NATURA IMPACT STATEMENT IN SUPPORT OF THE APPROPRIATE ASSESSMENT OF THE DRAFT PUBLIC REALM PLAN FOR SLANE, CO MEATH

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fers

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EXECUTIVE SUMMARY

The ambition of the Slane Public Realm Plan is "…to offer solutions to reorganise the street layout across the village centre and further to the south along Dublin Road to create a functional yet pleasant environment to move around, shop and interact. The proposal includes the redesign of the junction on the square, the creation of a new village square, the general reorganisation of the two main roads crossing the village and finally the creation of more pedestrian friendly and improved .recreational connections along the southern approach of the village…".

The objectives developed were:

1) *Improve continuity and quality of footpaths to increase pedestrian comfort;*
2) *Create safe and regular pedestrian crossing points along the N-S and E-W roads;*
3) *Create a village square as a new focus to the village centre;*
4) *Reduce carriageway width where suitable and improve its definition;*
5) *Redesign the Square and the junction to improve its general setting and associated movements;*
6) *Preserve and enhance the architectural value in compliance with ACA by improving the public realm quality;*
7) *Rationalise and unify street furniture including lighting and remove street clutter such as traffic gantries;*
8) *Enhance the general character of the area by implementing a greening strategy in appropriate locations;*
9) *Promote new pedestrian and cycling recreational greenways to the main cultural and heritage attractions in the area; and*
10) *Enhance the character of the village by undergrounding all services in the ACA.*

The village of Slane is situated in an ecologically sensitive location, with the River Boyne, the primary component of both the River Boyne and River Boyne SAC and the River Boyne and River Blackwater SPA passing through (and indeed making up a significant proportion of) the area of the Public Realm Plan. As such, Appropriate Assessment screening of any plan/project in this sensitive location is required. In June of 2021, FERS Ltd was commissioned by Meath Co Council to undertake an Appropriate Assessment screening of the draft Slane Public Realm Plan.

Screening having identified significant potential impacts, Phase II Appropriate Assessment was undertaken, and a Natura Impact Statement prepared. Following an examination, analysis, and evaluation of the relevant information, and applying the precautionary principle, it is considered that there would be no adverse impact of the proposed Public Realm Plan (assuming the implementation of mitigation measures) on the Qualifying Interests, nor the attainment of specific conservation objectives, either alone or in-combination with other plans or projects on the Natura 2000 sites described herein.

In order for Appropriate Assessment (AA) to comply with the criteria set out in the Habitats Directive and Part XAB of the Planning and Development Act 2000, an AA undertaken by the Competent Authority must include an examination, analysis, evaluation, findings, conclusions, and a final determination.

1 Introduction

1.1 FERS Ltd. Company background

Forest, Environmental Research and Services have been conducting ecological surveys and research since the company's formation in 2005 by Dr Patrick Moran and Dr Kevin Black. Dr Moran, the principal ecologist with FERS, holds a 1st class honours degree in Environmental Biology (UCD), a Ph.D. in Ecology (UCD), a Diploma in EIA and SEA management (UCD) a Diploma in Environmental and Planning Law (King's Inn) and a M.Sc. in Geographical Information Systems and Remote Sensing (University of Ulster, Coleraine). Patrick has in excess of 20 years of experience in carrying out ecological surveys on both an academic and a professional basis. Dr Emma Reeves, senior ecologist with FERS holds a 1st class honours degree in Botany, and a Ph.D. in Botany. Emma has in excess of 10 years of experience in undertaking ecological surveys on an academic and professional basis. Ciarán Byrne, a senior ecologist with FERS holds a 1st class honours degree in Environmental Management (DIT) and a M.Sc. in Applied Science/Ecological Assessment (UCC). Ciarán has in excess of 5 years in undertaking ecological surveys on both an academic and a professional basis.

FERS client list includes National Parks and Wildlife Service, An Bord Pleanála, various County Councils, the Heritage Council, Teagasc, University College Dublin, the Environmental Protection Agency, Inland Waterways Association of Ireland, the Department of Agriculture, the Office of Public Works and Coillte in addition to numerous private individuals and companies. FERS Ltd. has prepared in excess of 300 Appropriate Assessment Screenings/Natura Impact Statements for a wide range of plans and projects.

