

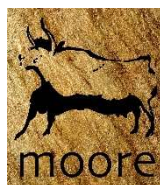
# Report for the purposes of Appropriate Assessment Screening

as required under Article 6(3) of the Habitats Directive  
(Council Directive 92/43/EEC)

## Knocktopher to Ballyhale R713 Footpath Upgrade



Prepared by: Moore Group – Environmental Services

21<sup>st</sup> November 2019



On behalf of Kilkenny County Council

<b>Project Proponent</b>	Kilkenny County Council
<b>Project</b>	Knocktopher to Ballyhale R713 Footpath Upgrade
<b>Title</b>	Report for the purposes of Appropriate Assessment Screening Knocktopher to Ballyhale R713 Footpath Upgrade

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## Abbreviations

AA	Appropriate Assessment
EEC	European Economic Community
EPA	Environmental Protection Agency
EU	European Union
GIS	Geographical Information System
NHA	Natural Heritage Area
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
OSI	Ordnance Survey Ireland
pNHA	proposed Natural Heritage Area
SAC	Special Area of Conservation
SPA	Special Protection Area
SUDS	Sustainable Urban Drainage System
WWTP	Wastewater Treatment Plant

# 1. Introduction

## 1.1. General Introduction

This report contains information required for the competent authority to undertake screening for Appropriate Assessment (AA) on the potential for the upgrading of footpaths along the R713 between Knocktopher and Ballyhale, County Kilkenny (hereafter referred to as the proposed Project) to significantly affect European sites.

Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3) of Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (referred to as the Habitats Directive):

- I). whether a plan or project is directly connected to or necessary for the management of the site, and
- II). whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of its conservation objectives.

Having regard to the provisions of the Planning and Development Act 2000 (sections 177U and 177V), the purpose of a screening exercise under section 177U of the PDA 2000 is to determine whether it is necessary to carry out an “appropriate assessment” of the implications for a European site of the proposed project. The trigger for the requirement for an “appropriate assessment” is that the project, either individually or in combination with other plans or projects, is “likely to have a significant effect” on the European site.

If the effects are deemed to be significant, potentially significant, or uncertain, or the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA). Screening should be undertaken without the inclusion of mitigation. If potential impacts clearly can be avoided through the modification or redesign of the plan or project, then the screening process is repeated on the altered plan or project.

When screening the project, there are two possible outcomes:

- the project poses no risk of a significant effect and as such requires no further assessment; and
- the project has potential to have a significant effect (or this is uncertain) and AA of the project is necessary.

This desktop report has been prepared by Moore Group - Environmental Services for Kilkenny County Council and assesses the potential for the proposed Project to impact on sites of European-scale ecological importance in accordance with Articles 6(3) and 6(4) of the Habitats Directive. The report was compiled by Ger O’Donohoe (B.Sc. Applied Aquatic Sciences (GMIT, 1993) & M.Sc. Environmental Sciences (TCD, 1999)) who has 25 years’ experience in environmental impact assessment and has completed numerous Appropriate Assessment Screening Reports and Natura Impact Statements on terrestrial and aquatic habitats.

## 1.2. Legislative Background - The Habitats and Birds Directives

It is necessary that the proposed Project has regard to Article 6 of the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (referred to as the Habitats Directive). This is transposed into Irish Law by the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477) (referred to as the Habitats Regulations).

The Habitats Directive (Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora) is the main legislative instrument for the protection and conservation of biodiversity in the European Union (EU). Under the Directive, Member States are obliged to designate Special Areas of Conservation (SACs) which contain habitats or species considered important for protection and conservation in a EU context.

The Birds Directive (Council Directive 79/409/EEC and Council Directive 2009/147/EC on the Conservation of Wild Birds), is concerned with the long-term protection and management of all wild bird species and their habitats in the EU. Among other things, the Directive requires that Special Protection Areas (SPAs) be established to protect migratory species and species which are rare, vulnerable, in danger of extinction, or otherwise require special attention.

Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas, designated under the Birds Directive, form a pan-European network of protected sites known as Natura 2000. The Habitats Directive sets out a unified system for the protection and management of SACs and SPAs. These sites are also referred to as European sites.

Articles 6(3) and 6(4) of the Habitats Directive set out the requirement for an assessment of proposed plans and projects likely to affect Natura 2000 sites.

Article 6(3) establishes the requirement to screen all plans and projects and to carry out a further assessment if required (Appropriate Assessment (AA)):

**Article 6(3):** *“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 subjected to an appropriate assessment of its implications for the site in view of the site’s conservation objectives. In 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.”*

**Article 6(4):** *“If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all*

*compensatory measures necessary to ensure that the overall coherence of the Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species the only considerations which may be raised are those relating to human health or public safety, to the beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”*

## 2. Methodology

The Commission’s methodological guidance (EC, 2002) promotes a four-stage process to complete the AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

Stages 1 and 2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

**Stage 1 Screening:** This stage examines the likely effects of a project either alone or in combination with other projects upon a Natura 2000 site and considers whether it can be objectively concluded that there are not likely to be significant effects on a Natura 2000 site. Mitigation measures (i.e., measures intended to avoid or reduce the harmful effects of the project on the site concerned) cannot be taken into account at this stage.

**Stage 2 Appropriate Assessment:** In this stage, there is a consideration of the impact of the project with a view to ascertain whether there will be any adverse effect on the integrity of the Natura 2000 site either alone or in combination with other projects or plans, with respect to the site’s structure and function and its conservation objectives. Additionally, where there are predicted impacts, an assessment of the potential mitigation of those impacts is considered.

**Stage 3 Assessment of Alternative Solutions:** This stage examines alternative ways of implementing the project that, where possible, avoid any adverse impacts on the integrity of the Natura 2000 site.

**Stage 4 Assessment where no alternative solutions exist and where adverse impacts remain:** Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the sites will be necessary.

To ensure that the proposed Project complies fully with the requirements of Article 6 of the Habitats Directive and all relevant Irish transposing legislation, Moore Group compiled this report to inform the screening for AA of the proposed Project to be undertaken by the competent authority to determine if the next stage (Stage 2) of the AA process is required.

## 2.1. Guidance

This report has been compiled in accordance with guidance contained in the following documents:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 rev.).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPWS 1/10 & PSSP 2/10.
- 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 Directorate-General, 2001); hereafter referred to as the EC Article Guidance Document.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC Environment Directorate-General, 2000); hereafter referred to as MN2000.
- Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC (EC, 2018).

## 2.2. Data Sources

Sources of information that were used to collect data on the Natura 2000 network of sites, and the environment within which they are located, are listed below:

- The following mapping and Geographical Information Systems (GIS) data sources, as required:
  - National Parks & Wildlife (NPWS) protected site boundary data;
  - Ordnance Survey of Ireland (OSI) mapping and aerial photography;
  - OSI/Environmental Protection Agency (EPA) rivers and streams, and catchments;
  - Open Street Maps;
  - Digital Elevation Model over Europe (EU-DEM);
  - Google Earth and Bing aerial photography 1995-2019;
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from [www.npws.ie](http://www.npws.ie) including:
  - Natura 2000 - Standard Data Form;
  - Conservation Objectives;
  - Site Synopses;
- National Biodiversity Data Centre records;
  - Online database of rare, threatened and protected species;
  - Publicly accessible biodiversity datasets.
- Status of EU Protected Habitats in Ireland. (National Parks & Wildlife Service, 2019); and
- Relevant Development Plans in neighbouring areas;
  - Kilkenny County Development Plan 2014-2020



### 3. Description of the proposed Project

This report presents a screening assessment for a proposed Project consisting of the upgrading of footpaths along the R713 between Knocktopher and Ballyhale, County Kilkenny.

