

# NATURA IMPACT STATEMENT

Rehabilitation Works, Moone Village Bridge

Kildare County Council

PROJECT NO. K469

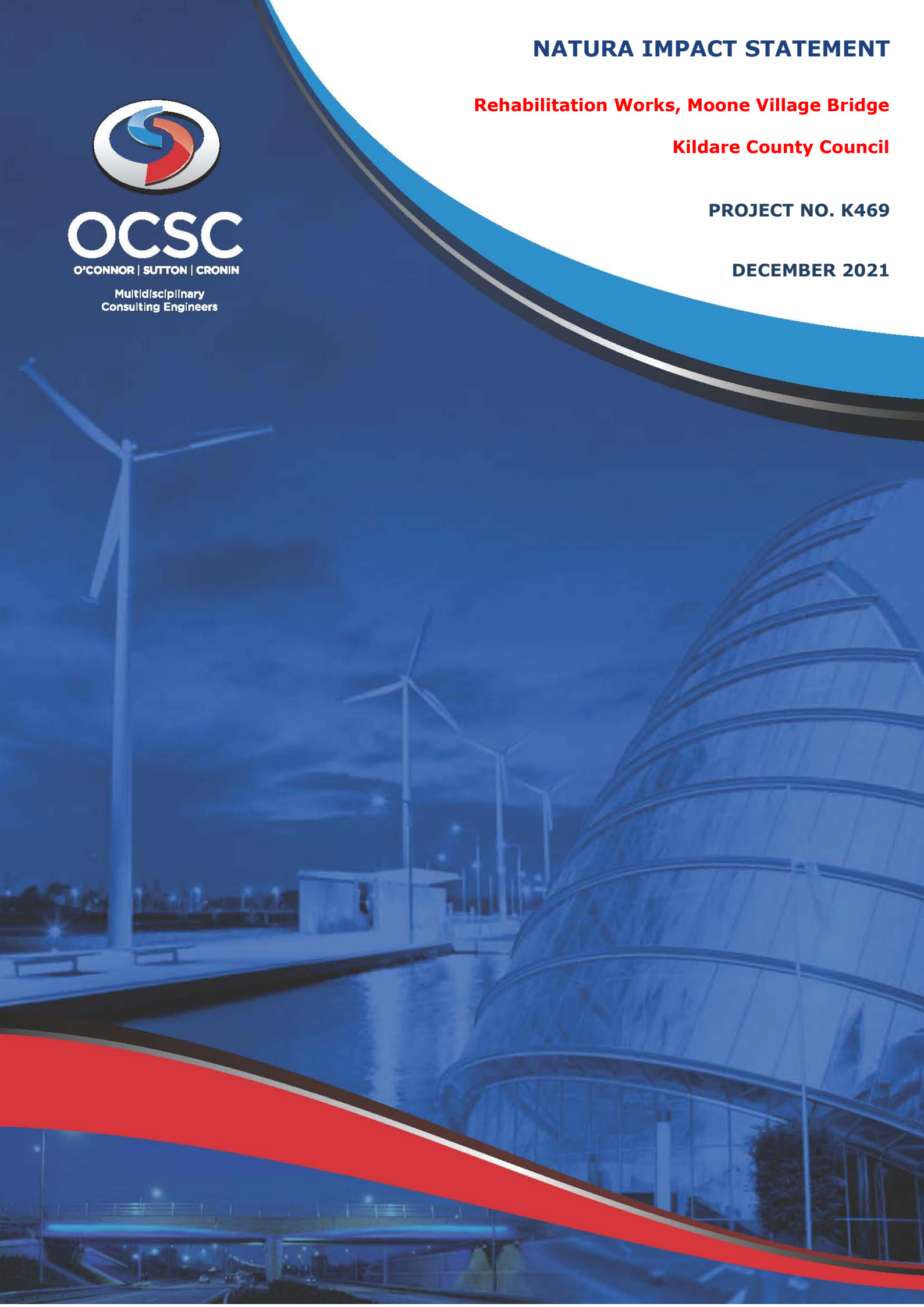
DECEMBER 2021



## OCSC

O'CONNOR | SUTTON | CRONIN

Multidisciplinary  
Consulting Engineers



# **NATURA IMPACT STATEMENT**

---

**Rehabilitation Works, Moone Village Bridge**

**Kildare County Council**

**PROJECT NO. K469**

**DECEMBER 2021**

# **NATURA IMPACT STATEMENT**

**Rehabilitation Works, Moone Village Bridge**

**for**

**Kildare County Council**



**OCSC**

**O'CONNOR | SUTTON | CRONIN**

Multidisciplinary  
Consulting Engineers

## NOTICE

This document has been produced by O'Connor Sutton Cronin & Associates for its client Kildare County Council. It may not be used for any purpose other than that specified by any other person without the written permission of the authors.



### DOCUMENT CONTROL & HISTORY

<b>OCSC Job No.: K469</b>	<b>Project Code</b>	<b>Originator</b>	<b>Zone Volume</b>	<b>Level</b>	<b>File Type</b>	<b>Role Type</b>	<b>Number</b>	<b>Status / Suitability Code</b>	<b>Revision</b>
	K469	OCSC	ZZ	ZZ	RP	YE	800	S2	P0
<b>Rev.</b>	<b>Status</b>	<b>Authors</b>	<b>Checked</b>	<b>Authorised</b>	<b>Issue Date</b>				
<b>P1</b>	<b>FINAL</b>	<b>LI</b>	<b>GB</b>	<b>EB</b>	<b>20.12.21</b>				
<b>P0</b>	<b>FINAL</b>	<b>LI</b>	<b>GB</b>	<b>EB</b>	<b>15.10.21</b>				

## NATURA IMPACT STATEMENT

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1 INTRODUCTION.....	3
1.1 Project Contractual Bases & Parties Involved.....	3
1.2 Project Description .....	3
1.3 Legislative Context.....	4
1.4 Methodology and Approach.....	4
1.5 Relevant Legislation.....	4
1.6 Limitations .....	6
1.7 Natura Impact Statement.....	6
2 Description of the existing environment .....	7
2.1 Site Location.....	7
2.2 Description of In-stream works .....	8
3 Relationship to Designated Sites.....	9
3.1 Zone of Influence.....	12
3.2 Description of the Natura 2000 Sites .....	13
3.3 River Barrow and River Nore SAC .....	14
4 Direct and Indirect Impacts.....	17
5 Mitigation .....	18
5.1 Construction/Rehabilitation Phase.....	19
5.2 Silt Management .....	19

<b>5.3 Ecological Supervision.....</b>	<b>20</b>
<b>5.4 Invasive Species.....</b>	<b>20</b>
<b>5.5 Fuel and Oil Control .....</b>	<b>21</b>
<b>5.6 Site drainage .....</b>	<b>21</b>
<b>6 Statement of Impacts and Conclusion of NIS .....</b>	<b>22</b>

## 1 INTRODUCTION

### 1.1 Project Contractual Bases & Parties Involved

This report has been prepared by O'Connor Sutton Cronin & Associates Ltd. (OCSC) at the request of their Client, Kildare County Council, who has proposed bridge rehabilitation on seven bridges within the county, including one at Moone. OCSC were commissioned to complete a Natura Impact Statement for the proposed works to Moone Village Bridge in Co. Kildare. This report assesses the effects that the proposed development would have on the Natura 2000 site network and the mitigation required.