1.2 The aim of this report

This report has been prepared in compliance with Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DoEHLG 2009, February 2010) and the European Communities (Birds and Natural Habitats) Regulations 2011 (DoEHLG 2011) in support of the Appropriate Assessment of the draft Public Realm Plan for Slane, Co Meath. This report provides the information required in order to establish whether or not the proposed development is likely to have a significant ecological impact on any Natura 2000 sites, in the context of their conservation objectives and specifically on the habitats and species for which the sites have been designated.

This report has similarly been prepared with regard to relevant rulings by the Court of Justice of the European Union (CJEU), the High Court, and the Supreme Court including but not limited to:

- [2013] C-258/11 Peter Sweetman and Others v An Bord Pleanála. The CJEU ruled that Article 6 (3) of Council Directive 92/43 / EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that a project not directly linked to it is not immediately necessary for the management of a site to prejudice the integrity of that site if it is likely to prevent the preservation of the constituent characteristics of the site concerned in relation to the presence of a natural priority habitat whose purpose is to maintain gave the reason for registering that site in the list of sites of Community importance within the meaning of that directive. For this verification, the precautionary principle must be applied;
- [2018] C – 164/17 Edel Grace and Peter Sweetman v An Bord Pleanála. The CJEU ruled that Article 6 of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that, where it is intended to carry out a project on a site designated for the protection and conservation of certain species, of which the area suitable for providing for the needs of a protected species fluctuates over time, and the temporary or permanent effect of that project will be that some parts of the site will no longer be able to provide a suitable habitat for the species in question, the fact that the project includes measures to ensure that, after an appropriate assessment of the implications of the project has been carried out and throughout the lifetime of the project, the part of the site that is in fact likely to provide a suitable habitat will not be reduced and indeed may be enhanced may not be taken into account for the purpose of the assessment that must be carried out in accordance with Article 6(3) of the directive to ensure that the project in question will not adversely affect the integrity of the site concerned; that fact falls to be considered, if need be, under Article 6(4) of the directive;
- [2018] C-323/17 People Over Wind and Sweetman v Coillte Teoranta - The (CJEU) ruled that Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site;

- [2018] C-461/17 Holohan v An Bord Pleanála – The CJEU ruled that:

    1. Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that an 'appropriate assessment' must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site.

    2. Article 6(3) of Directive 92/43 must be interpreted as meaning that the competent authority is permitted to grant to a plan or project consent which leaves the developer free to determine subsequently certain parameters relating to the construction phase, such as the location of the construction compound and haul routes, only if that authority is certain that the development consent granted establishes conditions that are strict enough to guarantee that those parameters will not adversely affect the integrity of the site.

    3. Article 6(3) of Directive 92/43 must be interpreted as meaning that, where the competent authority rejects the findings in a scientific expert opinion recommending that additional information be obtained, the 'appropriate assessment' must include an explicit and detailed statement of reasons capable of dispelling all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned.

    4. Article 5(1) and (3) of, and Annex IV to, Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment, must be interpreted as meaning that the developer is obliged to supply information that expressly addresses the significant effects of its project on all species identified in the statement that is supplied pursuant to those provisions.

    5. Article 5(3)(d) of Directive 2011/92 must be interpreted as meaning that the developer must supply information in relation to the environmental impact of both the chosen option and of all the main alternatives studied by the developer, together with the reasons for his choice, taking into account at least the environmental effects, even if such an alternative was rejected at an early stage.

- [2018] IESC 31 Connelly v An Bord Pleanála – Appropriate Assessment must contain complete, precise, and definitive findings;
- [2019] IEHC 84 Kelly v An Bord Pleanála - The Irish High Court concluded that SUDS form part of the development and are not mitigation measures which a competent authority cannot consider at the screening for AA stage.

Furthermore, there have been a number of recent Judicial Reviews that are pertinent as regards this report (e.g. [2020] No. 238 J.R.).

1.3 An outline of the Appropriate Assessment process

The "Habitats Directive" (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna) is the main legislative instrument for the protection and conservation of biodiversity within the European Union and lists certain habitats and species that must be protected within wildlife conservation areas, considered to be important at a European as well as at a national level. A "Special Conservation Area" or SAC is a designation under the Habitats Directive.