The villages of Knocktopher and Ballyhale are linked by the R713 Regional Road. However, there is an absence of a continuous pedestrian linkage between the two. Presently there are footpaths extending south from Knocktopher and north from Ballyhale. These footpaths were constructed over a number of phases with the most recent in 2010. There is a gap of approximately 800m between the extremities of both these footpaths.

Completing this section of footpath has been a long term aspiration of the local community in both Ballyhale and Knocktopher and the elected members of County Kilkenny. In addition it will provide for a safe pedestrian connection between both villages.

The proposed Project involves the construction of new tarmacadam footpaths to link the existing footpaths as outlined above. Kerbing is to be constructed using either precast or slip formed *in situ* concrete.

The proposed Project crosses Little Arrigal River. On approach and departure to the existing river bridge the works will be kept within/between the existing bridge parapets.

The project includes upgraded site drainage and the breakdown of the proposed surface water runoff and outfall is as follows;

Chainage 0-523 (61%) of runoff will be collected by relocated existing/new gullies/new combined drain kerbs connected to the existing combined sewer system which is connected to the pumping station that pumps the combined sewage to the Ballyhale Wastewater Treatment Plant.

Chainage 523-595 (9%) of runoff is retained existing over the edge drainage to adjacent fields

Chainage 595-820 (26%) of runoff will be collected by new gullies connected to a new infiltration trench soakaway at the back of the proposed footway.

Chainage 820-858 (4%) of runoff is retained existing kerb and gully drainage system

Figure 1 shows the proposed Project location and Figure 2 shows a detailed view of the proposed Project route on recent aerial photography. Figure 3a and b is a plan of the proposed Project.

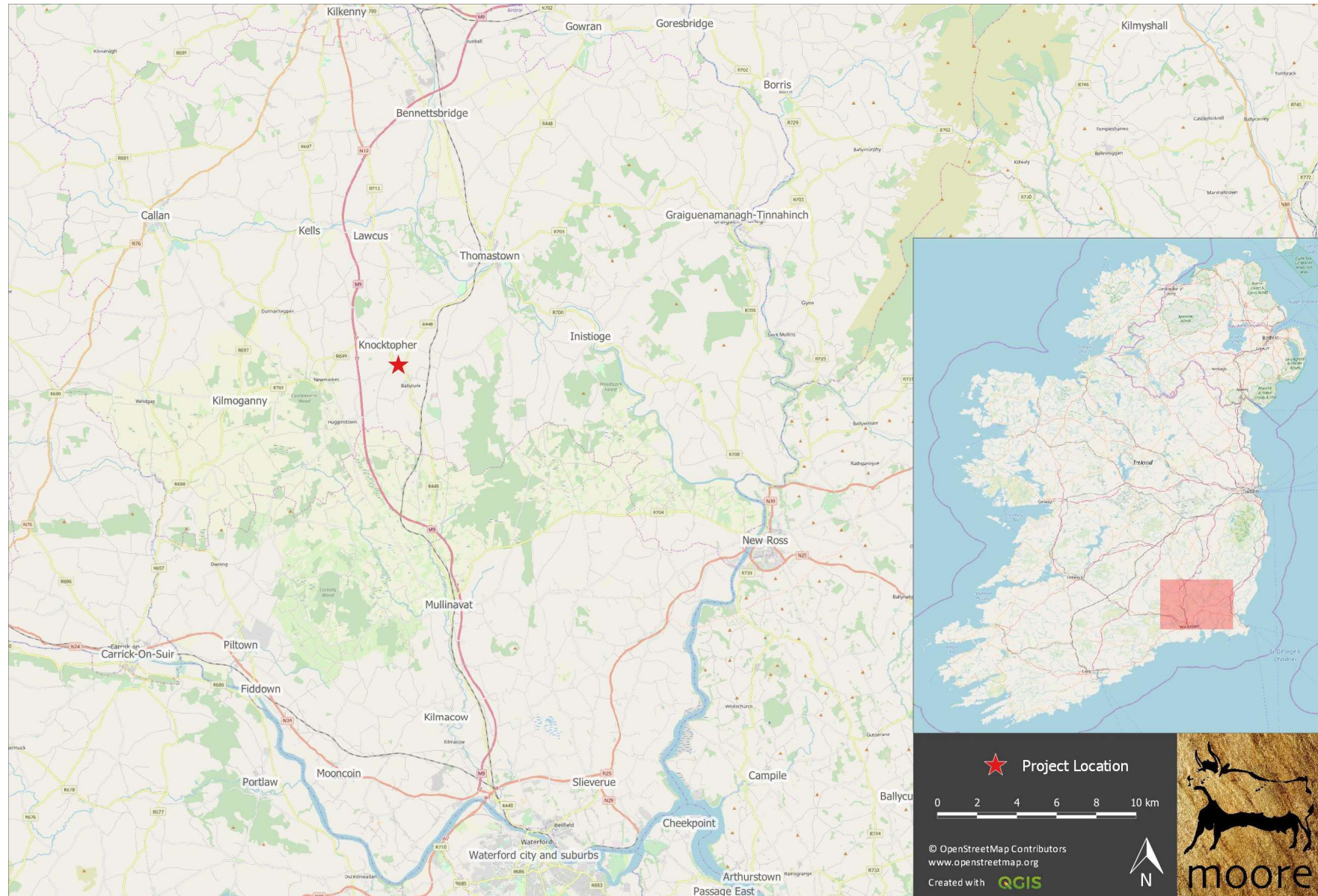


Figure 1. Showing the proposed Project location at Knocktopher, County Kilkenny.