The report was completed by Luis Lemma, BSc, MSc, Ph.D, Senior Ecologist, reviewed by Glenda Barry, the principal consultant with OCSC, and approved by Eleanor Burke, BSc, MSc, DAS, MEnvSc, CSci, Technical Principal, and the OCSC Environmental Division Manager.

### 1.2 Project Description

This Natura Impact Statement (NIS) report has been prepared to assess the impact and propose mitigation to the proposed rehabilitation for Moone bridge which is located in the village of Moone, Co. Kildare. The project description is critical for identification of impacts. The project description requires the identification of all features of the proposed project such as its scale and size as well as changes that will result from the project including excavation to be undertaken and resource requirements, e.g. water abstraction, emissions and waste, noise, light pollution, disturbance, etc. For large projects it may be necessary to identify the parameters for the construction, the operation, and the decommissioning phases. The boundaries of the project are critical, and all activities proposed should be within the application site.

The study area consists of a single-span, masonry arch structure spanning a total length of 2.5m over the Timolin stream on the L8102 between the villages of Moone and Timolin (Figure 2.1). The works are being undertaken as part of the Kildare County Bridge Remediation Programme for 2021.

A Preliminary Design Report (OCSC, July 2021) indicated that the following defects were identified at the time of inspection:

- Vegetation requiring removal on footways, parapets, embankments, and spandrel walls;
- Waterproofing required to the masonry structure;
- Missing masonry requiring replacement on parapets and the arch barrel;
- Masonry requiring repointing on the spandrel walls, arch barrel, and parapets;
- Debris requiring removal on the embankments and the downstream riverbed; and
- Installation of fencing required to close off a field.

The subject bridge is situated over the 1<sup>st</sup> order Timolin\_14 stream, a tributary of the River Greese. The River Greese is connected to the River Barrow and the associated River Barrow and River Nore SAC. The SAC boundary is c. 15.6km downstream of the Moone bridge. Due

to the hydrological connection, there is a potential pathway for impacts to affect downstream aquatic features of interest for which the SAC is designated, such as White-clawed Crayfish, Lamprey species, Salmon, and Otter. The River Greese, which is c. 500m downstream, does have populations of Atlantic Salmon and the Annex II species European Eel.

### 1.3 Legislative Context

The Habitats Directive promotes a hierarchy of avoidance, mitigation, and compensatory measures to be addressed in the AA process as follows:

- Firstly, a plan / project should aim to avoid any negative impacts on Natura 2000 sites by identifying possible impacts early and designing the project / plan to avoid such impacts.
- Secondly, mitigation measures should be applied during the appropriate assessment (stage 2) process to the point where no adverse impacts on the site(s) remain.
- Thirdly a plan / project may have to undergo an assessment of alternative solutions. Under this stage of the assessment, compensatory measures are required for any remaining adverse effects, but they are permitted only if (a) there are no alternative solutions and (b) the plan / project is required for imperative reasons of overriding public interest (the 'IROPI test'). European case law highlights that consideration must be given to alternatives outside the plan / project boundary area in carrying out the IROPI test.

### 1.4 Methodology and Approach

The NIS has been prepared taking into account the aforementioned as well as the following legislation and guidance:

- *Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*, Department of the Environment, Heritage and Local Government, 2009; 11 February 2010 revision.
- *Commission Notice: Managing Natura 2000 sites – The provisions of Article 6 of the 'Habitats' directive 92/43/EEC*, European Commission, 2018.
- *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*, European Commission Environment DG, 2002.
- *Managing Natura 2000 sites: the Provisions of Article 6 of the habitats Directive 92/43/EEC*, European Commission, 2000.

Using the above documents, it has been possible to carry out a desktop NIS using the best available guidance and operating within the applicable legislation.

### 1.5 Relevant Legislation

#### European Nature Directives (Habitats and Birds)

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora) forms the basis for the designation of Special Areas of Conservation (SACs). Similarly, Special Protection Areas (SPAs) are classified under the



Birds Directive (Council Directive 2009/147/EEC on the Conservation of Wild Birds). Collectively, SACs and SPAs are referred to as the Natura 2000 network. In general terms, they are considered to be of exceptional importance for rare, endangered, or vulnerable habitats and species within the European Community.

Under Article 6(3) of the Habitats Directive an 'appropriate assessment' must be undertaken for any plan or project that is likely to have a significant effect on the conservation objectives of a Natura 2000 site. An Appropriate Assessment is an evaluation of the potential impacts of a plan or project on the conservation objectives of a Natura 2000 site, and the development, where necessary, of mitigation or avoidance measures to preclude negative effects.

Article 6, paragraph 3 of the EC Habitats Directive 92/43/EEC ("the Habitats Directive") states 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. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public".

### **European Communities (Birds and Natural Habitats) Regulations 2011**

Part 5 of the European Communities (Birds and Natural Habitats) Regulations 2011 sets out the circumstances under which an 'Appropriate Assessment' is required. Section 42(1) requires that 'a screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects, is likely to have a significant effect on the European site.'

Section 42(2) expands on this, stipulating that a public authority must carry out a screening for Appropriate Assessment before consent for a plan or project is given or a decision to undertake or adopt a plan or project is taken. To assist a public authority to discharge its duty in this respect, Section 42(3)(a) gives them the authority to direct a third party to provide a Natura Impact Statement, and Section 42(3)(b) allows them to request any additional information that is considered necessary for the purposes of undertaking a screening. Similarly, Section 177T of Section 57 of the Planning and Development (Amendment) Act 2010 states that a competent authority may give a notice in writing to the applicant concerned, directing him or her to furnish a Natura Impact Statement, and the applicant shall furnish the statement within the period specified in the notice.

A Natura Impact Statement must include such information or data as the public authority considers necessary to enable it to ascertain if the plan or project will affect the integrity of a Natura 2000 site. Where appropriate, a Natura Impact Statement also needs to include:

- I. the alternative solutions that have been considered and the reasons why they have not been adopted;
- II. the imperative reasons of overriding public interest that are being relied upon to indicate that the plan or project should proceed notwithstanding that it may adversely affect the integrity of a European site; and
- III. the compensatory measures that are being proposed.

Section 42(6) requires that 'the public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it cannot be excluded, on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site'.

## 1.6 Limitations

This Natura Impact Statement Report has been prepared for the sole use of Kildare County Council ("the Client"). No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by OCSC.

This assessment is based on a review of available historical information, environmental records, consultations, relevant guidance information, and reports from third parties. All information received has been taken in good faith as being true and representative.

This report has been prepared in line with best industry standards. The methodology adopted and the sources of information used by OCSC in providing its services are outlined in this Report. The assessment undertaken by OCSC and described was undertaken in October 2021 and is based on the information available during that period. The scope of this Report and the services are accordingly factually limited by these circumstances.

