

The site is within and hydrologically linked to the proposed development site.

Potential Effects relevant to this site are addressed as follows:

- Habitat Loss or Alteration - loss of c.4.75 sq.m of habitat in vicinity of two piers to facilitate insertion of a scour wall at both sides of the upstream sections. Construction material entering the river could potentially impact locally and downstream of the bridge. Potential for habitat alteration if water quality impacted.
- Habitat or Species Fragmentation – Resultant impact to aquatic habitats or species downstream of bridge due to input of sediments, concrete, grouts, fuels or other pollutants could result in habitat or species fragmentation.
- Disturbance and/or displacement of Species – potential for noise and physical presence of materials from construction to impact on species.

- Water Quality – potential risk from pollutants entering water during construction phase to impact species. Qualifying habitats and species could be significantly affected during the construction phase.
- Hydrology (Flow) – minimal loss during construction when arches are dammed in turn to facilitate works. Insertion of scour wall on upstream side of two of the piers (total area 4.75m²) reduces available cross section area for flow through the bridge by 0.75% which is not a significant change to the flow of water under the bridge.

Qualifying Interests to be carried forward to Stage 2 - Yes

Site to be carried forward to Stage 2 – Yes.

10.7.6. **Lisbigney Bog SAC (000869)**

This site is located 7.75km south west of the proposed development.

The qualifying interests for the site are as follows:

- Desmoulin's whorl snail [1016]
- Calcerous fens with *Cladium mariscus* and species of the *Caricion davallianae* [7210]

The generic conservation objectives seek to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species.

This site which is 7.75km to the southwest of the subject sites drains into the Owenbeg River which joins the Nore River downstream of the bridge therefore the site is not directly downstream of the site.

Potential Effects

- Habitat Loss or Alteration – site c. 7.75km downstream with no loss and no direct impact pathway.
- Habitat or Species Fragmentation - site c. 7.75km downstream with no direct impact pathway.
- Disturbance and/or displacement of Species - site c. 7.75km downstream with no direct impact pathway
- Water Quality - site c.7.75km downstream with no direct impact pathway

- Hydrology (Flow) - site c. 7.75km downstream with no direct impact pathway

Qualifying Interest to be carried forward to Stage 2 – none

Site to be carried forward to Stage 2 – No.

10.7.7. **Knockacoller Bog SAC (002333)**

This site is located 10.25km north west of the proposed development.

The qualifying interests for the site are as follows:

- Active Raised bogs [7110] *
- Degraded Raised bogs [7120]
- Depressions on peat substrates of the Rhynchosporion [7150]

Priority habitat denoted by *

The specific site conservation objectives seek to restore the favourable conservation condition of the active raised bogs. In relation to ‘degraded raised bogs’ it is stated that: the long-term aim for Degraded raised bogs still capable of natural regeneration is that its peat-forming capability is re-established; therefore, the conservation objective for this habitat is inherently linked to that of Active raised bogs (7110) and a separate conservation objective has not been set in Knockacoller Bog SAC. In relation to the ‘Depressions on peat substrates of the Rhynchosporion’ it is stated that this qualifying interest is an integral part of good quality Active Raised bogs [7110] and thus a separate conservation objective has not been set for the habitat. While the site drains to a tributary of the River Nore the site is c.10km upstream of Poormans Bridge and therefore no impact pathway exists.

Potential Effects

- Habitat Loss or Alteration – site c. 10km upstream with no loss and no impact pathway.
- Habitat or Species Fragmentation - site c. 10km upstream with no impact pathway.
- Disturbance and/or displacement of Species - site c. 10km upstream with no impact pathway
- Water Quality - site c.10km upstream with no impact pathway

- Hydrology (Flow) - site c. 10km upstream with no impact pathway

Qualifying Interest to be carried forward to Stage 2 – none

Site to be carried forward to Stage 2 – No.

10.7.8. **Slieve Bloom SPA (004160)**

While the Nore River rises in the Slieve Bloom Mountains, this SPA is located 13.25km upstream to the north west of the proposed development.

The special conservation interests for the site are as follows:

- Hen Harrier [A082]

The generic conservation objectives seek to maintain or restore the favourable conservation condition of the bird species listed as SCI for this SPA.

The site is upstream of the subject development and the special conservation interest is not associated with or linked to aquatic environments.

Potential Effects

- Habitat Loss or Alteration – site c. 13.25km upstream with no loss and no impact pathway.
- Habitat or Species Fragmentation - site c. 13.25km upstream with no impact pathway.
- Disturbance and/or displacement of Species - site c. 13.25km upstream with no impact pathway
- Water Quality - site c.13.25km upstream with no impact pathway
- Hydrology (Flow) - site c. 13.25km upstream with no impact pathway

Special Conservation Interest to be carried forward to Stage 2 – none

Site to be carried forward to Stage 2 – No.

10.7.9. **Coolrain Bog SAC (002332)**

This site is located 14km upstream to the north west of the proposed development.

The qualifying interests for the site are as follows:

- Active Raised bogs [7110]*

- Degraded Raised bogs [7120]
- Depressions on peat substrates of the Rhynchosporion [7150]

Priority habitat denoted by *

The specific site conservation objectives seek to restore the favourable conservation condition of the active raised bogs. In relation to ‘degraded raised bogs’ it is stated that: the long-term aim for Degraded raised bogs still capable of natural regeneration is that its peat-forming capability is re-established; therefore, the conservation objective for this habitat is inherently linked to that of Active raised bogs (7110) and a separate conservation objective has not been set in this SAC. In relation to the ‘Depressions on peat substrates of the Rhynchosporion’ it is stated that this qualifying interest is an integral part of good quality Active Raised bogs [7110] and thus a separate conservation objective has not been set for the habitat.

While the site drains to a tributary of the River Nore the site is 14km upstream of Poormans Bridge and therefore no impact pathway exists.

Potential Effects

- Habitat Loss or Alteration – site c.14km upstream with no loss and no impact pathway.
- Habitat or Species Fragmentation - site c.14km upstream with no impact pathway.
- Disturbance and/or displacement of Species - site c.14km upstream with no impact pathway
- Water Quality - site c.14 km upstream with no impact pathway
- Hydrology (Flow) - site c.14 km upstream with no impact pathway

Qualifying Interest to be carried forward to Stage 2 – none

Site to be carried forward to Stage 2 – No.

10.7.10. **Slieve Bloom Mountains SAC (000412)**

While the Nore River rises in the Slieve Bloom Mountains, this SAC is located 14.4km upstream of the site to the north west of the proposed development.

The qualifying interests for the site are as follows:

- Northern Atlantic wet heaths with *Erica tetralix* [4010]
- Blanket bog (*active only) [7130]
- Alluvial Forests with *Alnus glutinosa* and *Fraxinus excelsior* [91E0]*

Priority habitat denoted by *

The site is upstream of the subject development and almost 15km from same.