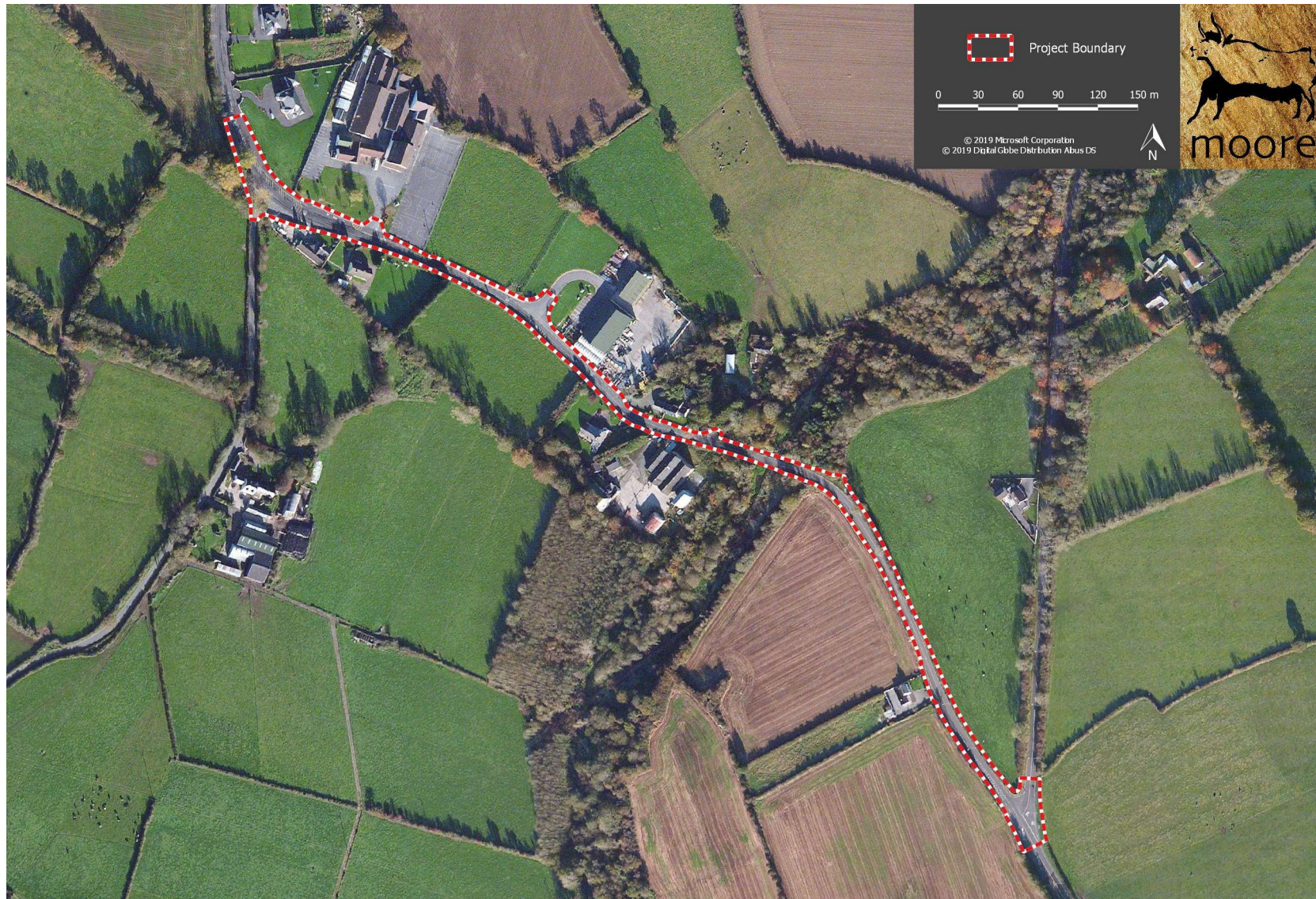


Figure 2. Showing the proposed Project area on recent aerial photography.



Figure 3a. Plan of the western extent of the proposed Project.

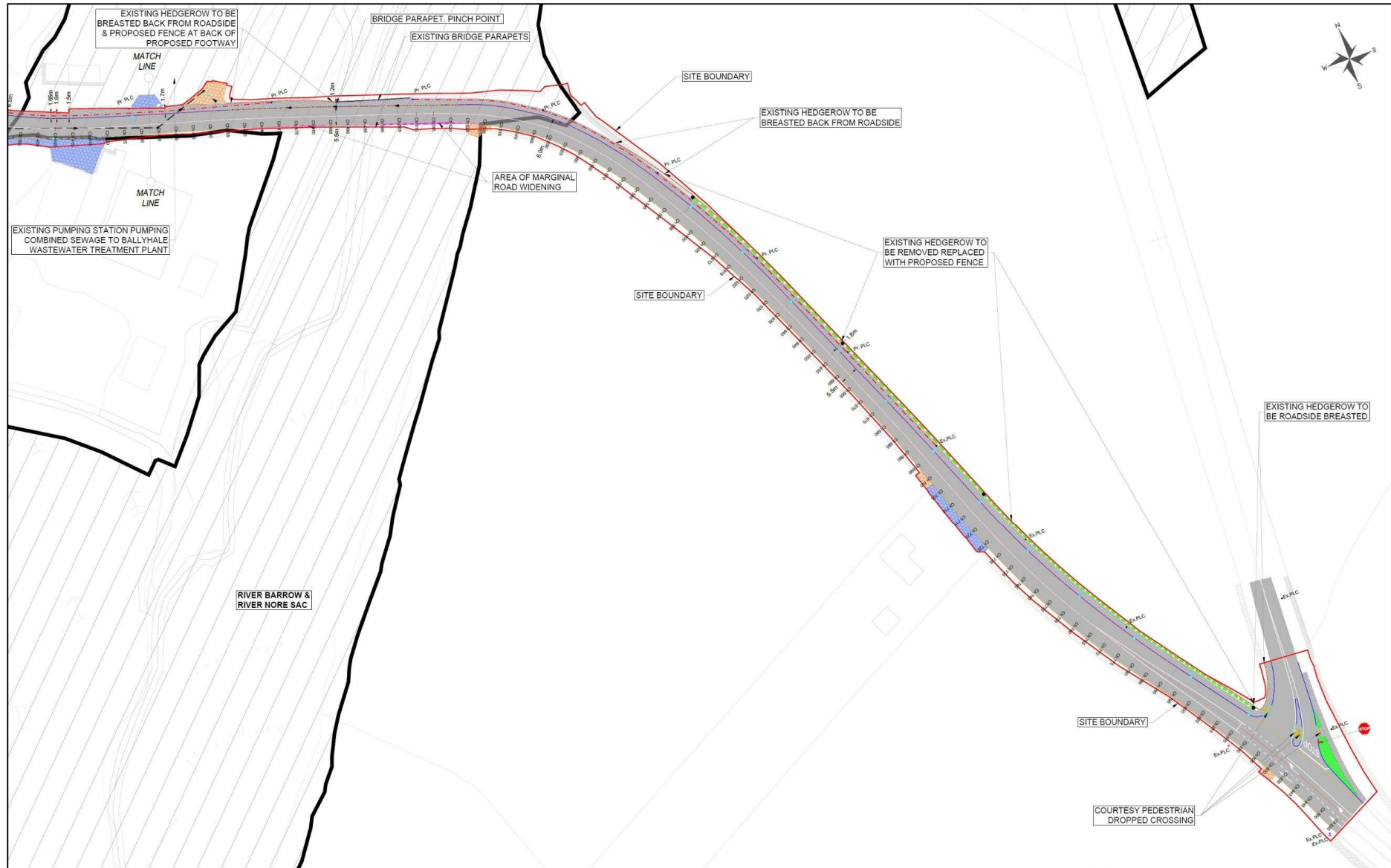


Figure 4b. Plan of the eastern extent of the proposed Project.

## 4. Identification of Natura 2000 Sites

### 4.1. Description of Natura Sites Potentially Affected

Department of Environment, Heritage and Local Government (2009) Guidance on Appropriate Assessment recommends an assessment of European sites within a zone of impact of 15 km. This distance is a guidance only and the zone of impact has been identified taking consideration of the nature and location of the proposed Project to ensure all European sites with connectivity to it are considered in terms of a catchment-based assessment.

The zone of impact may be determined by connectivity to the proposed Project in terms of:

- Nature, scale, timing and duration of works and possible impacts, nature and size of excavations, storage of materials, flat/sloping sites;
- Distance and nature of pathways (dilution and dispersion; intervening 'buffer' lands, roads etc.); and
- Sensitivity and location of ecological features.

The guidance provides that, at the screening stage, it is necessary to identify the sites and compile information on their qualifying interests and conservation objectives. In preparation for this, the potential for source pathway receptor connectivity is firstly identified and detailed information is then provided on sites with connectivity. European sites that are located within 15 km of the Project are listed in Table 1 and presented in Figures 4 and 5, below. Spatial boundary data on the Natura 2000 network was extracted from the NPWS website ([www.npws.ie](http://www.npws.ie)) on the 20<sup>th</sup> of November 2019.

*Table 1 European Sites located within 15km or the potential zone of impact<sup>1</sup> of the Project.*

Site Code	Site name	Distance (km) <sup>2</sup>
000404	Hugginstown Fen SAC	4.86
002137	Lower River Suir SAC	12.98
002162	River Barrow and River Nore SAC	0.00
002252	Thomastown Quarry SAC	7.67
004233	River Nore SPA	5.17

The Project is to take place along the margins of the R713 between Knocktopher and Ballyhale. The region in which the works are to take place is predominantly rural, however there are single dwelling houses, light industrial areas and Scoil Aireagail also located along the road's margins. The proposed Project crosses Little Arrigal River which is designated as part of the River Barrow and River Nore SAC (Site Code 002162). Downstream

<sup>1</sup> All European sites potentially connected irrespective of the nature or scale of the proposed Project.

<sup>2</sup> Distances indicated are the closest geographical distance between the proposed Project and the European site boundary, as made available by the NPWS. Connectivity along hydrological pathways may be significantly greater.

of the proposed Project, the Little Arrigal River enters the River Nore and at this point enters the River Nore SPA (Site Code 004233) approximately 6.2 river kilometres downstream of the proposed Project.