OCSC disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report which may come or be brought to OCSC's attention after the date of the Report.

The conclusions presented in this report represent OCSC's best professional judgement based on review of the relevant information available at the time of writing. The opinions and conclusions presented are valid only to the extent that the information provided was accurate and complete.

## 1.7 Natura Impact Statement

The report prepared for the second stage of AA is referred to as an NIS. The approach taken to preparing the NIS is as follows:

- Set out information on the Natura 2000 sites identified at screening stage likely to be significantly affected by the project.
- Describe the elements of the project or plan (alone or in combination with other projects or plans) that are likely to give rise to significant effects on the environment.
- Set out the conservation objectives of the site.

- Describe how the project or plan will affect key species and key habitats. Acknowledge uncertainties and gaps in information.
- Describe how the integrity of the site (determined by structure and function and conservation objectives) is likely to be affected by the project or plan (e.g. loss of habitat, disturbance, disruption, chemical changes, hydrological changes, geological changes, etc.). Acknowledge uncertainties and any gaps in information.
- The appropriate assessment is carried out by the competent authority and is supported by the NIS.

The approach taken in preparing the NIS is based on standard methods and guidance as listed in the references section of this report.

## 2 Description of the existing environment

### 2.1 Site Location

The study area is located in Moone, County Kildare where there is a proposal requiring approval under s.177AE to undertake remediation works on the bridge located on the L8102 at the northern end of Moone village. The study area consists of a small, single-span stone bridge over the Timolin stream as shown in Figure 2.1.

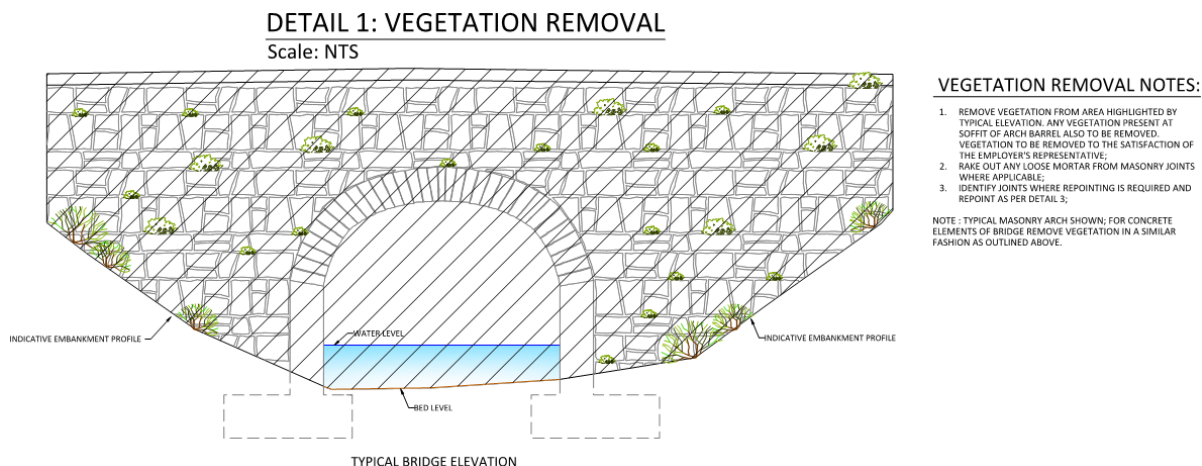


**Figure 2.1: Approximate Site location indicated by the red cross - Regional Location (Source: EPA Maps, 2021).**

## 2.2 Description of In-stream works

As outlined in the OCSC Remediation Methodology of Moone Bridge, there was a loss of mortar in the joints on several masonry units and vegetation growing between the units of the arch barrel. The extent of vegetation removal and masonry repointing is minor in nature with the specific repairs included in the notes for Details 1 and 3 and shown in Figures 2.2 and 2.3, respectively.

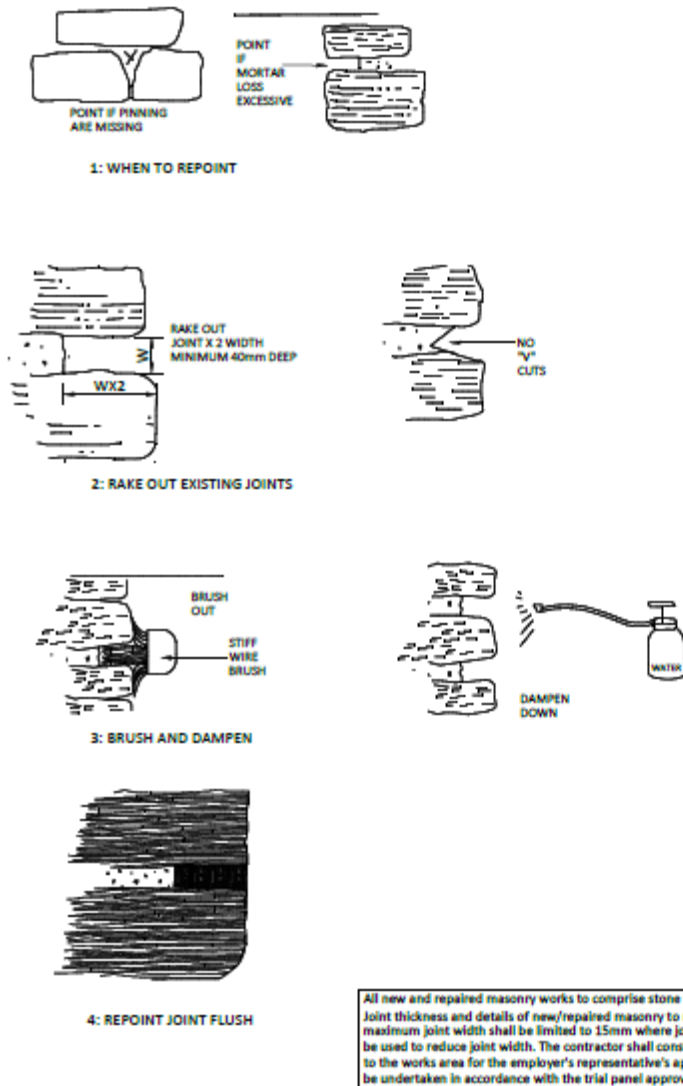
To further mitigate debris entering the watercourse, cleaning, and vegetation removal of bridge elements will be undertaken in such way as to prevent any debris falling into the watercourses. A sealed working platform – CRASH DECK - will be provided at the structure to contain the cleaning works. The crash deck will be fully boarded out and effectively screened and sealed on all edges to ensure that no products enter the watercourse. Debris will be removed from the crash deck at the end of each working day to avoid the build-up of material on the crash deck. During the cleaning works, the Contractor must use a filtration membrane on the scaffold/ crash deck to capture particles and prevent them from entering the river/ watercourse.