The "Birds Directive" (Council Directive 2009/147/EC on the Conservation of Wild Birds) provides for a network of sites in all member states to protect birds at their breeding, feeding, roosting, and wintering areas. This directive identifies species that are rare, in danger of extinction or vulnerable to changes in habitat and which need protection. A "Special Protection Area" or SPA, is a designation under The Birds Directive.

Special Areas of Conservation and Special Protection Areas form a pan-European network of protected sites known as Natura 2000 sites.

The Habitats Directive sets out the protocol for the protection and management of SACs. The Directive sets out key elements of the system of protection including the requirement for Appropriate Assessment of plans and projects. The requirements for an Appropriate Assessment are set out in the EU Habitats Directive. Articles 6(3) and 6(4) of the Directive respectively, state:

> "*…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….*"
>
> "*…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 over-riding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted….*"

1.4 Methodology for Appropriate Assessment

A number of guidance documents on the appropriate assessment process have been consulted during the preparation of this NIS. These are:

- Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (2000);
- 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 (Nov. 2001 – published 2002);
- EU Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC (2007);
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DoEHLG 2009, Revised February 2010);
- European Communities (Birds and Natural Habitats) Regulations 2011 (DoEHLG 2011); and
- Commission notice "Managing Natura 2000 sites The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Brussels, 21.11.2018 C (2018) 7621 final.

The assessment requirements of Article 6 are generally dealt with in a stage-by-stage approach. The stages as outlined in "Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities" are:

1.4.1 Stage (1) Appropriate Assessment (Habitats Directive) Screening

This initial process identifies the likely impacts of a proposed project or plan upon a Natura 2000 site, either alone, or in combination with other projects or plans and considers whether these impacts are likely to be significant. A recent judgement in the ECJ (C323/17) that has large implications for appropriate assessment screening in Ireland has found that:

"…Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site…"

1.4.2 Stage (2) Preparation of Natura Impact Statement

The consideration of the impact of the project or plan on the integrity of the Natura 2000 Site, either alone or in combination with other projects or plans to the sites structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts.

1.4.3 Stage (3) Assessment of Alternative Solutions

The process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site.

1.4.4 Stage (4) Assessment where Adverse Impacts Remain

An assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed.

At each stage, there is a determination as to whether a further stage in the Appropriate Assessment process is required. If, for example, the conclusions of the Screening stage indicate that there will be no significant impacts on the Natura 2000 site, there is no requirement to proceed further. Appropriate Assessment 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 a necessary precursor for Stage 4. This report is comprised of the ecological impact assessment and testing required under the provisions of Article 6(3) by means of the first stage of Appropriate Assessment, the screening process (as set out in the EU Guidance documents).

EU guidance states:

"…This stage examines the likely effects of a project or plan, either alone or in combination with other projects or plans, upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant...".

This report has been undertaken in accordance with the European Commission's Guidance on Appropriate Assessment (European Commission, 2001) which comprises the following:

1. Description of the Plan.
2. Identification of Natura 2000 sites potentially affected by the Plan.
3. Identification and description of individual and cumulative impacts likely to result from the Plan.
4. Assessment of the significance of the impacts identified on the conservation objectives of the site(s).

5. Exclusion of sites where it can be objectively concluded that there will be no significant impacts on conservation objectives.

1.5 Consultations

1.5.1 NPWS

The primary body consulted with regard to matters involving Natura 2000 sites is the National Parks and Wildlife Service (NPWS). The role of the NPWS is:

- To secure the conservation of a representative range of ecosystems and maintain and enhance populations of flora and fauna in Ireland.
- To implement the EU Habitats and Birds Directives.
- To designate and advise on the protection of Natural Heritage Areas (NHA) having particular regard to the need to consult with interested parties.
- To make the necessary arrangements for the implementation of National and EU legislation and policies and for the ratification and implementation of the range of international Conventions and Agreements relating to the natural heritage.
- To manage, maintain and develop State-owned National Parks and Nature Reserves.