The site specific conservation objectives seek to restore the favourable conservation condition of the qualifying interests above.

Potential Effects

- Habitat Loss or Alteration – site c.14.4km upstream with no loss and no impact pathway.
- Habitat or Species Fragmentation - site c.14.4km upstream with no impact pathway.
- Disturbance and/or displacement of Species - site c.14.4km upstream with no impact pathway
- Water Quality - site c.14.4km upstream with no impact pathway
- Hydrology (Flow) - site c.14.4km upstream with no impact pathway

Qualifying Interest to be carried forward to Stage 2 – none

Site to be carried forward to Stage 2 – No.

10.7.11. **Slieve Bloom Mountains Ramsar Site (7IE004)**

The NIS identifies Slieve Bloom Mountains Ramsar Site located within c.15km of the subject site. It is described as the largest and most intact area of mountain blanket bog known in Ireland with the features including areas of well development hummock, hollow and pool systems. It is stated that vegetation consists of a dwarf shrub and herb layer and extensive cover of Sphagnum moss. An absence of rock outcrops limits species and habitat diversity, except in valleys where seepage areas and streams provide increased nutrients. Notwithstanding that this Ramsar site is not a Natura 2000 site, it is c.14km upstream of the subject works and therefore no impact pathway exists providing that the proposed development would not be likely to have a significant effect on this site.

10.7.12. **Conclusion on Stage One Screening**

With regard to the following European sites, Lisbigney Bog SAC (000869), Knockacoller Bog SAC (002333), Slieve Bloom SPA (004160), Coolrain Bog SAC (002332) and Slieve Bloom Mountains SAC (000412) I consider it 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 these five European Sites, in view of the nature and scale of the proposed works, the nature of the Conservation Objectives, Qualifying and Special Conservation Interests of the sites, the separation distances and particularly the lack of any pathway between the proposed works and these European sites and a Stage 2 Appropriate Assessment is not therefore required for these sites.

As outlined above two of the sites considered in the Stage 1 screening namely the River Barrow and River Nore SAC (Site Code 002162); and the River Nore SPA (Site Code 004233), cannot be screened out and therefore a Stage 2 Appropriate Assessment is required for these two sites.

STAGE TWO APPROPRIATE ASSESSMENT

10.8. **Context**

10.8.1. As outlined above, this Stage 2 assessment relates to the qualifying interests and special conservation interests within 2 European Sites, namely the River Barrow and River Nore SAC (Site Code 002162); and the River Nore SPA (Site Code 004233) which I will address in turn.

10.9. **River Nore SPA (Site Code 004233)**

10.9.1. **Description of site**

The site is a Special Protection Area (SPA) under the E.U. Birds Directive of special conservation interest for the following species: Kingfisher. The River Nore SPA is of high ornithological importance as it supports a nationally important population of Kingfisher, a species that is listed on Annex I of the E.U. Birds Directive. The site

synopsis states that a survey in 2010 recorded 22 pairs of Kingfisher (based on 16 probable and 6 possible territories) within the SPA.

10.9.2. **Conservation Objectives**

There are generic conservation objectives available for this site which seek to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA which in this case is:

- Kingfisher [*Alcedo atthis*] - A229

10.9.3. **Potential direct and/or indirect effects:**

Potential Effects relevant to this site are addressed as follows:

- Habitat Loss or Alteration – loss of c.4.75 sq.m of habitat in vicinity of two piers to facilitate insertion of a scour wall at both sides of the upstream sections.
- Habitat or Species Fragmentation – while Kingfisher mobile, potential impact to species from impact on aquatic habitats or species downstream of the bridge.
- Disturbance and/or displacement of Species – potential for disturbance to kingfishers during the remedial works due to increased noise and human activity, heavy machinery use and bridge works.
- Water Quality – potential risk from pollutants entering water during construction phase to impact species.

The NIS references an ecological survey which was undertaken on 30th September 2014 where a single kingfisher was recorded upstream of the bridge flying away from the bridge. While this survey is now 6 years old, I note that the banks both upstream and downstream for 150m were surveyed for potential nesting sites but were not deemed suitable and no nests were found. Nesting sites were found both upstream and downstream of the site but as indicated in the NIS, the bridge itself appears to lie between two separate kingfisher territories. Therefore, I did not consider it necessary to seek further information on this matter given the absence of the species from the site or its immediate vicinity and given the localised nature of the proposed works within the River. The absence of such a request in the submission from the Department would support this view. While there is potential for impacts on water quality which could impact on the kingfisher's food, I consider that given the suite of mitigation measures proposed for the construction phase, which are outlined in

Section 5.6 of the NIS, I consider that the implementation of same would provide that the proposed development would not adversely affect the integrity of the site in view of its conservation objectives. Furthermore, it is proposed to have an onsite ecologist for the works and the conditioning of same that the proposed development would not adversely affect this special conservation interest.

10.9.4. I am satisfied that following the implementation of the mitigation which are designed to prevent disturbance that the construction and operation of the proposal will not adversely affect the integrity of the River Nore SPA in respect of the conservation objectives set for the Kingfisher special conservation interest.

10.10. River Barrow and River Nore SAC (Site Code 002162)

10.10.1. Description of site

As outlined in the site synopsis, this site is considered to be very important for the presence of a number of E.U. Habitats Directive Annex II animal species including Freshwater Pearl Mussel (both *Margaritifera margaritifera* and *M. m. durrovensis*), White-clawed Crayfish, Salmon, Twaite Shad, three lamprey species – Sea Lamprey, Brook Lamprey and River Lamprey, the tiny whorl snail *Vertigo moulinsiana* and Otter. This is the only site in the world for the hard water form of the Freshwater Pearl Mussel, *M. m. durrovensis*, and one of only a handful of spawning grounds in the country for Twaite Shad. The freshwater stretches of the River Nore main channel is a designated salmonid river. The Barrow/Nore is mainly a grilse fishery though spring salmon fishing is good in the vicinity of Thomastown and Inistioge on the Nore. The upper stretches of the Barrow and Nore, particularly the Owenass River, are very important for spawning.

Overall, the site is of considerable conservation significance for the occurrence of good examples of habitats and of populations of plant and animal species that are listed on Annexes I and II of the E.U. Habitats Directive. Furthermore it is of high conservation value for the populations of bird species that use it. The occurrence of several Red Data Book plant species including three rare plants in the salt meadows and the population of the hard water form of the Freshwater Pearl Mussel, which is limited to a 10 km stretch of the Nore, add further interest to this site.

The riparian zone of the River Nore stretch comprises treelines (WL1) and heavily managed agricultural grassland (GA1). The treelines are stock proof along the river with the exception of areas cleared for cattle drinking access near Poorman's Bridge. At Poorman's Bridge a good diversity of macrophytes are present.