**Figure 2.2: Typical detail for vegetation removal.**

## DETAIL 3: MASONRY REPOINTING

Scale: NTS



### MASONRY REPOINTING NOTES:

1. REPOINTING REQUIRED WHERE THE CONDITIONS PRESENTED IN (1) ARE ENCOUNTERED AND WHERE THE EMPLOYER'S REPRESENTATIVE DEEMS IT NECESSARY FOR REPOINTING TO BE CARRIED OUT. REFER TO BILL OF QUANTITIES FOR EXPECTED AREA OF STRUCTURE TO BE REPOINTED.
2. RAKE OUT EXISTING JOINTS TO REMOVE LOOSE MATERIAL. THE MASONRY BUILT IN COURSES USING SQUARE CUT STONE, SOME OF THE JOINTS WILL BE VERY FINE. TOOLS FOR RAKING OUT MAY NEED TO BE MADE SPECIFICALLY FOR THE JOB. JOINTS SHALL BE RAKED OUT TO A DEPTH OF TWICE THE JOINT WIDTH AS SHOWN.
3. JOINTS SHALL BE BRUSHED OUT USING A STIFF WIRE BRUSH. THE SURROUNDING MASONRY SHALL BE SUITABLY DAMPENED, THE CONTRACTOR SHALL ENSURE NO WATER FLOW, WEEPING, OR POOLED WATER IS PRESENT PRIOR TO REPOINTING
4. JOINTS SHALL BE REPOINTED FLUSH WITH THE EXISTING MASONRY
5. REPOINTING SHALL BE CARRIED OUT USING AN APPROPRIATE LIME MORTAR TO MATCH THE EXISTING. MORTAR FOR REPOINTING WILL BE MADE WITH NHL5 (NATURAL HYDRAULIC LIME 5) IN ACCORDANCE WITH THE SPECIFICATION. HOWEVER, WORK IN THE SPLASH/WET ZONE MAY BE SUBJECT TO PREMATURE WETTING AND THEREFORE THE MORTAR USED IN THAT ZONE MAY INCORPORATE UP TO 10 PERCENT OF PROMPT TO PRODUCE AN EARLY SET. THE PROPOSED MORTAR SHALL BE TO THE SATISFACTION OF THE EMPLOYERS REPRESENTATIVE.
6. REPOINTING WITH LIME MORTAR SHALL NOT BE CARRIED OUT IF TEMPERATURES ARE EXPECTED TO FALL BELOW 5°C WITHIN 1 WEEK OF APPLICATION.

Figure 2.2: Typical detail for masonry repointing.

### 3 Relationship to Designated Sites

Natura 2000 sites within 15 kilometres of the proposed structure were considered initially as per the NPWS guidance document. This initial screening revealed that the following sites lie within 15km radius of the development (Figure 3.1 and Table 3):

Table 3. European Sites within 15 kilometres (ZOI) to the proposed site.

Site Code	Site Name	Distance (km)	Sensitive Receptors (Qualifying Interest & Special Conservation Interests) [including the relevant code for the qualifying feature]
002162	River Barrow and River Nore SAC	4.6 S	[1130] Estuaries [1140] Tidal Mudflats and Sandflats [1170] Reefs

Site Code	Site Name	Distance (km)	Sensitive Receptors (Qualifying Interest & Special Conservation Interests) [including the relevant code for the qualifying feature]
			[1310] Salicornia Mud [1330] Atlantic Salt Meadows [1410] Mediterranean Salt Meadows [3260] Floating River Vegetation [4030] Dry Heath [6430] Hydrophilous Tall Herb Communities [7220] Petrifying Springs* [91A0] Old Oak Woodlands [91E0] Alluvial Forests* [1016] Desmoulin's Whorl Snail ( <i>Vertigo moulinsiana</i> ) [1029] Freshwater Pearl Mussel ( <i>Margaritifera margaritifera</i> ) [1092] White-clawed Crayfish ( <i>Austropotamobius pallipes</i> ) [1095] Sea Lamprey ( <i>Petromyzon marinus</i> ) [1096] Brook Lamprey ( <i>Lampetra planeri</i> ) [1099] River Lamprey ( <i>Lampetra fluviatilis</i> ) [1103] Twaite Shad ( <i>Alosa fallax</i> ) [1106] Atlantic Salmon ( <i>Salmo salar</i> ) [1355] Otter ( <i>Lutra lutra</i> ) [1421] Killarney Fern ( <i>Trichomanes speciosum</i> ) [1990] Nore Freshwater Pearl Mussel ( <i>Margaritifera durrovensis</i> )
000781	Slaney River Valley SAC	7.8 E	[1130] Estuaries [1140] Tidal Mudflats and Sandflats [1330] Atlantic salt meadows ( <i>Glauco-Puccinellietalia maritimae</i> ) [1410] Mediterranean salt meadows ( <i>Juncetalia maritimi</i> ) [3260] Floating River Vegetation [91A0] Old Oak Woodlands [91E0] Alluvial Forests* [1029] Freshwater Pearl Mussel ( <i>Margaritifera margaritifera</i> ) [1095] Sea Lamprey ( <i>Petromyzon marinus</i> ) [1096] Brook Lamprey ( <i>Lampetra planeri</i> ) [1099] River Lamprey ( <i>Lampetra fluviatilis</i> ) [1103] Twaite Shad ( <i>Alosa fallax</i> ) [1106] Atlantic Salmon ( <i>Salmo salar</i> ) [1355] Otter ( <i>Lutra lutra</i> ) [1365] Common (Harbour) Seal ( <i>Phoca vitulina</i> )
001757	Holdenstown Bog SAC	11.3 SE	[7140] Transition Mires