Information pertaining to Natura 2000 sites within the Republic of Ireland is typically held by NPWS and is publicly accessible through their on-line database at www.npws.ie . Consultations carried out involved querying the NPWS database for information pertaining to Natura 2000 sites within 15 km of the proposed development.

1.5.2 NBDC Database

The National Biodiversity Database Centre database was queried for records of species of conservation concern present within the immediate vicinity of the proposed development.

1.5.3 Other relevant data-sources

Other relevant data-sources were queried as necessary

2 Screening

Following the guidelines set out by NPWS (2009), Appropriate Assessment Screening (Phase I Appropriate Assessment) is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3) of the EU Habitats Directive. According to the guidelines as laid by NPWS (2009), Appropriate Assessment Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3):

(1) Is the plan or project directly connected to or necessary for the management of the site?

(2) Is the plan or project, alone or in combination with other such plans or projects likely to have significant negative effects on a Natura 2000 site(s) in view of the conservation objectives of that site(s)?

The proposed Public Realm Plan (PRP) does not comply with the first screening test (i.e., the proposed development is not directly connected to, or necessary for the management of any Natura 2000 site). The screening exercise will therefore inform the Appropriate Assessment process in determining whether the proposed PRP, alone or in combination with other plans and projects, has any potential to have significant effects on the Natura 2000 sites within the study area. If the effects are deemed to be significant, potentially significant, or uncertain, or it the screening process becomes overly complicated, then applying the Precautionary Principle and in accordance with Article 6(3) of the Habitats Directive, a Stage 2 Appropriate Assessment is required stage, i.e., "*The consideration of the impact of the project or plan on the integrity of the Natura 2000 Site, either alone or in combination with other projects or plans to the sites structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts.*"

2.1 Description of proposed development

The Slane Public Realm Plan sets out the future approach to the streets and spaces of the town. The ambition of the public realm plan is :

"…to offer solutions to reorganise the street layout across the village centre and further to the south along Dublin Road to create a functional yet pleasant environment to move around, shop and interact. The proposal includes the redesign of the junction on the square, the creation of a new village square, the general reorganisation of the two main roads crossing the village and finally the creation of more pedestrian friendly and improved .recreational connections along the southern approach of the village…".

The extent of the Slane Public Realm Plan (PRP) is indicated in Figure 1, Figure 2, Figure 3 and Figure 4. A map indicating the location of the PRP relative to surrounding habitats is presented in Figure 5. An illustration of the overall Aspiration for the area is presented in Figure 6. An illustration of the overall Vision for the Public Realm Plan area is illustrated in Figure 7. Excerpts from the planned layouts for the Village Centre and Southern approach are illustrated in Figure 8 and Figure 9 respectively.