It is noted that the Lower River Suir SAC (Site Code 002137) is located at its closest approximately 12.98 km to the southwest, but that there is no connectivity to this European site at its closest point. The only potential area of connectivity between the proposed Project and the Lower River Suir SAC is at the mouth of the Barrow River, where the Rivers Suir and Barrow mix, over 25 km to the south east of the proposed Project.

There are no predicted effects on the River Nore SPA and the Lower River Suir SAC given:

- the nature and scale of the proposed Project, which involves the construction of tarmacadam footpaths with precast or slip formed in situ concrete kerbings and a retaining wall;
- that the proposed works are to take place predominantly within the existing road take of the R713; and
- the distance between the proposed Project and these European Sites.

In light of the above points potential significant effects on the River Nore SPA and the Lower River Suir SAC are screened out at this preliminary stage.

The proposed Project intersects the boundary of the River Barrow and River Nore SAC as published by the NPWS in the vicinity of where the Project crosses the Little Arrigal River.

Details of the qualifying interests of River Barrow and River Nore SAC (Site Code 002162) are listed in Table 2 below, and Site Synopses are available from the NPWS website ([www.npws.ie](http://www.npws.ie)).

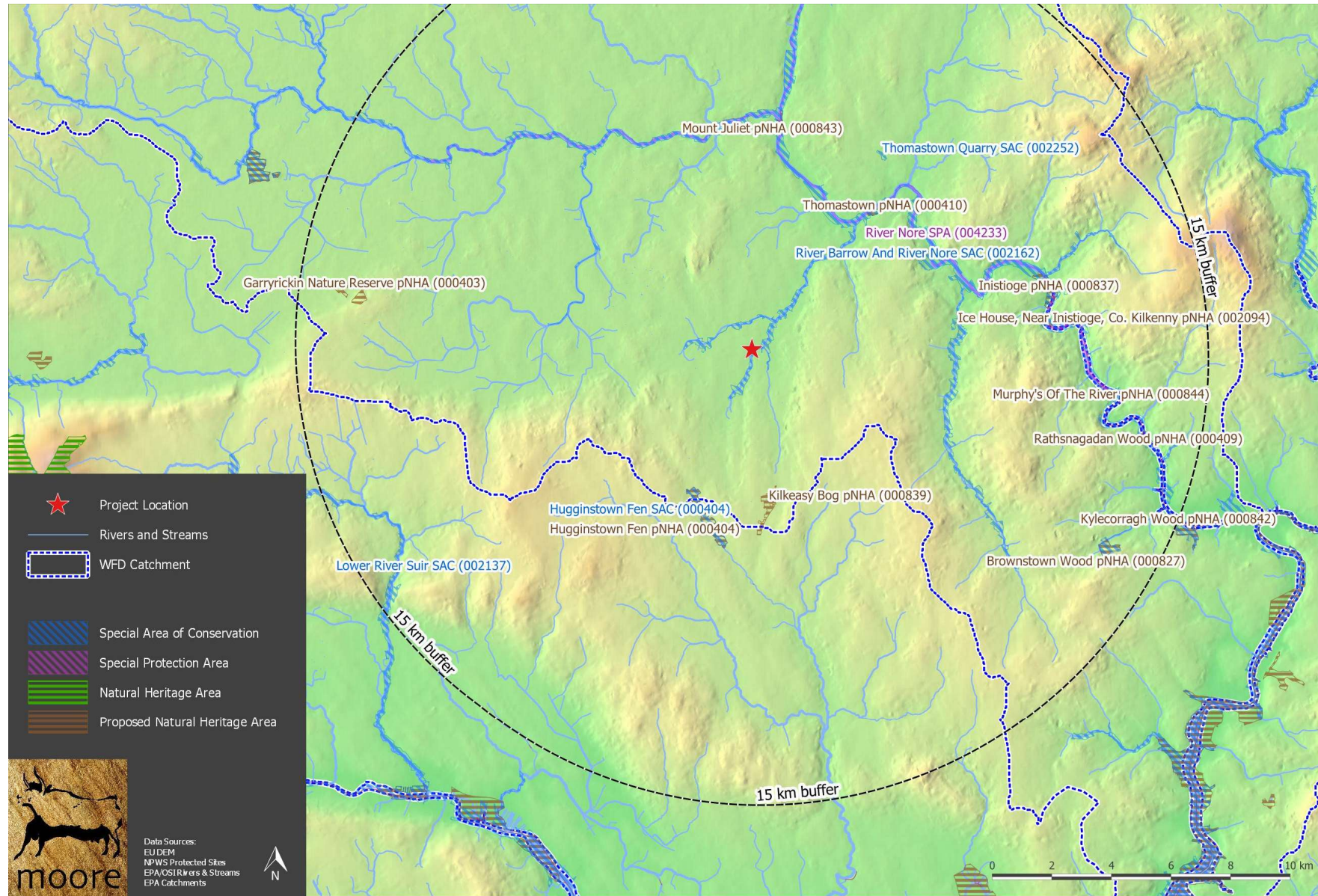


Figure 4. Showing European sites and NHAs/pNHAs within 15 km of the proposed Project.