10.10.2. **Surveys Undertaken**

Field surveys undertaken are outlined in Section 3.4 of the NIS. In addition to the surveys outlined above in respect of biodiversity (bats and botanical) an otter survey, ornithological survey and biological water quality survey are detailed. White clawed crayfish surveys and freshwater pearl mussel and Nore pearl mussel surveys are outlined. These surveys were undertaken c.2014 with most repeated in 2017. As outlined in relation to the Kingfisher in section 10.9 above, while some of the surveys are now 6 years old, many of the surveys were updated in 2017. I note that the conclusion of these surveys and in particular the nature of the works proposed which relate to the repair of the Bridge with minimal works in-stream. Therefore I did not consider it necessary to seek further information in relation to these surveys given the localised nature of the proposed works within the River. The absence of such a request in the submission from the Department of Culture, Heritage and the Gaeltacht would support this view.

10.10.3. **Conservation Objectives**

There are detailed conservation objectives for this SAC. They aim to maintain or restore the favourable conservation condition of the habitats including priority habitats and species listed in the Habitats and Birds Directives, with specific attributes and targets listed for each habitat and species.

10.10.4. **Qualifying Interests**

The qualifying interests for this site are outlined below as follows:

- Desmoulin's whorl snail [1016]
- Freshwater Pearl Mussel [1029]
- White-clawed crayfish [1092]
- Sea Lamprey [1095]
- Brook Lamprey [1096]

- River Lamprey [1099]
- Twaite shad [1103]
- Atlantic Salmon [1106]
- Estuaries [1130]
- Mudflats and sandflats not covered by seawater at low tide [1140]
- *Salicornia* and other annuals colonizing mud and sand [1310]
- Atlantic salt meadows [1330]
- Otter [1355]
- Mediterranean salt meadows [1410]
- Kilarney Fern [1421]
- Nore Freshwater Pearl Mussel [1990]
- Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation [3260]
- European Dry Heaths [4030]
- Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]
- Petrifying springs with *tufa* formation [7220]*
- Old sessile oak woods with *illex* and *Blechnum* in the British Isles [91A0]
- Alluvial Forests with *Alnus glutinosa* and *Fraxinus excelsior* [91E0]*

Priority habitat denoted by *

10.10.5. **Qualifying Interests to be Assessed**

Given the size of this SAC, the variety of habitats arising and the location of the subject site at the northern most extent of this SAC a number of the qualifying interests are located at such a remove from the zone of influence of the subject site that it is beyond reasonable scientific doubt that there is any potential for significant impacts. Table 5 in the NIS identifies each of the qualifying interests and identifies the potential for effects from the proposed development. I would also note that the Conservation Objectives for this site map the location of some of these qualifying interests. The following table outlines the qualifying interests which are outside the

zone of influence of the proposed development and for which no further assessment is considered necessary. The map reference is provided where the interests have been mapped.

Qualifying Interest	Map Ref **	Rationale
Twaite shad [1103]		Lives in lower reaches of estuaries as juveniles and at sea as adult with estuaries c. 60km from the site and further downstream along River Channel.
Estuaries [1130]	2	Coastal habitat of the SAC in vicinity of and south of New Ross and therefore in excess of 60km from the site overland and more along the River Channel.
Mudflats and sandflats not covered by seawater at low tide [1140]	3	Coastal habitat of the SAC south of New Ross and therefore in excess of 60km from the site overland and more along the River Channel.
<i>Salicornia</i> and other annuals colonizing mud and sand [1310]	5	Coastal habitat of the SAC south of New Ross and therefore in excess of 60km from the site overland and more along the River Channel.
Atlantic salt meadows [1330]	5	Coastal habitat of the SAC south of New Ross and therefore in excess of 60km from the site overland and more along the River Channel.
Mediterranean salt meadows [1410]	5	Coastal habitat of the SAC south of New Ross and therefore in excess of 60km from the site overland and more along the River Channel.
Killarney Fern [1421]	7	Not recorded within the site area and nearest recorded area along the Nore is northwest of New Ross c.56km overland and further along River Channel.
European Dry Heaths [4030]		Works located within river therefore no impact on this terrestrial habitat which has not been recorded within the footprint of the site.

Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]		10km grid square (S48) within which Poorman's Bridge located not within distribution or range of the Habitat (NPWS 2013) with closest 10km grid square where recorded c.39km across land from bridge and longer along the River channel.
Petrifying springs with <i>tufa</i> formation [7220]*	6	This habitat has been recorded at a significant distance downstream of the site south of Thomastown, Co. Kilkenny (see map 6) and therefore no impact likely given distance and the localised nature of the proposed works
Old sessile oak woods with <i>ilex</i> and <i>Blechnum</i> in the British Isles [91A0]	6	This habitat has been recorded a significant distance downstream (521) of the site south of Inistioge, Co. Kilkenny (see map 6) and therefore no impact likely given distance and the works proposed are in the river so would not affect this habitat.

**in Conservation Objectives (if recorded)

Having regard to the rationale outlined above, it is considered that the qualifying interests outlined in the table above do not require further assessment.

The following section of this assessment provides an assessment of the remaining qualifying interests as follows which it is proposed to consider further:

Qualifying Interest	Map Ref **	Conservation Objective	Rationale for Further Assessment
Desmoulin's whorl snail [1016]	7	Maintain favourable condition	Species could potentially be downstream of site
Freshwater Pearl Mussel [1029]		Status of the freshwater pearl mussel (<i>Margaritifera margaritifera</i>) as a qualifying Annex II species is currently under review. Outcome of	Species found downstream of site

		<p>review will determine whether a site-specific conservation objective is set for species.</p> <p>(Nore freshwater pearl mussel (<i>Margaritifera durrovensis</i>) remains a qualifying species in SAC).</p>	
White-clawed crayfish [1092]	7	Maintain favourable condition	Species found potentially downstream of site
Sea Lamprey [1095]		Restore favourable condition	Species found potentially downstream of site
Brook Lamprey [1096]		Restore favourable condition	Species found potentially downstream of site
River Lamprey [1099]		Restore favourable condition	Species found potentially downstream of site
Atlantic Salmon [1106]		Restore favourable condition	Species found potentially downstream of site
Otter [1355]		Restore favourable condition	No holts within 150m but one individual observed 100m upstream of bridge. Foraging in immediate area likely.

Nore Freshwater Pearl Mussel [1990]	7	Restore favourable condition	Species found downstream of site
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]		Maintain favourable condition	Species found potentially within zone of influence of the Bridge
Alluvial Forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> [91E0]*	6	Restore favourable condition	Sections of woodland recorded upstream and downstream of the Bridge

Priority habitat denoted by *

**in Conservation Objectives (if recorded)

10.10.6. **Potential direct and/or indirect effects on Qualifying Interests requiring Further Assessment**

The following features require further consideration in light of the potential direct and indirect effects which may arise. Each feature is considered separately.