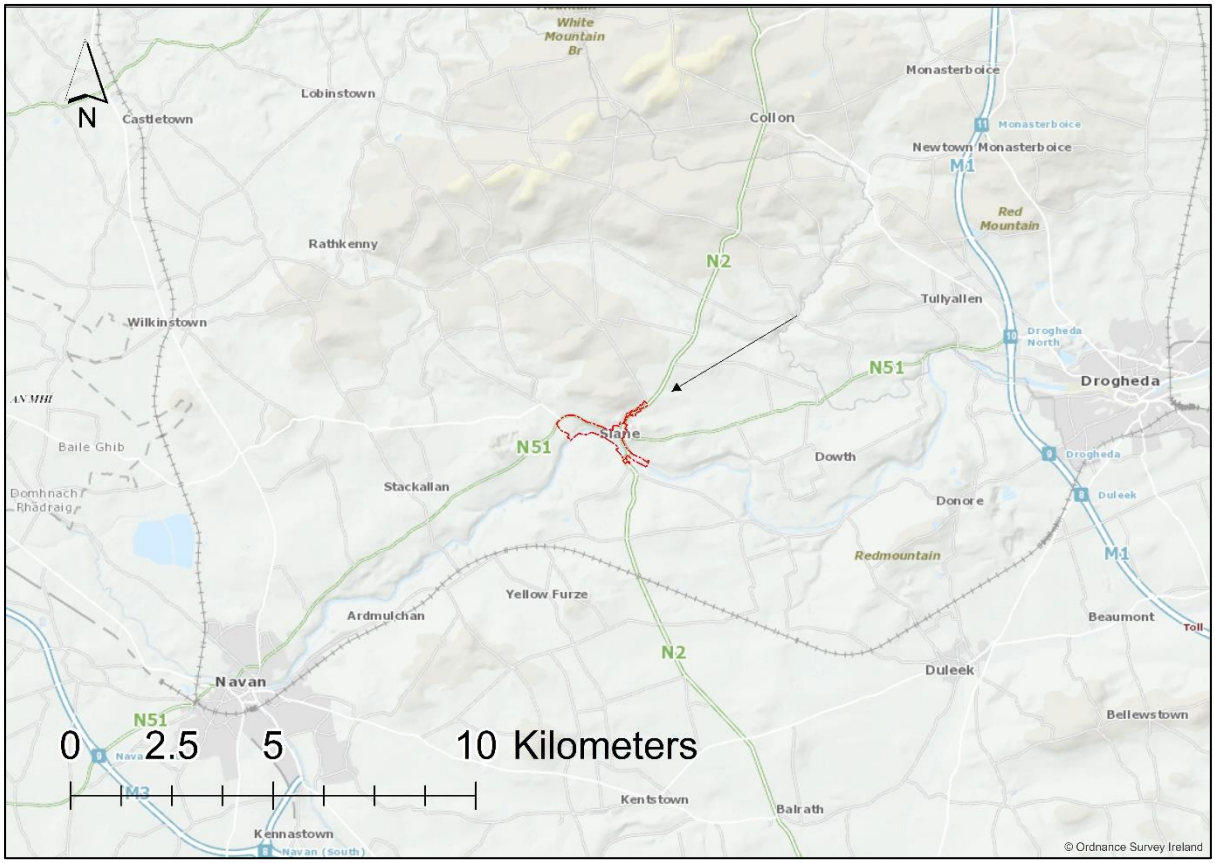

Figure 1: Location of Slane Public Realm Plan area (1:100,000)