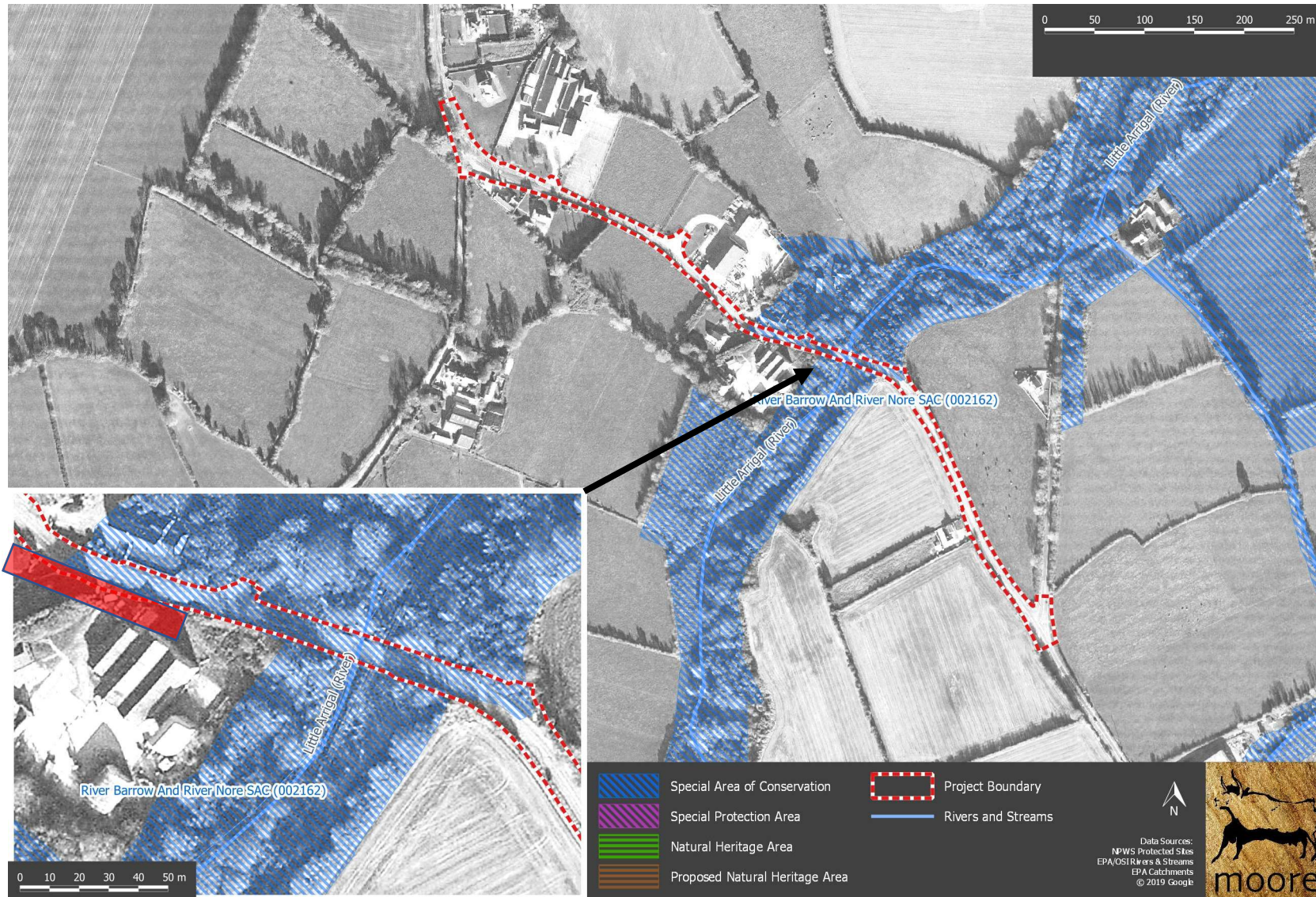


Figure 5. Detailed view of European sites and NHAs/pNHAs in the vicinity of the proposed Project

Table 2 SACs located within the potential zone of influence of the Project (\*indicates priority habitat).

Site Code	Site Name	Qualifying Interests
002162	River Barrow and River Nore SAC	<p><b>Species:</b></p> <p>1016 Desmoulin's whorl snail <i>Vertigo moulinsiana</i></p> <p>1029 Freshwater pearl mussel <i>Margaritifera margaritifera</i></p> <p>1092 White-clawed crayfish <i>Austropotamobius pallipes</i></p> <p>1095 Sea lamprey <i>Petromyzon marinus</i></p> <p>1096 Brook lamprey <i>Lampetra planeri</i></p> <p>1099 River lamprey <i>Lampetra fluviatilis</i></p> <p>1103 Twaite shad <i>Alosa fallax</i></p> <p>1106 Atlantic salmon (<i>Salmo salar</i>) (only in fresh water)</p> <p>1355 Otter <i>Lutra lutra</i></p> <p>1421 Killarney fern <i>Trichomanes speciosum</i></p> <p>1990 Nore freshwater pearl mussel <i>Margaritifera durrovensis</i></p> <p><b>Habitats:</b></p> <p>1130 Estuaries</p> <p>1140 Mudflats and sandflats not covered by seawater at low tide</p> <p>1310 <i>Salicornia</i> and other annuals colonizing mud and sand</p> <p>1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)</p> <p>1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>3260 Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation</p> <p>4030 European dry heaths</p> <p>6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels</p> <p>7220 * Petrifying springs with tufa formation (<i>Cratoneurion</i>)</p> <p>91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</p> <p>91E0 * Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)</p>

## 4.2. Conservation Objectives of the Natura 2000 Sites

### 4.2.1. River Barrow and River Nore SAC (002062) - Version 1; 19<sup>th</sup> July 2011

The following Conservation Objectives are set out for the River Barrow and River Nore SAC. Specific attributes, measures and targets are presented in the relevant Conservation Objectives documents and will be addressed in more detail if required after potential impacts have been determined.

#### **1016 Desmoulin's whorl snail *Vertigo moulinsiana***

To maintain the favourable conservation condition of Desmoulin's whorl snail in the River Barrow and River Nore SAC.

#### **1029 Freshwater pearl mussel *Margaritifera margaritifera***

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.

#### **1092 White-clawed crayfish *Austropotamobius pallipes***

To maintain the favourable conservation condition of White-clawed crayfish in the River Barrow and River Nore SAC.

#### **1095 Sea lamprey *Petromyzon marinus***

To restore the favourable conservation condition of Sea lamprey in the River Barrow and River Nore SAC.

#### **1096 Brook lamprey *Lampetra planeri***

To restore the favourable conservation condition of Brook lamprey in the River Barrow and River Nore SAC.

#### **1099 River lamprey *Lampetra fluviatilis***

To restore the favourable conservation condition of River lamprey in the River Barrow and River Nore SAC.

#### **1103 Twaite shad *Alosa fallax***

To restore the favourable conservation condition of Twaite shad in the River Barrow and River Nore SAC.

#### **1106 Atlantic salmon (*Salmo salar*) (only in fresh water)**

To restore the favourable conservation condition of Salmon in the River Barrow and River Nore SAC.

**1130 Estuaries**

To maintain the favourable conservation condition of Estuaries in the River Barrow and River Nore SAC.

**1140 Mudflats and sandflats not covered by seawater at low tide**

To maintain the favourable conservation condition of the Mudflats and sandflats not covered by seawater at low tide in the River Barrow and River Nore SAC.

**1310 *Salicornia* and other annuals colonizing mud and sand**

To maintain the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in the River Barrow and River Nore SAC

**1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)**

To restore the favourable conservation condition of Atlantic salt meadows in the River Barrow and River Nore SAC.

**1355 Otter *Lutra lutra***

To restore the favourable conservation condition of Otter in the River Barrow and River Nore SAC.

**1410 Mediterranean salt meadows (*Juncetalia maritimi*)**

To restore the favourable conservation condition of Mediterranean salt meadows in the River Barrow and River Nore SAC.

**1421 Killarney fern *Trichomanes speciosum***

To maintain the favourable conservation condition of Killarney Fern in the River Barrow and River Nore SAC.

**1990 Nore freshwater pearl mussel *Margaritifera durrovensis***

To restore the favourable conservation condition of the Nore freshwater pearl mussel in the River Barrow and River Nore SAC.

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

To maintain the favourable conservation condition of Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation in the River Barrow and River Nore SAC.

**4030 European dry heaths**

To maintain the favourable conservation condition of European dry heaths in the River Barrow and River Nore SAC.

**6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels**

To maintain the favourable conservation condition of Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels in the River Barrow and River Nore SAC.

**7220 \* Petrifying springs with tufa formation (Cratoneurion)**

To maintain the favourable conservation condition of Petrifying springs with tufa formation (*Cratoneurion*) in the River Barrow and River Nore SAC.

**91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles**

To restore the favourable conservation condition of Old oak woodland with Ilex and Blechnum in the River Barrow and River Nore SAC.

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

To restore the favourable conservation condition of Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) in the River Barrow and River Nore SAC.

#### 4.3. Assessment Criteria

##### 4.3.1. Examples of Direct, Indirect or Secondary Impacts

In order to identify those sites that could be potentially affected, it is necessary to describe the Natura 2000 site in the context of why it has been designated i.e. in terms of its Qualifying Interests and the environmental and ecological conditions that maintain the condition of these features. The underpinning conditions that are required to maintain the 'health' of these features are listed in Table 3 below.