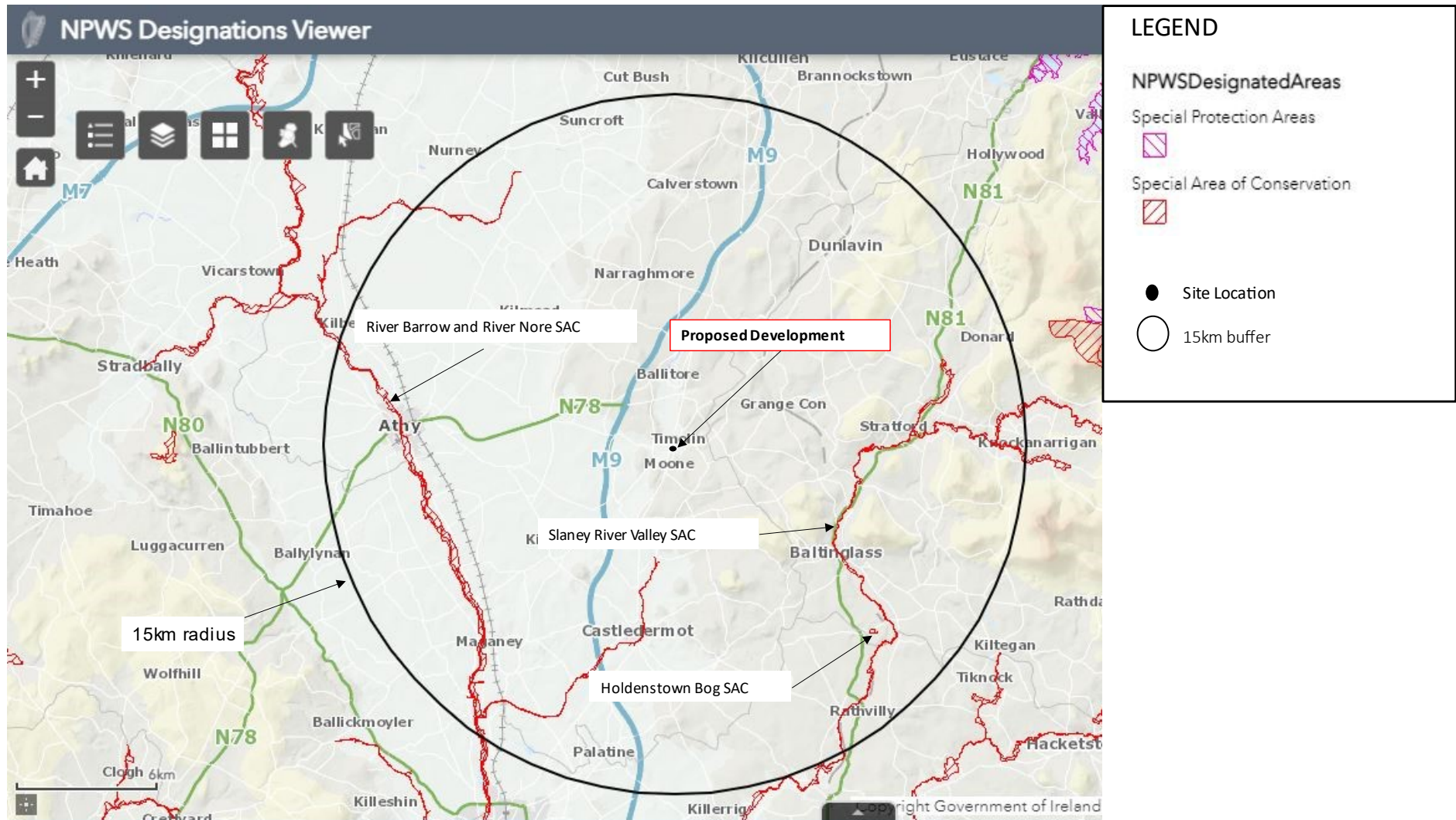


Figure 3.1. Designated Sites within 15km radius (Source: NPWS, 2021).

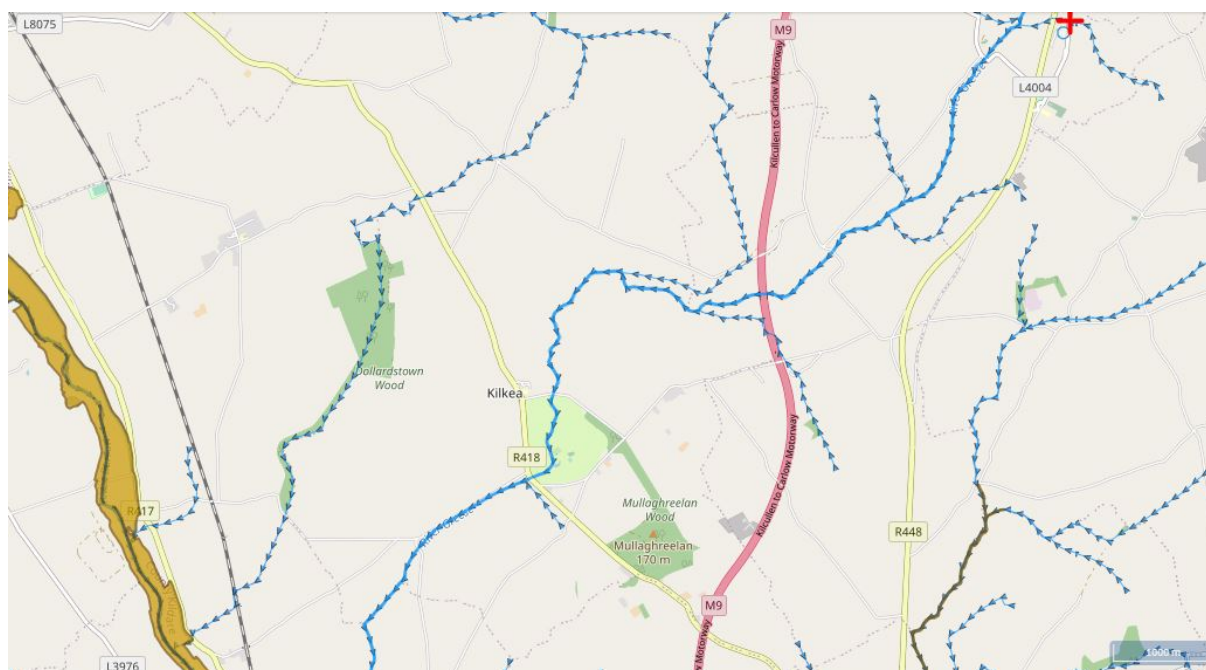
### 3.1 Zone of Influence

According to the DEHLG 2009 guidelines, “Although a distance of 15km is currently recommended in the case of plans...[however] for projects, the distance could be much less than 15km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis”

Thus, the zone of influence must be defined for each project. A “zone of influence” is the difference between an activity's spatial footprint and the extent of the activity's effects on surrounding habitat and wildlife populations. Light, noise, and hydrological connections are the major influencers in this regard. The factors in defining the zone of influence above were as follows:

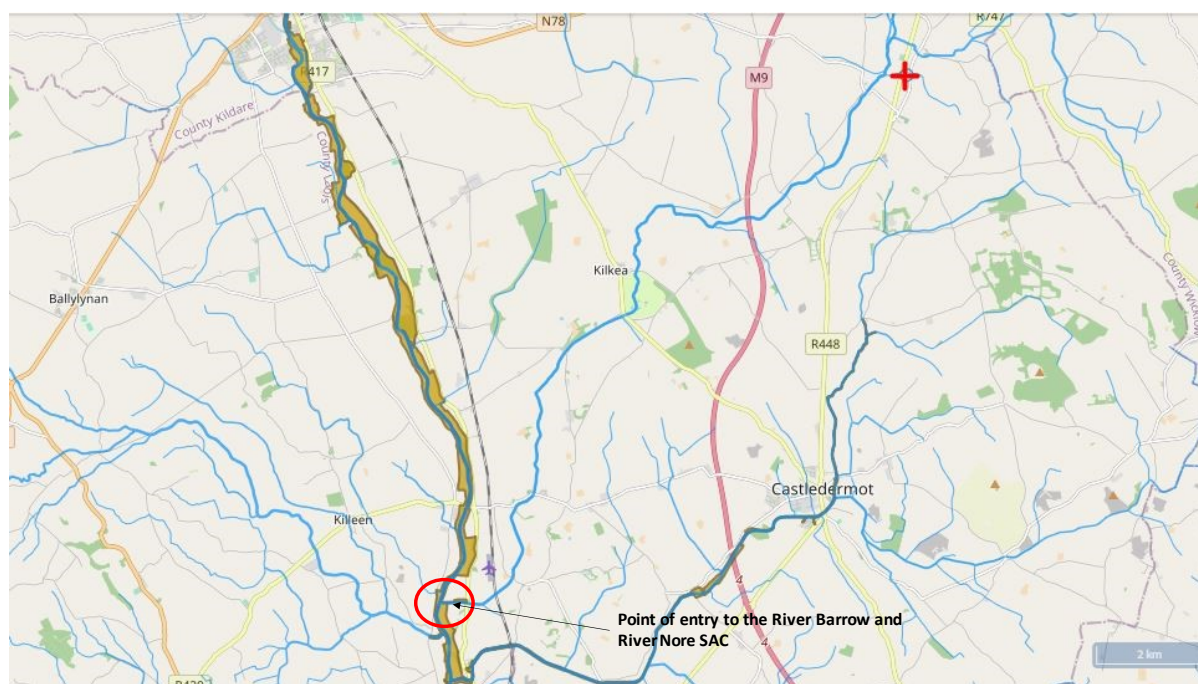
- The location of designated Natura 2000 sites.
- The footprint of the development
- The distance to which pollution generated could impact on downstream habitats.
- The extent of noise and light impacts on ecological receptors.