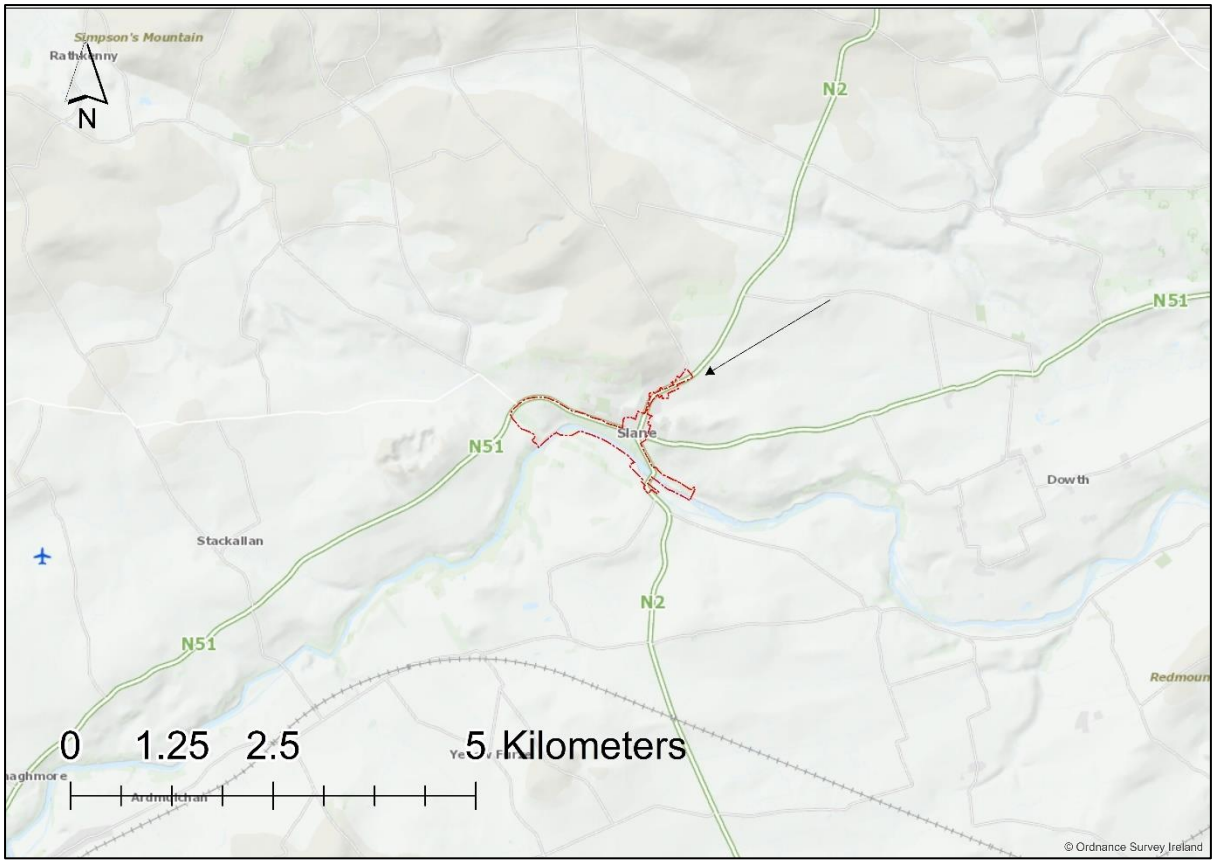

Figure 2: Location of Slane Public Realm Plan area (1:50,000)

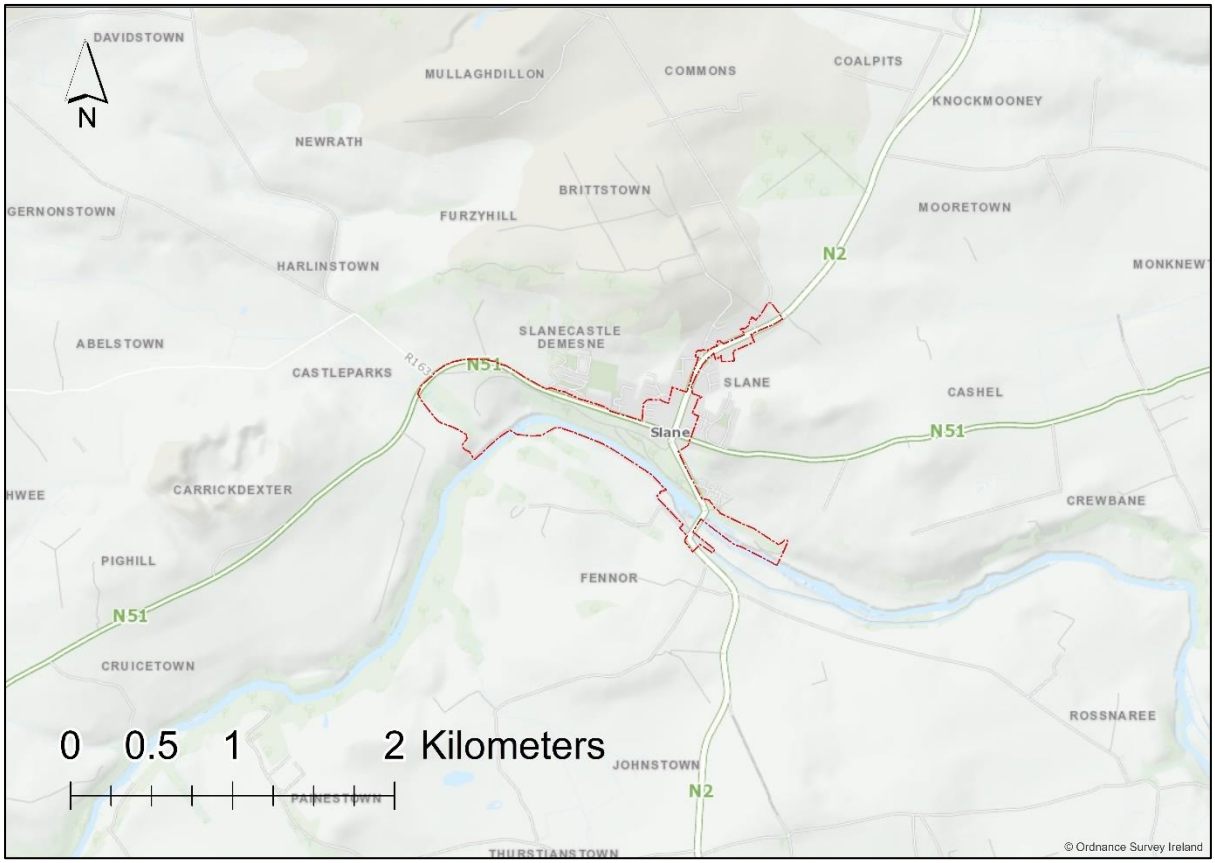

Figure 3: Location of Slane Public Realm Plan area (1:25,000)