*Table 3 Qualifying Interests and Key environmental conditions supporting site integrity.*

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests	Potential Impacts
* Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	Riparian/lacustrine habitat prone to flooding.	Grazing, Invasive Species, Drainage, Planting of nonnative conifers, felling of native tree species.	This habitat does not occur in the zone of influence of the project and will not be affected.
Atlantic salt meadows (Glauco-	Marine and groundwater dependent. Medium	Overgrazing; erosion; invasive species, particularly common	This habitat does not occur in the zone of influence of the

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests	Potential Impacts
<i>Puccinellietalia maritima</i> )	sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion.	cordgrass ( <i>Spartina anglica</i> ); infilling and reclamation.	project and will not be affected.
Brook Lamprey ( <i>Lampetra planeri</i> )	Surface water dependent Highly sensitive to hydrological change.	Channel maintenance, barriers, passage obstruction, gross pollution and specific pollutants.	There will be no instream works and no direct impacts on this species. SuDS features have been included in the design of the scheme to avoid impacts on water quality. There will be no works required in the area of the SAC and no discharges to the SAC. The proposed SuDS design present an improvement of existing drainage conditions directing surface water away from the Little Arrigal River.
Desmoulin's whorl snail ( <i>Vertigo moulinsiana</i> )	Stable wetland water table. Emergent vegetation. Groundwater supply.	Climate Change, Flooding, Urbanisation (Habitat Encroachment, Pesticides, Fertilised, Grazing, Undergrazing, Afforestation, Stock Feeding, Burning, Peat Extraction, Communications Networks, Paths & Tracks, Walking/horse riding & non-motorised vehicles, Water Pollution, Landfill, Drainage, Modifying structures of inland watercourses.	This species does not occur in the zone of influence of the project and will not be affected.
Estuaries	Surface and marine water dependent. Low sensitivity to hydrological changes. Aquaculture, fishing and pollution.	Aquaculture, fishing, dumping of wastes and water pollution.	This habitat does not occur in the zone of influence of the project and will not be affected.
European dry heaths	Dry heaths occur on a range of slopes, in both upland and lowland areas, though most usually on slopes of 5-20° or more, often on upper slopes of hills and mountains, and are usually reported as being concentrated towards the drier south and east of the country.	Overgrazing, Abandonment of pastoral systems, General Forestry management, Forestry planting, Burning, Fertilisation, Agricultural improvement, Sand and gravel extraction	This habitat does not occur in the zone of influence of the project and will not be affected.
Freshwater Pearl Mussel ( <i>Margaritifera margaritifera</i> )	Surface water dependent Highly sensitive to hydrological change Very highly sensitive to pollution.	Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.	There will be no instream works and no direct impacts on this species. SuDS features have been included in the design of the scheme to avoid impacts on water quality. There will be no works required in the area of the SAC and no discharges to the

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests	Potential Impacts
			SAC. The proposed SuDS design present an improvement of existing drainage conditions directing surface water away from the Little Arrigal River.
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	Habitats are formed on gleyed soils, rich in nutrients, sand, silty and sand-silty ones with a high ground water level. Usually these nitrophilous communities are located in the form of the narrow strips near riverbeds and channels and occupy a small area.	Change of hydrological regime, adjustment of river channels, expansion of neophyte species, farming.	This habitat does not occur in the zone of influence of the project and will not be affected. .
Killarney fern ( <i>Trichomanes speciosum</i> )	Sensitive to desiccation and are not adapted to reduce or control water loss.	Human disturbance, Grazing, Woodland clearance, Natural processes such as wind felling of trees, competition from other plants, unusual weather conditions such as a prolonged frost or drought, and rock falls, Modifications to hydrology, Water pollution by nitrogenous waste,	This habitat does not occur in the zone of influence of the project and will not be affected.
Mediterranean salt meadows ( <i>Juncetalia maritimi</i> )	Marine and groundwater dependent. Sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion	Overgrazing; erosion; invasive species, particularly common cordgrass ( <i>Spartina anglica</i> ); infilling and reclamation.	This habitat does not occur in the zone of influence of the project and will not be affected.
Mudflats and sandflats not covered by seawater at low tide	Surface and marine water dependent. Low sensitivity to hydrological changes. Aquaculture, fishing and pollution.	Aquaculture, fishing, dumping of wastes and water pollution.	This habitat does not occur in the zone of influence of the project and will not be affected.
Nore freshwater pearl mussel ( <i>Margaritifera durrovensis</i> )	Surface water dependent Highly sensitive to hydrological change Very highly sensitive to pollution.	Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.	There will be no instream works and no direct impacts on this species. SuDS features have been included in the design of the scheme to avoid impacts on water quality. There will be no works required in the area of the SAC and no discharges to the SAC. The proposed SuDS design present an improvement of existing drainage conditions directing surface water away from the Little Arrigal River.
Old sessile oak woods with Ilex and Blechnum in the British Isles	Changes in management. Changes in nutrient or base status. Introduction of alien species.	The introduction of alien species; sub-optimal grazing patterns; general forestry management; increases in urbanisation and human habitation adjacent to oak	This habitat does not occur in the zone of influence of the project and will not be affected.

Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests	Potential Impacts
		woodlands; and the construction of communication networks through the woodland.	
Otter ( <i>Lutra lutra</i> )	Prey availability. Water Quality. Riparian vegetation for breeding sites. Unhindered passage along waterways.	Decrease in water quality: Use of pesticides; fertilization; vegetation removal; professional fishing (including lobster pots and fyke nets); hunting; poisoning; sand and gravel extraction; mechanical removal of peat; urbanised areas; human habitation; continuous urbanization; drainage; management of aquatic and bank vegetation for drainage purposes; ; and canalization or modifying structures of inland water course.	There will be no instream works and no direct impacts on this species. SuDS features have been included in the design of the scheme to avoid impacts on water quality. There will be no works required in the area of the SAC and no discharges to the SAC. The proposed SuDS design present an improvement of existing drainage conditions directing surface water away from the Little Arrigal River.
* Petrifying springs with tufa formation (Cratoneurion)	Groundwater dependent. Highly sensitive to hydrological changes. Changes in nutrient or base status.	Peat or turf cutting; arterial drainage; local drainage; water abstraction and agricultural reclamation.	This habitat does not occur in the zone of influence of the project and will not be affected.
River Lamprey ( <i>Lampetra fluviatilis</i> )	Surface water dependent Highly sensitive to hydrological change.	Channel maintenance, barriers, passage obstruction, gross pollution and specific pollutants.	There will be no instream works and no direct impacts on this species. SuDS features have been included in the design of the scheme to avoid impacts on water quality. There will be no works required in the area of the SAC and no discharges to the SAC. The proposed SuDS design present an improvement of existing drainage conditions directing surface water away from the Little Arrigal River. .
Salmon ( <i>Salmo salar</i> ) (only in fresh water)	Surface water dependent Highly sensitive to hydrological change	Numerous threats impact upon this species. Some of these include: cultivation, pesticides; fertilization; pollution; water pollution; biocenotic evolution; accumulation of organic material; eutrophication; over-fishing; forest-related pressures; parasites.	There will be no instream works and no direct impacts on this species. There will be no instream works and no direct impacts on this species.
Sea Lamprey ( <i>Petromyzon marinus</i> )	Surface water dependent Highly sensitive to hydrological change.	Obstructions to movement; gross pollution; and specific pollutants.	There will be no instream works and no direct impacts on this species. SuDS features have been included in the design of the scheme to avoid impacts on water quality. There will be no works required in the area of the



Qualifying Interests	Key environmental conditions supporting site integrity	Current Threats to Qualifying Interests	Potential Impacts
			SAC and no discharges to the SAC. The proposed SuDS design present an improvement of existing drainage conditions directing surface water away from the Little Arrigal River.
<i>Salicornia</i> and other annuals colonizing mud and sand	Marine water dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Infilling, reclamation, invasive species.	Invasive Species; erosion and accretion.	This habitat does not occur in the zone of influence of the project and will not be affected.
Twaité shad ( <i>Alosa fallax</i> )	Surface water dependent Sensitive to hydrological change	Threats include: pesticides; fertilization; pollution; water pollution; accumulation of organic material; eutrophication; forest-related pressures.	There will be no instream works and no direct impacts on this species. SuDS features have been included in the design of the scheme to avoid impacts on water quality. There will be no works required in the area of the SAC and no discharges to the SAC. The proposed SuDS design present an improvement of existing drainage conditions directing surface water away from the Little Arrigal River.
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation	Surface and groundwater dependent. Highly sensitive to hydrological changes. Highly sensitive to pollution.	Eutrophication; overgrazing, excessive fertilisation; afforestation; and the introduction of invasive alien species.	There will be no instream works and no direct impacts on this habitat. SuDS features have been included in the design of the scheme to avoid impacts on water quality. There will be no works required in the area of the SAC and no discharges to the SAC. The proposed SuDS design present an improvement of existing drainage conditions directing surface water away from the Little Arrigal River. .
White-clawed Crayfish ( <i>Austropotamobius pallipes</i> )	Surface water dependent. Highly sensitive to hydrological change, Very highly sensitive to pollution.	Introduction of diseases transmitted by introduced American crayfish.	There will be no instream works and no direct impacts on this species. SuDS features have been included in the design of the scheme to avoid impacts on water quality. There will be no works required in the area of the SAC and no discharges to the SAC. The proposed SuDS design present an improvement of existing drainage conditions directing surface water away from the Little Arrigal River.