Desmoulin's whorl snail Vertigo moulinsiana

There are no Desmoulin's whorl snail records from the two 10km grid squares through which the River Nore flows downstream of Poorman's Bridge. It is outlined that the rare Desmoulin's whorl snail grows to between 2.3 to 2.7mm in height and lives on living and dead stems and leaves of tall plants in wetland situations. It requires a stable hydrogeology where the water table is at or slightly above the ground surface for much of the year. Given the absence of any record of this species within the most proximate grid squares and the habitat requirements of the snail and

its distribution in the wider region, this species is highly unlikely to occur at the development site. Therefore, it can be reasonably concluded that the proposed development would not adversely affect this qualifying interest even in the absence of mitigation.

Freshwater Pearl Mussel and the Nore Freshwater Pearl Mussel

The NIS considers both of these QI's together and in the interest of reference it is proposed to do the same in this report. The Habitats Directive lists the Nore freshwater pearl mussel *Margaritifera durrovensis* under a unique taxon code separate from the species *Margaritifera margaritifera*, the Freshwater Pearl Mussel. The NIS states that the River Nore population is the only known extant population of this taxon in the world. Both taxa have declined throughout their range. *Margaritifera durrovensis* is listed as "critically endangered" and its extreme decline and single population status make it one of the most endangered taxa in the world.

A survey was conducted at the site on 22nd July 2014 to try and locate every mussel within close proximity (50m) of the bridge. A further 150m was surveyed downstream to see if mussels became more plentiful as well as a short section upstream of the bridge. In relation to freshwater pearl mussels, no live mussels were found in the direct vicinity of the bridge piers or within 100m downstream of the bridge. Therefore, it can be concluded that the direct impact to pearl mussels in the immediate vicinity is not significant and no mussels need be translocated. The reason for the lack of mussels is considered to be due to a combination of the effects of the existing bridge which has resulted in scoured habitat in the immediate footprint of the bridge and poor habitat conditions from direct trampling by cattle that have access into the river. The habitat in this area is not supporting live adult mussels and does not have potential at present for juvenile mussel survival.

In relation to the Nore Freshwater Pearl Mussel, from 150m downstream of the bridge some Nore mussel habitat can be found. A total of 14 live mussels were found in 2014 in contrast to the 108 Nore pearl mussels counted in 1993 both immediately upstream and downstream of the bridge which had reduced to 44 in the 1999 survey. The entire world population of *Margaritifera durrovensis* is now thought to be located within the 10km of the Nore immediately downstream of Poorman's Bridge. The NIS explains that the likely cause of the decline is the repeated episodes of suspended

physical and organic fine sediment with any future release of fine sediment, which can travel for many kilometres, having the potential to cause damage to the remaining mussels downstream.

It is therefore considered that there are potential significant effects on the Nore Freshwater Pearl Mussel which will be addressed in the next paragraph but it can be reasonably concluded that the proposal would not have an adverse effect on the freshwater pearl mussel in the absence of mitigation.

Potential for Adverse Affects

As outlined above, the potential for adverse affects relates to the Nore Freshwater Pearl Mussel. Potential for significant effects on the freshwater pearl mussel has been ruled out in the NIS and I would concur with the logic for same. The main potential effects relate to the potential for a deterioration in water quality. There is the potential for old lime mortar to enter the watercourse as well as risk of organic pollution through accidental spillage of hydrocarbons, concrete wastewater escaping from a leak in the shuttering or overflowing over the shuttering or grout wastewater. Table 9 in the NIS provides an assessment of the potential significant effects on the Nore Freshwater Pearl Mussel (NFPM) (note – it is annotated as Brook Lampray but it is clear from the content of Table 9 that it relates to the NFPM).

As outlined in relation to the distribution of this species, it is stated that there will be no direct effects as no NFPM were recorded within the footprint of the site. The potential effect relates to the construction phase and the potential for the release of silt or pollutants to affect juveniles. Within each of the attributes/measures for the conservation objective, considered in the NIS for this species, the potential of the release of sediment/pollutants at the construction phase is pinpointed. I note that it is outlined that for each one addressed, other than hydrological regime: flow variability, that the potential for significant effects arise and mitigation is required. This is addressed in Section 10.14 below.

White-clawed crayfish

As outlined in the NIS, White-clawed crayfish prefer relatively cool temperatures and adequate dissolved oxygen and lime. Juveniles live among submerged tree-roots, gravel or aquatic plants, while larger crayfish need stones to hide under or earthen

banks to burrow with little activity during winter. They have a wide range of predators and try to avoid predation by hiding in refuges by day and coming out at night.

No crayfish were detected at Poorman's Bridge during the survey undertaken in September 2014 either 50m upstream or downstream. It is stated that given the survey effort including trapping and hand searching they are most likely absent from this area. A walkover for 2km downstream did not uncover any otter sprainting sites which would facilitate the identification of recent crayfish remains. None were found present during an extensive sweep sampling carried out in October 2017. It is considered that suboptimal habitat suitability is the likely reason for the absence/low density of the species in the River at Poormans Bridge.

Potential for Adverse Affects

The main potential effects relate to the potential for a deterioration in water quality. Siltation related impacts prevent crayfish from entering refugia under cobble and boulder as the interstitial space becomes blocked. As such crayfish in the open during the day can be easily predated. Sediment also prevents crayfish from breathing using gills under their carapace. Table 11 in the NIS provides an assessment of the potential significant effects on the white-clawed crayfish. I would note that as set out in the NIS, a map produced by the NPWS indicating the distribution of the species does not include the subject site. While the species is considered pollution tolerant it could be affected by a significant deterioration in water quality. Notwithstanding, while it is not considered that the proposal would affect the population structure, it is considered that mitigation is required in respect of the other attributes. One of the potential effects on this species is crayfish plague which is spread invisibly in water and which is a significant threat to this species. Mitigation is specifically addressed in Section 10.14 below.

Sea Lamprey, River Lamprey and Brook Lamprey

Sea lamprey can be present as juveniles for several years before migrating to sea and following migration, several months before spawning. As outlined in the NIS, the brook and river lamprey are very similar genetically and cannot be distinguished by visual means. The 10km grid square encompassing Poorman's Bridge lies within the range or distribution of the brook and river lamprey. The NIS looks both 50m

upstream and downstream of the Bridge. Overall the habitat of the River Nore at Poorman's Bridge may be considered good quality river/brook lamprey habitat.

Potential for Adverse Effects

I would note that as outlined in the NIS at Tables 12, 13 and 14, the proposed development will not physically impede the migration of any of the three lamprey species. While it is proposed to dam the arches to facilitate the works, it is proposed that only 2 would be dammed at any one-time facilitating flow through the remaining three river arches.