Given the type of project, the sites being given further consideration are the River Barrow and River Nore SAC shown in Figures 3.2 and 3.3 due to the fact that it is downstream from the proposed development. The other sites are too distant to be impacted or are within a separate water catchment.



**Figure 3.2. River Flow direction showing the site in the top right (red cross) and the waterway leading to the River Barrow and River Nore SAC downstream (Source: EPA maps, 2021).**





**Figure 3.3. River network showing the site in the top right (red cross) and the point of entry to the River Barrow and River Nore SAC downstream (Source: EPA maps, 2021).**

### 3.2 Description of the Natura 2000 Sites

The Habitats Directive states, “Any plan or project not directly connected 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 implication for the site in view of the sites conservation objectives...the competent national authorities shall agree to the plan or project only having ascertained that it will not adversely affect the integrity of the site...” The conservation objectives form the basis of the Appropriate Assessment as it is against these objectives that the assessment is made. The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives, and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network. European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation conditions will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Favourable conservation status of a habitat is achieved when:

- its natural range and the area it covers within that range are stable or increasing;

- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and
- the conservation status of its typical species is favourable. The favourable conservation status of a species is achieved when:
  - population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
  - the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
  - there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Tables 3 and 4 lists the species and habitats that the SAC is designed to protect. It is in relation to the conservation objective to maintain or restore these habitats or species that this assessment is made.

### 3.3 River Barrow and River Nore SAC

The River Barrow and River Nore are collectively listed as a Special Area of Conservation (SAC) and designated based on the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (Table 3).

**Table 3. River Barrow and River Nore SAC Qualifying Interest – Species & Habitats**

Code	Qualifying Interest
1130	Estuaries
1140	Tidal Mudflats and Sandflats
1170	Reefs
1310	Salicornia Mud
1330	Atlantic Salt Meadows
1410	Mediterranean Salt Meadows
3260	Floating River Vegetation
4030	Dry Heath
6430	Hydrophilous Tall Herb Communities
7220	Petrifying Springs*
91A0	Old Oak Woodlands
91E0	Alluvial Forests*
1016	Desmoulin's Whorl Snail ( <i>Vertigo moulinsiana</i> )
1029	Freshwater Pearl Mussel ( <i>Margaritifera margaritifera</i> )
1092	White-clawed Crayfish ( <i>Austropotamobius pallipes</i> )
1095	Sea Lamprey ( <i>Petromyzon marinus</i> )
1096	Brook Lamprey ( <i>Lampetra planeri</i> )
1099	River Lamprey ( <i>Lampetra fluviatilis</i> )

Code	Qualifying Interest
1103	Twaite Shad ( <i>Alosa fallax</i> )
1106	Atlantic Salmon ( <i>Salmo salar</i> )
1355	Otter ( <i>Lutra lutra</i> )
1421	Killarney Fern ( <i>Trichomanes speciosum</i> )
1990	Nore Freshwater Pearl Mussel ( <i>Margaritifera durrovensis</i> )

The conservation objectives are to maintain or restore the Qualifying Interests (shown in Table 4) for which the SAC has been selected at favourable conservation status.

**Table 4. River Barrow and River Nore SAC Qualifying Interest – Species & Habitats**

Code	Qualifying Interest	Objectives
1130	Estuaries	To maintain the favourable conservation condition
1140	Tidal Mudflats and Sandflats	To maintain the favourable conservation condition
1170	Reefs	To maintain the favourable conservation condition
1310	Salicornia Mud	To maintain the favourable conservation condition
1330	Atlantic Salt Meadows	To restore the favourable conservation condition
1410	Mediterranean Salt Meadows	To restore the favourable conservation condition
3260	Floating River Vegetation	To maintain the favourable conservation condition
4030	Dry Heath	To maintain the favourable conservation condition
6430	Hydrophilous Tall Herb Communities	To maintain the favourable conservation condition
7220	Petrifying Springs*	To maintain the favourable conservation condition
91A0	Old Oak Woodlands	To restore the favourable conservation condition
91E0	Alluvial Forests*	To restore the favourable conservation condition
1016	Desmoulin's Whorl Snail ( <i>Vertigo moulinsiana</i> )	To maintain the favourable conservation condition
1029	Freshwater Pearl Mussel ( <i>Margaritifera margaritifera</i> )	currently under review
1092	White-clawed Crayfish ( <i>Austropotamobius pallipes</i> )	To maintain the favourable conservation condition
1095	Sea Lamprey ( <i>Petromyzon marinus</i> )	To restore the favourable conservation condition
1096	Brook Lamprey ( <i>Lampetra planeri</i> )	To restore the favourable conservation condition
1099	River Lamprey ( <i>Lampetra fluviatilis</i> )	To restore the favourable conservation condition
1103	Twaite Shad ( <i>Alosa fallax</i> )	To restore the favourable conservation condition
1106	Atlantic Salmon ( <i>Salmo salar</i> )	To restore the favourable conservation condition
1355	Otter ( <i>Lutra lutra</i> )	To restore the favourable conservation condition
1421	Killarney Fern ( <i>Trichomanes speciosum</i> )	To maintain the favourable conservation condition
1990	Nore Freshwater Pearl Mussel ( <i>Margaritifera durrovensis</i> )	To restore the favourable conservation condition

The conservation objectives above form the basis of this assessment. In relation to conservation condition, the bar of “restore” is more difficult to achieve than “maintain”. This will be considered should significant impacts be identified in relation to the habitats or species

for which the site is selected. This table should be read with information from the Article 17 reporting in respect of the Habitats Directive which indicates the status and trends of the designated species.