#### 4.3.2. Ecological Network Supporting Natura 2000 Sites

An analysis of the proposed Natural Heritage Areas and designated Natural Heritage Areas in terms of their role in supporting the species using Natura 2000 sites was undertaken. It was assumed that these supporting roles mainly related to mobile fauna such as mammals and birds which may use pNHAs and NHAs as “stepping stones” between Natura 2000 sites.

Article 10 of the Habitats Directive and the Habitats Regulations 2011 place a high degree of importance on such non-Natura 2000 areas as features that connect the Natura 2000 network. Features such as ponds, woodlands and important hedgerows were taken into account during the rest of the AA process.

There are a number of proposed Natural Heritage Areas designated downstream along the Rivers Nore and Barrow, however, for the purposes of this screening report these areas are dealt with under their higher conservation status designations as European sites.

## 5. Identification of Potential Impacts & Assessment of Significance

The proposed Project is not directly connected with or necessary to the management of the sites considered in the assessment and therefore potential impacts must be identified and considered.

### 5.1. Potential Impacts

This section uses the information collected on the sensitivity of each European site considered and describes any likely significant effects of implementation of the Project. This assumes the absence of any controls, conditions or assumption mitigation measures.

The likely significant effects of the proposed Project are presented in Table 5 (Section 5.3), both in isolation and potentially in combination with other plans and projects.

It has been noted that the proposed Project intersects the boundary of the River Barrow and River Nore SAC in the vicinity of where the Project crosses the Little Arrigal River. It has also been noted that the proposed Project in this area is located within the road take of the R713. No habitats associated with the River Barrow and River Nore SAC are located within the proposed Project boundary. It is therefore concluded that there will be no direct impacts on any European sites and there will be no habitat loss or fragmentation as a result of the proposed Project.

Having considered direct impacts and ruling them out, indirect impacts are then considered.

A worst-case scenario may be considered whereby the Project would be the source of a significant detrimental change in water quality in the River Barrow and River Nore SAC either alone or in combination with other

projects or plans as a result of indirect pollution. The effect would have to be considered in terms of changes in water quality which would affect the species and/or habitats or food sources for which the European site's species are designated. However, this is unlikely.

Although the proposed Project is located in close proximity to the Little Arrigal River, it has been noted that there are to be no discharges from the proposed Project site to the Little Arrigal River during the construction works and that all surface water is to be directed to an improved SuDS system.

Having regard for the nature and scale of the proposed works, and the fact that any surface water will be directed away from the river, effects on the European sites considered are unlikely and significant effects have been

It can be excluded, on the basis of objective information, and in view of best scientific knowledge, that the proposed Project, either individually or in combination with other plans or projects, will have a significant effect on the relevant European sites.

## 5.2. Assessment of Potential In-Combination Effects

Cumulative impacts or effects are changes in the environment that result from numerous human-induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

As part of the Screening for an Appropriate Assessment, in addition to the proposed Project, other relevant plans and projects in the area must also be considered at this stage. This step aims to identify at this early stage any possible significant in-combination effects of the proposed development with other such plans and projects on European sites.

A review of mapping made available through the planning section of the Kilkenny County Council website indicates that, within the last three years, there have been no applications for planning granted permission in the vicinity of the proposed Project.

The Kilkenny County Development Plan in complying with the requirements of the Habitats Directive requires that all Projects and Plans that could affect the Natura 2000 sites in the same zone of impact of the Project site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with Plans or Projects for the development area and surrounding townlands in which the development site is located, would be avoided.

Any new applications for the Project area will be assessed on a case by case basis by Kilkenny County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

### 5.3 Summary of Potential Impacts

*Table 4. Outlining the potential impacts in the absence of mitigation of the Project.*

Site	Potential Direct Impacts e.g. Habitat Loss	Potential Indirect Impacts e.g. alteration to hydrological regime	Surface or Groundwater Contamination	Disturbance to Protected Species (Habitats Directive Annex II & IV)	Stage 2 AA Required
River Barrow and River Nore SAC (002062)	No	No	No	No	No

## 6. Conclusion

It has been noted that the proposed Project intersects the boundary of the River Barrow and River Nore SAC in the vicinity of where the Project crosses the Little Arrigal River. It has also been noted that the proposed Project in this area is located within the road take of the R713. No habitats associated with the River Barrow and River Nore SAC are located within the proposed Project boundary. It is therefore concluded that there will be no direct impacts on any European sites and there will be no habitat loss or fragmentation as a result of the proposed Project.

Having considered direct impacts and ruling them out, indirect impacts are then considered.

A worst-case scenario may be considered whereby the Project would be the source of a significant detrimental change in water quality in the River Barrow and River Nore SAC either alone or in combination with other projects or plans as a result of indirect pollution. The effect would have to be considered in terms of changes in water quality which would affect the species and/or habitats or food sources for which the European site's species are designated. However, this is unlikely.

Although the proposed Project is located in close proximity to the Little Arrigal River, it has been noted that there are to be no discharges from the proposed Project site to the Little Arrigal River during the construction works and that all surface water is to be directed to an improved SuDS system.

Having regard for the nature and scale of the proposed works, and the fact that any surface water will be directed away from the river, effects on the European sites considered are unlikely and significant effects have been ruled out.

It has been objectively concluded by Moore Group Environmental Services that:

1. The proposed Project is not directly connected with, or necessary to the conservation management of the European sites considered in this assessment.
2. The proposed Project is unlikely to indirectly significantly affect the Qualifying interests or Conservation Objectives of the European sites considered in this assessment.
3. The proposed Project, alone or in combination with other projects, is not likely to have significant effects on the European sites considered in this assessment in view of their conservation objectives.
4. It is possible to conclude that there would be no significant effects, no potentially significant effects and no uncertain effects if the proposed Project were to proceed.

It can be excluded, on the basis of objective information, and in view of best scientific knowledge, that the proposed Project, either individually or in combination with other plans or projects, will have a significant effect on the relevant European sites.

It is the view of Moore Group Environmental Services that it is not necessary to undertake any further stage of the Appropriate Assessment process.

A finding of no significant effects report is presented in Appendix A in accordance with the EU Commission's methodological guidance (European Commission, 2001).

## 7. References

Department of the Environment, Heritage and Local Government (2010) Guidance on Appropriate Assessment of Plans and Projects in Ireland (as amended February 2010).

European Commission (2000) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

European Commission Environment DG (2002) 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, Brussels.

European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC: Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interests, compensatory measures, overall coherence and opinion of the Commission. European Commission, Brussels.

European Commission (2018) Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.

NPWS (2011) Conservation Objectives: River Barrow and River Nore SAC 002162. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht

NPWS (2019) The Status of EU Protected Habitats and Species in Ireland. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin.

NPWS (2019) National Parks and Wildlife Service Metadata available online at <https://www.npws.ie/maps-and-data>

# Appendix A

## FINDING OF NO SIGNIFICANT EFFECTS REPORT

### Finding no significant effects report matrix

#### Name of project or plan

Proposed upgrading of footpaths along the R713 between Knocktopher and Ballyhale, County Kilkenny.