In terms of each of the lamprey, there is potential for result of the release of pollutants or sediment in the main channel during construction phase to affect water quality and effect four of the attributes/measures for the conservation objectives. For each of the three species these are – population structure, juvenile density in fine sediment, extent and distribution of spawning habitat and available of juvenile habitat. Given the potential for the construction phase to potentially lead to adverse affects on the conservation objectives for these species, mitigation is considered necessary.

Atlantic Salmon

Relatively cool rivers with extensive gravelly bottom headwaters are essential during the early life of salmon who live in freshwater for first 2-3 years before migrating to sea. The River Nore channels have low well vegetated banks and flood frequently and are considered to be excellent spawning and nursery habitats (if unaltered). The Nore is ranked 4th nationally containing 6% of the fluvial habitat accessible to Atlantic Salmon. The NIS looks in detail at the area 50m upstream and downstream of the Bridge. Overall the habitat of the River Nore at Poorman's Bridge may be considered a very good salmonid habitat but it is noted that this is mainly for Brown Trout.

Potential for Adverse Affects

The main potential effects relate to the potential for a deterioration in water quality. Siltation remains a problem and will damage the quality of the riverine gravels and possibly result in calcification. There is the potential for the water quality to be reduced as a result of sediment or pollutants entering the river during the works. This could result in an indirect effect on Atlantic Salmon. Table 10 in the NIS provides an assessment of the potential adverse affects on Atlantic Salmon. Each of the

attributes/measures is addressed which considers that mitigation is required given the potential for adverse effects on the conservation objective, all of which I note relate to potential impacts at construction phase in respect of water quality.

Mitigation is addressed in Section 10.14 below. While I would note that the proposal to dam the arches to facilitate the works also has the potential to impact the pathway of these species, it is proposed that only 2 arches would be dammed at any one time and therefore pathways remain to facilitate migration downstream.

Otter

The otter is widespread throughout the country with Ireland hosting one of the most important otter populations in Western Europe. There were no otter holts or field signs of otter recorded within 250m upstream or downstream of the bridge. One individual was observed 100m upstream and it is considered likely that otter forage within the immediate area.

Potential for Adverse Effects

Table 15 of the NIS considers the potential significant effects on otter. I note the seven attributes/measures in the conservation objectives for this species and would concur that the only one which could potentially be affected is the fish biomass availability. As outlined, any impacts that reduce the availability or quality of, or cause disturbance to, the terrestrial or aquatic habitat will affect the otter. High water quality and ample food supply are considered synonymous. An impact to prey species (crayfish and fish) through the potential for localised reductions in water quality to occur during the construction phase through the release of pollutants or sediments has the potential for this conservation objective to be adversely affected and therefore mitigation is required.

Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation

Also referenced as floating river vegetation, the NIS notes that the definition of this QI is very wide covering the majority of rivers and streams with aquatic plant communities. The River Nore at Poorman's Bridge supports a combination of submerged species and littoral emergent species. The bridge structure is considered to have a good diversity of liverwort species with river moss species locally frequent on the hard substrata within the water column. As noted in the NIS, the 10km square

encompassing the site lies both within the range and distribution of this habitat type but the range of this habitat is extensive with almost every 10km grid square in the country within the distribution of this habitat type and therefore it is highly likely that the better quality Annex I floating river vegetation habitat could potentially occur downstream of the bridge. It is outlined in the NIS that the riverine plant community at Poorman's Bridge has been impacted by cattle poaching and its quality has been reduced by agricultural impacts.

Potential for Adverse Affects

Table 16 in the NIS provides an assessment of the potential significant effects on this qualifying interest, in respect of the attributes/measures set out in the conservation objectives of which there are eight. I would note that of the eight, five are considered to have the potential to be adversely affected. I note the three which are not considered to have the potential to be significantly affected are hydrological regime, river flow and tidal influence and floodplain connectivity and I consider that reasonable arguments are provided to satisfy the Board that the conservation objectives would not be significantly effected for these. Of the remaining five, these are habitat area and distribution, substratum composition, water quality and vegetation composition. Again, the potential for sediment, pollutants or nutrient release during the construction phase creates the potential for this conservation objective to be adversely affected and therefore mitigation is required.

Alluvial forests

The principal communities within the SAC are Gallery Woodland and wet willow-alder-ash woodland. The 10km square encompassing the site lies within the distribution of this habitat type but it is clarified that the current known range of this habitat is extensive throughout Ireland. Riparian woodland habitat occurs along the banks of the River Nore both upstream and downstream of the bridge with the north-eastern bank supporting the most continuous section of woodland with open banks along the southern bank of the river either side of the bridge along the edge of agricultural grassland. It is noted in the NIS that there are several locations mapped for this habitat in the main Nore Channel downstream of the bridge (608) c.3.5km from the bridge.

Potential for Adverse Affects

No felling of riparian woodland is required for access or remedial works, therefore no habitat loss will occur. Table 17 in the NIS provides an assessment of the potential adverse affects on Alluvial Forests, in respect of the attributes/measures set out in the conservation objectives. While, the habitat could be potentially impacted if pollutants such as hydrocarbons and concrete and sediment entered the river I note the consideration in respect of the potential for impacts and I would concur that given the distance from the subject site to the nearest habitat which is 3.5km downstream (identifier 608), no adverse affects would arise even in the absence of mitigation and therefore no further assessment is required.

Summary of Potentially Adverse Affects

The potential direct and/or indirect effects, without mitigation, on the qualifying interests to be assessed are summarised below although it is noted as acknowledged in the NIS, and with which I would agree, that the main threat to the species and habitats relate to water quality impacts. The significance of impact with respect to habitat alteration and water quality have been rated as Negative Profound Long-term. The most sensitive receptor is the Nore Freshwater Pearl Mussel (NFPM). In a worst case scenario a considerable release of concrete to the river could result in NFPM fatalities.