The Special Conservation Interests listed for River Barrow and River Nore SAC details are as follows:

1. The site is of ornithological importance for a number of E.U. Birds Directive Annex I species including Greenland White-fronted Goose, Whooper Swan, Bewick's Swan, Bar-tailed Godwit, Peregrine, and Kingfisher. Nationally important numbers of Golden Plover and Bar-tailed Godwit are found during the winter. Wintering flocks of migratory birds are seen in Shanahoe Marsh and the Curragh and Goul Marsh, both in Co. Laois and along the Barrow Estuary in Waterford Harbour. There is also an extensive autumnal roosting site in the reedbeds of the Barrow Estuary used by Swallows before they leave the country. The old oak woodland at Abbeyleix has a typical bird fauna including Jay, Long-eared Owl, and Raven. The reedbed at Woodstown supports populations of typical waterbirds including Mallard, Snipe, Sedge Warbler, and Water Rail.
2. Three rare invertebrates have been recorded in alluvial woodland at Murphy's of the River. These are: *Neoascia obliqua* (Order Diptera: Syrphidae), *Tetanocera freyi* (Order Diptera: Sciomyzidae), and *Dictya umbrarum* (Order Diptera: Sciomyzidae). The rare invertebrate, *Mitostoma chrysomelas* (Order Arachnida) occurs in the old oak woodland at Abbeyleix and only two other sites in the country. Two flies (Order Diptera) *Chrysogaster virescens* and *Hybomitra muhlfeldi* also occur at this woodland.
3. The site supports many other important animal species. Those which are listed in the Irish Red Data Book include Daubenton's Bat, Badger, Irish Hare, and Common Frog. The rare Red Data Book fish species Smelt (*Osmerus eperlanus*) occurs in estuarine stretches of the site. In addition to the Freshwater Pearl Mussel, the site also supports two other freshwater mussel species, *Anodonta anatina* and *A. cygnea*.
4. Seventeen Red Data Book plant species have been recorded within the site, most in the recent past.
5. The site is 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 are 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.

#### 4. Direct and Indirect Impacts

Having outlined the proposed project and the details of the Natura 2000 sites, an assessment for possible impacts can be carried out following the document, "Assessment of plans and projects significantly affecting Natura 2000 sites- Methodology guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission, 2002". The impact of the project on the conservation objectives of the selected Natura 2000 site must be examined in terms of both direct and indirect impact.

**Direct impacts:** loss of habitats or loss of nesting/den sites. For example, if the main habitat on a site was heath and the footprint building resulted in loss of heath habitat that would fall into this category.

The footprint of the development does not overlap any of the Annex I, II and III habitats or Special Conservation Interest Habitats listed above. Therefore, no direct impacts are predicted.

**Indirect impacts:** examples of indirect impacts are water pollution, light pollution, or noise pollution

#### Annex I Species and Special Conservation Interest Habitats - Indirect Impacts

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

#### Annex II and III Species and Special Conservation Interest Habitats - Indirect Impacts

Austropotamobius pallipes (White-clawed Crayfish) [1092]

Lampetra fluviatilis (River Lamprey) [1099]

Lampetra planeri (Brook Lamprey) [1096]

Petromyzon marinus (Sea Lamprey) [1095]

Salmo salar (Salmon) [1106]

Lutra lutra (Otter) [1355]

#### Indirect Impacts - Construction Phase - Typical risks associated with this project:

- 1) The disturbance of soil and mobilisation of sediments, fuel spillage or leakage, and the use of concrete products during site works pose a risk of water pollution: this is particularly relevant to the rehabilitation of the Moone bridge where parking,

machinery usage, fuel and concrete storage and use, and the removal of vegetation and debris from the site may contribute to these risks.

- 2) Invasive species being brought from different areas: the introduction and/or spread of invasive species such as Himalayan Balsam, Giant Hogweed, or Japanese Knotweed could result in the establishment of invasive alien species which may have negative effects on the surrounding environs.
- 3) The rehabilitation works provide a mechanism by which pollution could enter the nearby protected area. Mitigation is proposed in Table 5.

### Indirect Impacts - Operational Phase - The Operational Phase of this project has:

No impacts are expected for the operational phase of the project.

**Table 5. Summary of Impacts on Habitats identified as within the Zone of Influence of the development. Blue highlights where impacts are predicted, and mitigation will follow.**

Qualifying Interest	Direct Impacts	Indirect Impacts
Water courses of plain to montane levels with the Ranunculus fluitans and Callitriche-Batrachion vegetation [3260]	No direct impacts as the proposed development is outside the Natura 2000 network	Indirect impacts such as pollution from hydrocarbons, cementitious products and sedimentation during construction and operation phases.
Austropotamobius pallipes (White-clawed Crayfish) [1092] Lampetra fluviatilis (River Lamprey) [1099]	No direct impacts as the proposed development is outside the Natura 2000 network	Indirect impacts such as sedimentation, hydrocarbon pollution, invasive species, and decreased water quality during construction and operation phases.
Lampetra planeri (Brook Lamprey) [1096]	No direct impacts as the proposed development is outside the Natura 2000 network	Indirect impacts such as sedimentation, hydrocarbon pollution, invasive species, and decreased water quality during construction and operation phases.
Petromyzon marinus (Sea Lamprey) [1095]	No direct impacts as the proposed development is outside the Natura 2000 network	Indirect impacts such as sedimentation, hydrocarbon pollution, invasive species, and decreased water quality during construction and operation phases.
Salmo Salar (Salmon) [1106]	No direct impacts as the proposed development is outside the Natura 2000 network	Indirect impacts such as sedimentation, hydrocarbon pollution, invasive species, and decreased water quality during construction and operation phases.
Lutra lutra (Otter) [1355]	No direct impacts as the proposed development is outside the Natura 2000 network	Indirect impacts such as sedimentation, hydrocarbon pollution, invasive species, and decreased water quality during construction and operation phases.

## 5. Mitigation

The main mitigation for this site would be:

1. CEMP – Construction Environmental Management Plan.
2. Physical Mitigation installed to protect water quality in the greater area.
3. On-site management to protect water courses.
4. Avoid interfering with the hydrology of site.

## **Construction Environmental Management Plan**

An outline construction environmental management plan (CEMP) for the project should be prepared to further examine potential construction related impacts and develop appropriate mitigation measures to ensure no construction related impacts on the conservation objectives of River Barrow and River Nore SAC.

Specifically, the outline CEMP and subsequent contractor CEMP should:

- Detail the establishment of a site compound for the storage of plant, machinery, and materials during the construction phase of the project. The CEMP must consider the location of the off-site compound with due regard for the receiving environment at the off-site location.
- Ensure all plant and machinery are refuelled at the off-site compound at the start of each working day.
- Ensure all plant and machinery are being regularly checked for leaks.
- Ensure no hydrocarbons will be stored at the project site.
- Ensure a spill kit is available at the project site for accidental leaks.
- Detail measures to ensure that construction or demolition debris does not enter the stream during works on the bridge.
- Detail measures to mitigate silt mobilisation and subsequent potential for runoff.
- Detail the roles and responsibilities of construction and associated staff regarding the protection of the receiving environment.