#### Name and location of the Natura 2000 site(s)

The Project is to take place along the margins of the R713 between Knocktopher and Ballyhale. The region in which the works are to take place is predominantly rural, however there are single dwelling houses, light industrial areas and Scoil Aireagail also located along the road's margins. The proposed Project crosses Little Arrigal River which is designated as part of the River Barrow and River Nore SAC (Site Code 002162). Downstream of the proposed Project, the Little Arrigal River enters the River Nore and at this point enters the River Nore SPA (Site Code 004233) approximately 6.2 river kilometres downstream of the proposed Project.

It is noted that the Lower River Suir SAC (Site Code 002137) is located at its closest approximately 12.98 km to the southwest, but that there is no connectivity to this European site at its closest point. The only potential area of connectivity between the proposed Project and the Lower River Suir SAC is at the mouth of the Barrow River, where the Rivers Suir and Barrow mix, over 25 km to the south east of the proposed Project.

There are no predicted effects on the River Nore SPA and the Lower River Suir SAC given:

- the nature and scale of the proposed Project, which involves the construction of tarmacadam footpaths with precast or slip formed in situ concrete kerbings and a retaining wall;
- that the proposed works are to take place predominantly within the existing road take of the R713; and
- the distance between the proposed Project and these European Sites.

In light of the above points potential significant effects on the River Nore SPA and the Lower River Suir SAC are screened out at this preliminary stage.

The proposed Project intersects the boundary of the River Barrow and River Nore SAC as published by the NPWS in the vicinity of where the Project crosses the Little Arrigal River.

#### Description of the project or plan

This report presents a screening assessment for a proposed Project consisting of the upgrading of footpaths along the R713 between Knocktopher and Ballyhale, County Kilkenny.

The villages of Knocktopher and Ballyhale are linked by the R713 Regional Road. However, there is an absence of a continuous pedestrian linkage between the two. Presently there are footpaths extending south from Knocktopher and north from Ballyhale. These footpaths were constructed over a number of phases with the most recent in 2010. There is a gap of approximately 800m between the extremities of both these footpaths.

Completing this section of footpath has been a long term aspiration of the local community in both Ballyhale and Knocktopher and the elected members of County Kilkenny. In addition it will provide for a safe pedestrian connection between both villages.

The proposed Project involves the construction of new tarmacadam footpaths to link the existing footpaths as outlined above. Kerbing is to be constructed using either precast or slip formed *in situ* concrete.

The proposed Project crosses Little Arrigal River. On approach and departure to the existing river bridge the works will be kept within/between the existing bridge parapets.

The project includes upgraded site drainage and the breakdown of the proposed surface water runoff and outfall is as follows;

Chainage 0-523 (61%) of runoff will be collected by relocated existing/new gullies/new combined drain kerbs connected to the existing combined sewer system which is connected to the pumping station that pumps the combined sewage to the Ballyhale Wastewater Treatment Plant.

Chainage 523-595 (9%) of runoff is retained existing over the edge drainage to adjacent fields

Chainage 595-820 (26%) of runoff will be collected by new gullies connected to a new infiltration trench soakaway at the back of the proposed footway.

Chainage 820-858 (4%) of runoff is retained existing kerb and gully drainage system.

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**Is the project or plan directly connected with or necessary to the management of the site(s)**

No

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**Are there other projects or plans that together with the projects or plan being assessed could affect the site**

A review of mapping made available through the planning section of the Kilkenny County Council website indicates that, within the last three years, there have been no applications for planning granted permission in the vicinity of the proposed Project.

The Kilkenny County Development Plan in complying with the requirements of the Habitats Directive requires that all Projects and Plans that could affect the Natura 2000 sites in the same zone of impact of the Project site would be initially screened for Appropriate Assessment and if requiring Stage 2 AA, that appropriate employable mitigation measures would be put in place to avoid, reduce or ameliorate negative impacts. In this way any, in-combination impacts with Plans or Projects for the development area and surrounding townlands in which the development site is located, would be avoided.

Any new applications for the Project area will be assessed on a case by case basis by Kilkenny County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

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## ***THE ASSESSMENT OF SIGNIFICANCE OF EFFECTS***

**Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.**

It has been noted that the proposed Project intersects the boundary of the River Barrow and River Nore SAC in the vicinity of where the Project crosses the Little Arrigal River. It has also been noted that the proposed Project in this area is located within the road take of the R713. No habitats associated with the River Barrow and River Nore SAC are located within the proposed Project boundary. It is therefore concluded that there will be no direct impacts on any European sites and there will be no habitat loss or fragmentation as a result of the proposed Project.

Having considered direct impacts and ruling them out, indirect impacts are then considered.

A worst-case scenario may be considered whereby the Project would be the source of a significant detrimental change in water quality in the River Barrow and River Nore SAC either alone or in combination with other projects or plans as a result of indirect pollution. The effect would have to be considered in terms of changes in water quality which would affect the species and/or habitats or food sources for which the European site's species are designated. However, this is unlikely.

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**Explain why these effects are not considered significant.**

Although the proposed Project is located in close proximity to the Little Arrigal River, it has been noted that there are to be no discharges from the proposed Project site to the Little Arrigal River during the construction works and that all surface water is to be directed to an improved SuDS system.

Having regard for the nature and scale of the proposed works, and the fact that any surface water will be directed away from the river, effects on the European sites considered are unlikely and significant effects have been ruled out.

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**List of agencies consulted: provide contact name and telephone or e-mail address**

The requirement for Appropriate Assessment Screening was determined by Kilkenny County Council.

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**Response to consultation**

N/A.



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## ***DATA COLLECTED TO CARRY OUT THE ASSESSMENT***

### **Who carried out the assessment**

Moore Group Environmental Services.

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### **Sources of data**

NPWS database of designated sites at [www.npws.ie](http://www.npws.ie)

National Biodiversity Data Centre database <http://maps.biodiversityireland.ie>

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### **Level of assessment completed**

Desktop Assessment.

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### **Where can the full results of the assessment be accessed and viewed**

Kilkenny County Council Planning Section.

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## ***OVERALL CONCLUSIONS***

There It has been noted that the proposed Project intersects the boundary of the River Barrow and River Nore SAC in the vicinity of where the Project crosses the Little Arrigal River. It has also been noted that the proposed Project in this area is located within the road take of the R713. No habitats associated with the River Barrow and River Nore SAC are located within the proposed Project boundary. It is therefore concluded that there will be no direct impacts on any European sites and there will be no habitat loss or fragmentation as a result of the proposed Project.

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Although the proposed Project is located in close proximity to the Little Arrigal River, it has been noted that there are to be no discharges from the proposed Project site to the Little Arrigal River during the construction works and that all surface water is to be directed to an improved SuDS system.

Having regard for the nature and scale of the proposed works, and the fact that any surface water will be directed away from the river, effects on the Europeans sites considered are unlikely and significant effects have been ruled out.

It has been objectively concluded by Moore Group Environmental Services that:

1. The proposed Project is not directly connected with, or necessary to the conservation management of the European sites considered in this assessment.
2. The proposed Project is unlikely to indirectly significantly affect the Qualifying interests or Conservation Objectives of the European sites considered in this assessment.
3. The proposed Project, alone or in combination with other projects, is not likely to have significant effects on the European sites considered in this assessment in view of their conservation objectives.
4. It is possible to conclude that there would be no significant effects, no potentially significant effects and no uncertain effects if the proposed Project were to proceed.

It can be excluded, on the basis of objective information, and in view of best scientific knowledge, that the proposed Project, either individually or in combination with other plans or projects, will have a significant effect on the relevant European sites.

It is the view of Moore Group Environmental Services that it is not necessary to undertake any further stage of the Appropriate Assessment process.