Potential Effect	Description of Impact	Significance of the impact
Habitat Loss or Alteration	works are confined to the existing footprint of the bridge with habitat loss of 4.75m ² due to the insertion of a scour wall at both sides of the upstream section of two of the piers. There is the potential for construction material entering the river and altering the habitat if there was an impact on water quality - Concrete, mortar, sediment, fuel oils and other chemicals have potential to have a significant impact on the integrity of the site	Negative Profound Long-term
Water Quality	Potential risk to water quality from entry of pollutants and sediments into the watercourse during construction phase - Concrete, mortar, sediment, fuel oils and other chemicals have potential to have a	Negative Profound Long-term

	significant impact on the integrity of the site	
Habitat or species fragmentation	Impact to aquatic habitats or species downstream due to input of sediments, concrete, grouts or other pollutants. The alteration of habitat downstream of the bridge could present a divide for less mobile species either side of this altered habitat	Negative Slight Long-term
Disturbance/ displacement of species	Construction noise, presence of materials within the river such as the proposed dam/barrier and pumps and construction workers	Negative Slight Short-term

10.10.7. Mitigation Measures

Qualifying Interests where Mitigation Required

The NIS acknowledges in its consideration of the potential for adverse affects that there is the potential for adverse affects on eight of the qualifying interests in the absence of mitigation as follows:

- White-clawed crayfish [1092]
- Sea Lamprey [1095]
- Brook Lamprey [1096]
- River Lamprey [1099]
- Atlantic Salmon [1106]
- Otter [1355]
- Nore Freshwater Pearl Mussel [1990]
- Water courses of plain to montane levels with the Ranunculus fluitans and Callitriche-Batrachium vegetation [3260]

The NIS sets out a series of mitigation measures at Section 5.6 under a number of headings which have been proposed in order to mitigate against the potential adverse affects which are primarily related to protecting the water quality in the River. Following the receipt of the submission from the Development Applications Unit of the Department of Culture, Heritage and the Gaeltacht several matters were raised in respect of mitigation, monitoring and in particular supervision of works. Following same, a further information request was sought. The response to the

information sought in respect of mitigation is set out in Section 4 of the further information response. As outlined in Section 8.4 above, a response was received from the DAU which seeks to clarify a number of matters. They state in particular that the proposed works lie 100 metres upstream of the Nore Pearl Mussel, a sensitive qualifying interest species of the River Barrow and River Nore Special Area of Conservation (SAC) (Site Code 002162) and due to the sensitivity of the works site, it is of utmost importance that work methodology is supported by scientific evidence with sufficient understanding of the hydrology and hydrogeology of the Nore at Poorman's Bridge and its rainfall response, flood behaviour and groundwater/baseflows to ensure that the river can be safely dammed and dewatered without risk of significant negative impacts to the downstream population of the Nore Pearl Mussel. I will address the specific matters below in respect of trigger levels. I will outline the mitigation proposed and any amendments made to same in the response to further information.

Works supervision and Project Ecologist

The matter of the supervision of works and the role of the ecologist was specifically addressed in the response from the DAU whereby they requested clarification on the proposed management structure of the project and roles and responsibilities of the Project Engineer and the Ecologist. I would note that as set out in Section 4.2 of the FI response, it is stated that a LCC appointed engineer will monitor all aspect of the work on a daily basis in accordance with the agreed procedures (NIS, SOWOR etc) with a daily monitoring regime including turbidity monitoring. It is proposed that the ecologist will ensure environmental compliance in line with the NIS, SOWOR etc and an environmental compliance report will be circulated to LCC, NPWS and IFI on a weekly basis for the duration of the works. I would note that at Section 4.2 a table is provided which provides 56 matters for mitigation/monitoring, an outline of the critical considerations for each matter and the person/persons/role responsible. I consider that the matter has been satisfactorily addressed and it is clear to whom responsibility relates for the works proposed.

Method Statement for Proposed Works

A detailed Method Statement has been prepared. Before works commence it is proposed that consultation will be undertaken with NPWS, IFI and LCC on the details of the method statement which I note is included as Appendix 5. Works, it is

proposed, will be undertaken according to the final approval detailed method statement including the detail of each aspect and timing of works. It is also proposed that more detailed method statements on aspects of works shall be circulated to statutory stakeholders at least one week prior to the commencement of works and agreed by statutory stakeholders.

The DAU raised a number of concerns in respect of the works methodology which the applicant was requested to clarify in the further information request. In the first instance, the FI stated that the NIS acknowledges the risk that it will not be possible to pump out the work areas due to infiltration from the riverbed (Item 29 of works methodology) and the NIS states that the methodology will be revised to clarify this point (pg.12 NIS) with other details undecided including the Emergency Response Actions/Method Statements, locations of physiochemical monitoring points and physiochemical trigger values for cessation of operations. In response, (section 4.1 of the FI response), it is stated that it is confirmed that the methodology in point 19 will be implemented. It is also outlined that a water level and turbidity report prepared for this project established mitigation in relation to water levels at the proposed site. Monitoring of water levels and turbidity was undertaken and a suite of proposed measures are outlined. It outlines the proposal to undertake physiochemical readings with triggers where works will be abandoned outlined. I would also refer the Board to the paragraph below which deals specifically with trigger levels.

Secondly, the FI requested clarification in respect of the Methodology of Proposed Works wherein at page 5 it was stated that silt fences will remain in place for a number of months after work has finished however page 76 of the NIS stated that silt fences will remain in place post works until waters in the settlement area have percolated to ground. In response the applicant states (section 4.3 of FI) that in relation to silt fences, page 7 of the Methodology gives more detail than page 76 of the NIS with the contractor to be instructed to comply with the methodology.

Thirdly, the FI requested clarification in respect of the Methodology of Proposed Works wherein it was stated at page 7 point 25 that no herbicide can be used for removal of vegetation given the sensitivity of the site however Drwg 15234-1004 (east downstream elevation) states 'tree stumps to be poisoned'. In response the applicant states (section 4.4 of FI) That no conventional spraying will be used to kill vegetation, where trees growing from the bridge will be cut, the roots that penetrate

the bridge will not be removed and therefore could regrow and where there is risk of regrowth, Eco plugs are proposed. It is also stated that the treatment of tree stumps does not represent a significant risk to water quality.

Commencement of Works

It is proposed that prior to the commencement of works, the contractor will advise LCC and statutory stakeholder that work is ready to commence. It is stated that works will be conducted outside sensitive periods for fish species, i.e. the salmon run and periods of the year when there are low levels of precipitation (the summer months). IFI and the NPWS will be informed of the timing of works.

Trigger levels

The NIS states that agreement will be reached on appropriate trigger levels in relation to water depth at which point works can commence. Abandonment trigger levels are also proposed to be determined. As outlined below in relation to the methodology of works, a water level and turbidity report has been prepared noting that a turbidity monitor and water level gauge have been in operation at the bridge since the 3rd February 2018. It is stated that the data will be used to set the trigger levels for commencement and emergency cessation of works.

In their response the DAU states in respect of cessation of works trigger levels that it should be clarified how the water level trigger (greater than or equal to 0.737 metres) and rainfall trigger (rainfall greater than or equal to 20 mm over 24 hours) were deduced. I would note that as the NIS states, it is proposed that agreement will be reached on appropriate trigger levels in relation to water depth at which point works can commence. In this regard I consider that the matter of how the figures were deduced is not imperative to the consideration of this assessment. I would propose that a condition is attached requiring such agreement is undertaken. It also states that it should be clarified whether the rainfall trigger is antecedent rainfall or rainfall in any 24 hour period and noted that 20mm of rain in the summer is different to 20mm in the winter and queries how this was factored into trigger level calculations. I would refer again to the proposal within the NIS to agree the trigger levels prior to commencement given the potential delay between approval and commencement of development and also note that as outlined within the documentation that it is proposed to undertake the works in the summer period.