### **5.1 Construction/Rehabilitation Phase**

The removal and disposal of wastewater from temporary welfare facilities in the construction compounds and throughout the site must be carried out by a fully permitted waste collector holding valid Waste Collection Permits as issued under the Waste Management (Collection Permit) Regulations, 2007.

To prevent small spillages or loose debris falling into watercourses, scaffolding and a bearing shelf with polythene sheeting canopy should be erected under scaffolds.

A 'leave no trace' policy should be adopted with education and awareness programmes to be implemented ensuring that littering does not develop into a significant issue.

### **5.2 Silt Management**

The first step to prevent silt from entering protected habitats is to minimise the generation of silt laden runoff through planning of construction activities by working during clement weather and minimising the storage of sediment producing material. Where silt laden runoff is generated, it should be prevented from entering sensitive habitats. Specifically, the following actions should be taken:

- Prior to the outset of any excavation, the active works area should be assessed and clearly delineated. The minimum area necessary will be identified, and there must be no access to works vehicles outside the fenced off areas. All works are to be located within the confines of these fences. No works should take place outside the fences to prevent damage to areas outside the necessary development footprint.
- Excavation, when needed, should be undertaken during clement weather to minimise runoff.
- Backfill trenching as work proceeds and remove excess material.
- Where possible, minimise areas stripped of vegetation using a phased approach during construction.
- Avoid stockpiles of excavated earth to control silt runoff.
- Backfilling shall, wherever practicable, be undertaken immediately after the specified operations preceding it have been completed.
- Silt fencing should be erected along the boundaries of the watercourse during the rehabilitation works. This will mitigate any sediment run-off resulting from excavations and construction entering the adjacent body of water.

### 5.3 Ecological Supervision

Prior to commencement of works, a suitably qualified ecologist should be appointed to act as an ecological clerk of works (ECoW). The ECoW should:

- Review the final contractor CEMP and supply input in respect of environmental and ecological matters including a review of the agreed point of discharge from all dewatering activities (i.e. the location of tanker discharges).
- Provide advice on all relevant mitigation measures set out in the outline CEMP, contractor CEMP, and the NIS.
- Carry out regular inspection and monitoring of the construction work, particularly in relation to ensuring the implementation of the proposed silt fencing to ensure no impacts on the conservation objectives of any Natura 2000 site.
- Have the authority to halt works in the event of any non-compliance or failure of the mitigation measures detailed in the NIS.

### 5.4 Invasive Species

The Appropriate Assessment Screening Report concluded that there was potential for impact relative to the spreading of Invasive Species on the conservation objectives of the River Barrow and River Nore SAC as a result of the proposed project.

Therefore, it considered that, in the absence of mitigation, imported material could lead to further spread of Invasive Species in the aquatic habitats surrounding the aforementioned European Site.



In line with good practice, methods for the prevention of spread of Invasive Alien Species should ensure that the following guidelines are implemented:

- Kelly, J., Maguire, C.M. and Cosgrove, P.J., Muir, R.A. (2015). Best Practice Management Guidelines Japanese knotweed *Fallopia japonica*. Prepared for NIEA and NPWS as part of Invasive Species Ireland.
- NRA Guidelines on the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads (2010). In addition, good construction site hygiene should be employed to prevent the introduction and spread of problematic invasive alien plant species (e.g. Himalayan Balsam, Japanese Knotweed, etc.) by thoroughly washing vehicles prior to arriving or leaving any site.
- All plant and equipment employed on the construction site (e.g. excavator, footwear, etc.) must be thoroughly cleaned down prior to arrival on site to prevent the spread of invasive plant species
- All washing must be undertaken in areas with no potential to result in the spread of invasive species. This process will be detailed in the contractor's method statement
- Any soil and topsoil required on the site will be sourced from a stock that has been screened for the presence of any invasive species and where it is confirmed that none are present
- Any plant, vehicles, or equipment that may have worked in areas of the project footprint where invasive species are known to occur (MERC, 2019a) should be suitably cleaned by a high-pressure hose prior to leaving an infested area.
- All fill and material sourced or relocated within the site should be screened at source for the presence of invasive species by the ECoW to prevent the spread of these species along the road corridor. This is in line with the guidance for the control of non-native invasive species set out in the NRA publication 'Guidelines on the Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads' (NRA, 2010) to be employed by the contractor.

## 5.5 Fuel and Oil Control

On-site refuelling must be carried out using a mobile, double-skinned fuel bowser.

Only designated, trained, and competent operatives should be authorised to refuel plant on site. Mobile measures such as drip trays and fuel absorbent mats must be used during all refuelling operations. Mobile fuel storage such as fuel bowsers, if used, should not be placed in proximity to the waterway.

All refuelling procedures and practices must be reviewed and monitored by the Environmental Clerk of Works during the construction stage.

## 5.6 Site drainage

Drainage activities in the catchment can lead to flash floods which can damage the many Annex II species present on the SAC; therefore, the following mitigation is proposed:

- No direct discharges to water are to be made.
- Natural vegetation on verges of the proposed rehabilitation must be preserved when possible, acting as a filter to any sediment laden runoff.
- Stockpiles of excavated materials should be small and must be sealed with a digger bucket to reduce the potential for sediment runoff. These areas must be surrounded with silt fencing to prevent any pathway to any sensitive receptors downstream. Polyethylene sheeting should also be placed over stockpiles if required.
- The appointed ECoW and the site manager should respond to changing weather, ground, or drainage conditions as the project proceeds to ensure the effectiveness of the watercourse protection measures is maintained in so far as is possible.
- Silt fencing installed adjacent to the bridge under rehabilitation must remain in place until the works in that area have been completed.
- Whilst no significant silt laden run off is anticipated in this project, the site should be regularly monitored by construction staff and the proposed Environmental Clerk of Works for signs of run-off such as silt in surrounding vegetation. Measures will be put in place to prevent this and may include the provision of an additional layer of silt fence. A silt fence may be constructed by attaching a sheet of geotextile membrane to a stock fence and burying the bottom of the membrane into the ground, thus allowing water to pass through but not the heavier fraction of the sediment.

## 6. Statement of Impacts and Conclusion of NIS

The proposed site is outside the Natura 2000 network. Having considered all the habitats and species for which the nearby Natura 2000 sites are designated, it was concluded that the main risk is to water quality in the River Barrow and River Nore SAC as well as to some aquatic species such as Salmon (*Salmo salar*), Otter (*Lutra lutra*), White-clawed Crayfish (*Austropotamobius pallipes*), River Lamprey (*Lampetra fluviatilis*), Brook Lamprey (*Lampetra planeri*), and Sea Lamprey (*Petromyzon marinus*).

Mitigation is proposed to reduce this risk to water pollution to a non-significant level. This includes careful project management in respect of water protection and proper management of fuels and building materials.

The mitigation will be the responsibility of Kildare County Council and may be implemented through a contractor. The conclusion is that, with mitigation in place, no significant negative impacts on the conservation status of the Natura 2000 network and its associated habitats and species are anticipated as a result of this development.