It is also noted in the submission that the staff gauge will be installed and calibrated with reference to the known water level at the time of installation, using data from the website <https://waterlevel.ie>, which returns live water level data for the River Nore at McMahon's Bridge downstream of Poorman's Bridge and recommended that it is clarified that there is no lag between the OPW gauge at McMahon's Bridge and the staff gauge which could compromise risk management trigger levels. I consider that this matter can be clarified as part of the agreement process prior to commencement.

The DAU agree with the physiochemical triggers but would heed caution with respect to the relative turbidity trigger as it is not a reliable surrogate for suspended solids and advise that devices such as a Sonde, that can take high resolution measurements in real-time, should be installed. The applicant will be required by condition to agree the device for measurement with the DAU. The matters arising in the response can therefore, be addressed by way of condition and I would recommend that prior to commencement of development that such matters are agreed with the Department and I consider that the appropriate assessment can be appropriately concluded on this basis.

Consultation

As well as the daily SOWOR each phase of the works must be approved by all parties before it is allowed to commence. The stages proposed are outlined and include site set up, insertion of aqua barrier, masonry works to piers, insertion of shutters for the scour walls, concrete pour, resurfacing and pressurised grouting.

Setting up the site

It is proposed that the site compound will be set up outside of the SAC and SPA to the south-west of the bridge. An exclusion zone of 50m from the River Nore is proposed for vehicles and machinery. Settling tanks and pumps will be lifted into place from the road and scaffolding is proposed to be carried by hand into the river for assembling. The proposed pumps are double bunded and silent with the water pumped into the temporary settlement tanks and from there flows into a settlement area created on the riverbank c. 20m back from the riverbank. It is also proposed that a triple line of silt fencing will be put in place between the settlement tanks and the river. The area of the tanks and settlement is proposed to be enclosed in stock-

proof fencing with silt fences to remain in place post works until waters in the settlement area have percolated to ground.

Damming the works area

It is proposed to dam two of the five in-river arches at a time. This will enable repair works to one pier and two arches to be carried out in the dry. A scaffold platform will be erected within each dammed area and as each section of work is completed the dam will be relocated and centred on the next pier with a total of four stages. It is proposed that the dam will be formed on the river bed, upstream and downstream of two adjacent spans using aqua barriers with information on same provided in the documentation with the dammed area behind the aqua barriers to be electro-fished to ensure any lamprey or other species are removed. A raised access platform from the riverbank to the specific area will be provided by the contractor. Any minor infiltration will be stopped with double bagged sandbags. Any water continuing to infiltrate from the riverbed shall be pumped to the settling tanks.

Pumping from behind the works area

As outlined above, it is proposed that two pumps (silent) will be set up on the south-east bank for pumping the water behind the dammed area with the water pumped into the 3 temporary settlement tanks and into a settlement area, which it is proposed be regularly maintained, created on the riverbank and silt fencing proposed between the river and the tanks. It is proposed that turbidity readings will be taken from the tanks prior to, during and after pumping from behind the water barriers and monitored continually. The Ecologist has the authority to stop all works if levels exceed baseline readings with the NPWS to be consulted regarding threshold levels.

Sediment Control

It is proposed that the EPA (2016) Environmental Management Guidelines “Environmental Management in the Extractive Industry (Non-Scheduled Materials)” will be followed in the design of all silt control/settlement ponds with regard to the exiting of the settlement lagoons and the retention time.

Vegetation Removal

It is proposed as part of the works to remove tree stumps from upstream cutwaters and downstream face of piers. No herbicides can be used. The mitigation in respect of bats within crevices in the bridge is detailed in Section 10.2.3 of this report.

Vegetation removed from the bridge and site footprint will be stored within a skip in the compound.

Repointing

It is proposed that a platform is erected in the works area to facilitate repointing the crown of the arch barrels with a liner installed on the platform to catch any mortar that may fall with any such mortar disposed of to the on-site skip. It is proposed to replace this liner regularly. Works will be carried out by experienced stone masons and in the event of heavy rainfall the scaffolding will be removed. It is clarified that no pointing is required below the water level. In the event that the water cannot be pumped out (due to infiltration from the riverbed) works will proceed within standing water using prompt lime mortar below the water line.

Scour protection

It is also proposed to provide scour protection at the upstream end of two piers (3 & 4) and possibly part of piers 2 & 5 which will require the pouring of concrete behind shuttering, propped off the bed or adjacent piers with the works carried out with the dammed, pumped out area. It is outlined that if water cannot be pumped out (due to infiltration from the river bed) works proceed within standing water. As concrete is being poured water will be pumped to a mobile bouzer for disposal off site. It is proposed that sandbags will be used. Emergency procedures for shut-off or concrete of grout pumps are recommended to be in place prior to any works commencing.

Resurfacing of Bridge Surface

It is proposed to resurface the carriageway of the bridge including the removal of the top 60mm of the current surface and provision of 60mm hot rolled asphalt. The works will be undertaken under the supervision of competent personal and it is envisaged that the work would not lead to adverse affects given the location of same.

Pressurised Grouting

Pressurised grouting is proposed in the piers and the arch barrels up to the quarter points of the bridge after all pointing works have been completed. It is proposed that entry holes are drilled into the bridge for grouting at each pier and arch.

A number of specific measures are proposed for the grout application phase including the use of a trained operator, hardeners introduced to encourage fast

setting, volumes required calculated ahead of application, use of slow flow, monitor volume, personnel visually monitor works, stop works in the event of any leaks and deploy pump immediately.

Grout and Concrete Wastewater

It is paramount that grout and concrete wastewater must not enter the watercourse. If there is a spill, it is proposed that a pump can be immediately deployed to pump any contaminated water from the watercourse. It is also proposed that the washout of concrete trucks will not be carried out near the site.

Additional Mitigation Measures

Section 5.6.17 of the NIS outlines a suite of additional mitigation measures which I would note comprise standard good practice construction phase mitigation measures including operation of machinery, removal of waste from the site and refuelling of vehicles.

Monitoring

As outlined above, turbidity and water level monitoring has been carried out at the subject site and is detailed in the report "Water Level and Turbidity Report" which is attached within Appendix 5 of the NIS document. The responsibility for monitoring of all elements of the proposed development has been clarified by the application in the response to Item 3b of the further information request and is set out at section 4.2 of the FI response. Other monitoring proposed is set out in Section 5.6.20 of the NIS including monitoring of the site in general, sandbags and silt fences.

Mitigation of Potential Adverse Effects.

As outlined above, the main effects from the proposed development in respect of the qualifying interests relate to the construction phase and the potential for the proposal to negatively effect water quality. As outlined above, the Department in their response to the FI response have requested clarification on trigger levels for the cessation of works and also the type of device for the gauge which I consider can be appropriately addressed by agreement prior to the commencement of development. I consider that the mitigation measures outlined are comprehensive, appropriately detailed and satisfactory to ensure that the proposed development would not adversely affect the integrity of the River Barrow and River Nore SAC in view of its conservation objectives. I would also consider that it is reasonable to conclude that

the proposed development would not adversely affect the integrity of the River Nore SPA in view of its conservation objectives as outlined in Section 10.9 above.

10.10.8. **Potential in-combination effects:**

The subject site is located in a rural area dominated by agricultural land with sporadic one-off residential properties within the wider area. Potentially significant impacts arising from the proposed remedial works in combination with other developments would arise through the increase in sedimentation and nutrients in the river which would likely result in a significant cumulative impact on qualifying features of the Natura 2000 sites.

There are large sections of improved grassland pastures for cattle adjacent to the bridge and surrounding area. Cattle are accessing the river adjacent to the bridge and the biodiversity of flora has been reduced by drainage, reseeding, fertilisation and intensive grazing by cattle. The NIS states that arterial drainage schemes would have disturbed sediment regimes and habitats within the river. The main potential impacts arise in terms of potential increase in nutrient levels of local watercourses. There is potential for the proposed works to contribute to a cumulative impact on water quality through the sedimentation and other pollutants entering the watercourse as a result of construction works and farming operations.

Barriers to fish migration can cause a significant threat. Potential barriers would include culverts, bridge aprons, weirs and stone weirs. The damming works will be temporary only lasting the summer months and will only dam two piers at a time. Hydraulic analysis has been provided with the velocities through the bridge for a range of flows provided. However, as noted elsewhere in this report, when two arches are dammed, the remaining three in-river arches have adequate hydraulic capacity to take normal summer flows.

Climate change is also addressed noting that changing climate affects ecosystems in a variety of ways with saltwater intrusion on freshwater systems provided as an example. It is concluded in respect of climate change that the effects of climate change together with the proposed development could exacerbate potential impacts and considered that without proper mitigation a negative cumulative impact to water quality, species and habitat would be significant.

A list of recent developments granted planning permission in the vicinity were analysed. Developments comprising of residential, agricultural and quarrying activities were granted permission. Potential significant impacts arise from the combination of the remedial works with other developments which could result in a significant cumulative impact on qualifying features without proper mitigation. I do not, however, consider that any significant potential in-combination or cumulative impacts arise over and above those potential direct and indirect effects listed above.

10.11. Residual effects/Further analysis:

10.11.1. No significant residual effects are identified following implementation of the recommended mitigation measures.

10.12. NIS Omissions:

10.12.1. I consider that the NIS provides a robust consideration of the potential effects arising in respect of the proposed development. As noted above, further information was requested in respect of the proposed development which include matters which relate in the main to mitigation and supervision and require finalisation in a number of instances with the NPWS. However, I do not consider that there are any significant omissions in the NIS submitted.

10.13. Suggested related conditions:

10.13.1. Having regard to the nature of the proposed development, the potential direct and indirect effects identified, I consider that the majority of the mitigation measures proposed in the NIS are primarily matters of good practice construction methodology, and I consider that the mitigation measures should be incorporated into a final Construction Environmental Management Plan to be agreed with the relevant statutory agencies/authorities. Agreement is also required on final trigger levels for the cessation of works which should also be included in the CEMP. If the Board is minded to approve the proposed development, I therefore recommend the following conditions:

- Compliance with the mitigation measures contained in the Natura Impact Statement.

- Agreement with the NPWS on trigger levels for the cessation of works and the gauge devices to be used.
- Preparation of a Final Construction and Environmental Management Plan, incorporating all mitigation measures indicated in the Natura Impact Statement to be agreed with relevant bodies.
- Appointment of a suitably qualified ecologist to remain on site for the duration of the works.

10.14. Appropriate Assessment Conclusions

10.14.1. Having regard to the remedial works proposed and subject to the implementation of best practice construction methodologies and the proposed mitigation measures as proposed and clarified in the response to further information, I consider that it is reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans and projects would not adversely affect the integrity of the River Barrow and River Nore SAC (Site Code 002162) or the River Nore SPA (Site Code 004233), or any other European site, in view of the site's Conservation Objectives.

11.0 Recommendation

11.1. 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 NIS.

11.2. Reasons and Considerations

11.2.1. 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 River Nore SPA (site code 004233), and the River Barrow and River Nore SAC (site code 002162)
- (e) the policies and objectives of the Laois County Development Plan, 2017-2023,
- (f) the nature and extent of the proposed works 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 and the response to the further information request,
- (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

11.3. **Appropriate Assessment:**

11.3.1. The Board agreed with the screening assessment and conclusion carried out in the Inspector's report that the River Nore SPA (site code 004233), and the River Barrow and River Nore SAC (site code 002162), are the only European Sites in respect of which the proposed development has the potential to have a significant effect.

11.3.2. The Board considered the Natura Impact Statement and associated documentation submitted with the application for approval, the mitigation measures contained therein, the submissions on file, the response to the further information request and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development for the affected European Sites, namely River Nore SPA (site code 004233), and the River Barrow and River Nore SAC (site code 002162), 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 Sites.

In completing the appropriate assessment, the Board accepted and adopted the screening and the appropriate assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on 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.

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

- 11.4.1. 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 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.

12.0 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 7th day of February, 2020 and in the Further Information Response submitted to An Bord Pleanála on the 12th day of October, 2020, 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. Prior to the commencement of development, the local authority shall undertake a resurvey of the structure for bats and a botanical survey for those areas of the bridge not accessible during the original survey. These surveys shall be placed on file prior to commencement of development and retained as part of the public record.

Reason: In the interest of nature conservation

3. Prior to the commencement of development, the local authority shall agree with the relevant statutory agencies a Construction Environmental Management Plan, incorporating:
 - (a) all mitigation measures indicated in the Natura Impact Statement;
 - (b) cessation of work trigger levels and the type of devices to be used for the measurement of trigger levels as agreed with the Department of Culture, Heritage and the Gaeltacht; and
 - (c) the mitigation measures outlined in the Bat Survey submitted to An Bord Pleanála on 12 October 2020.

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

Reason: To ensure the protection of European sites.

4. The County Council and any agent acting on its behalf shall comply with the mitigation measures contained in the Natura Impact Statement which was submitted with the application.

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

5. No works shall take place during the peak spawning period for salmonids between 1st October and 30th April inclusive.

Reason: In the interest of nature conservation and to ensure the protection of the European sites.

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 ecologist shall be appointed by the County Council to oversee the site set-up and works and the ecologist shall be present on site during all works. 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.

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 archaeologist

shall be appointed by the County Council to oversee the site set-up and installation of the dam (aqua barrier) around each pier.

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

November 2020