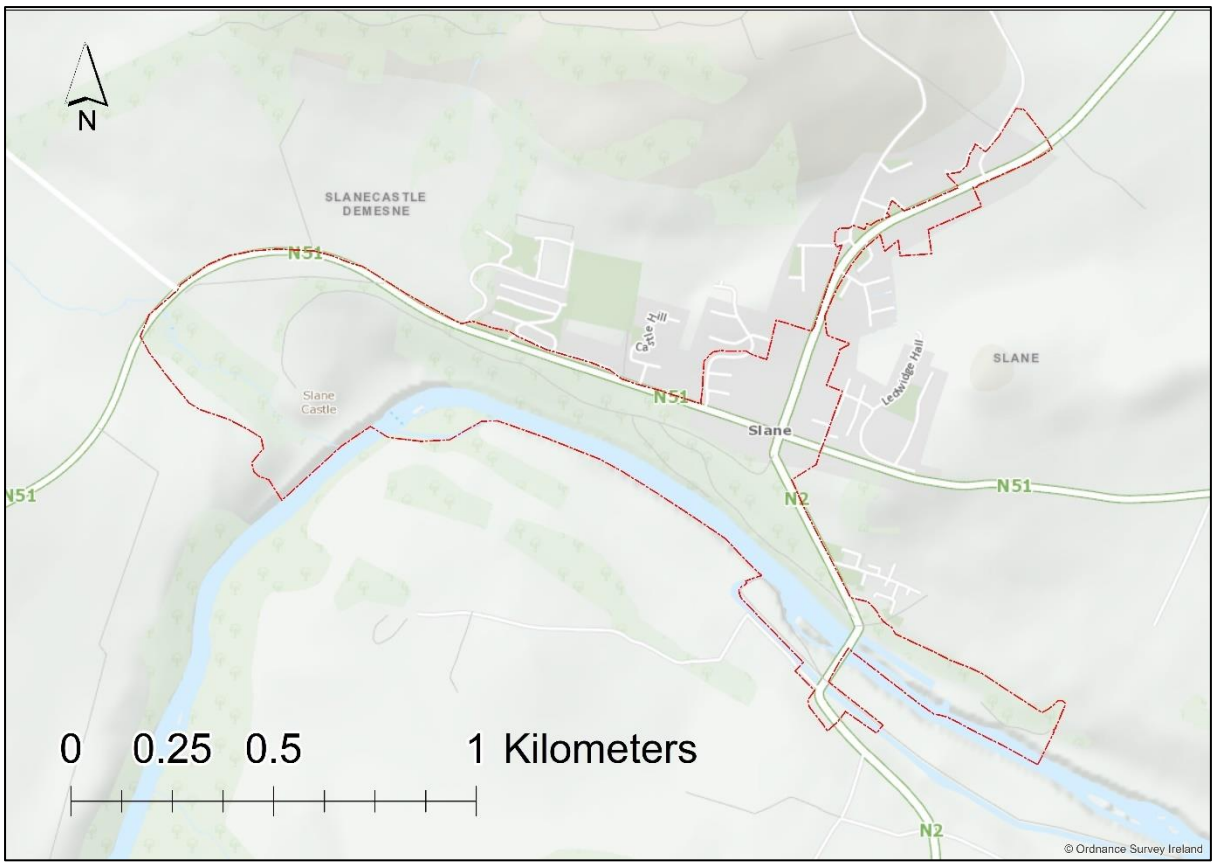

Figure 4: Location of Slane Public Realm Plan area (1:10,000)

Figure 5: Location of Slane Public Realm Plan area relative to *environs* (1:10,000)

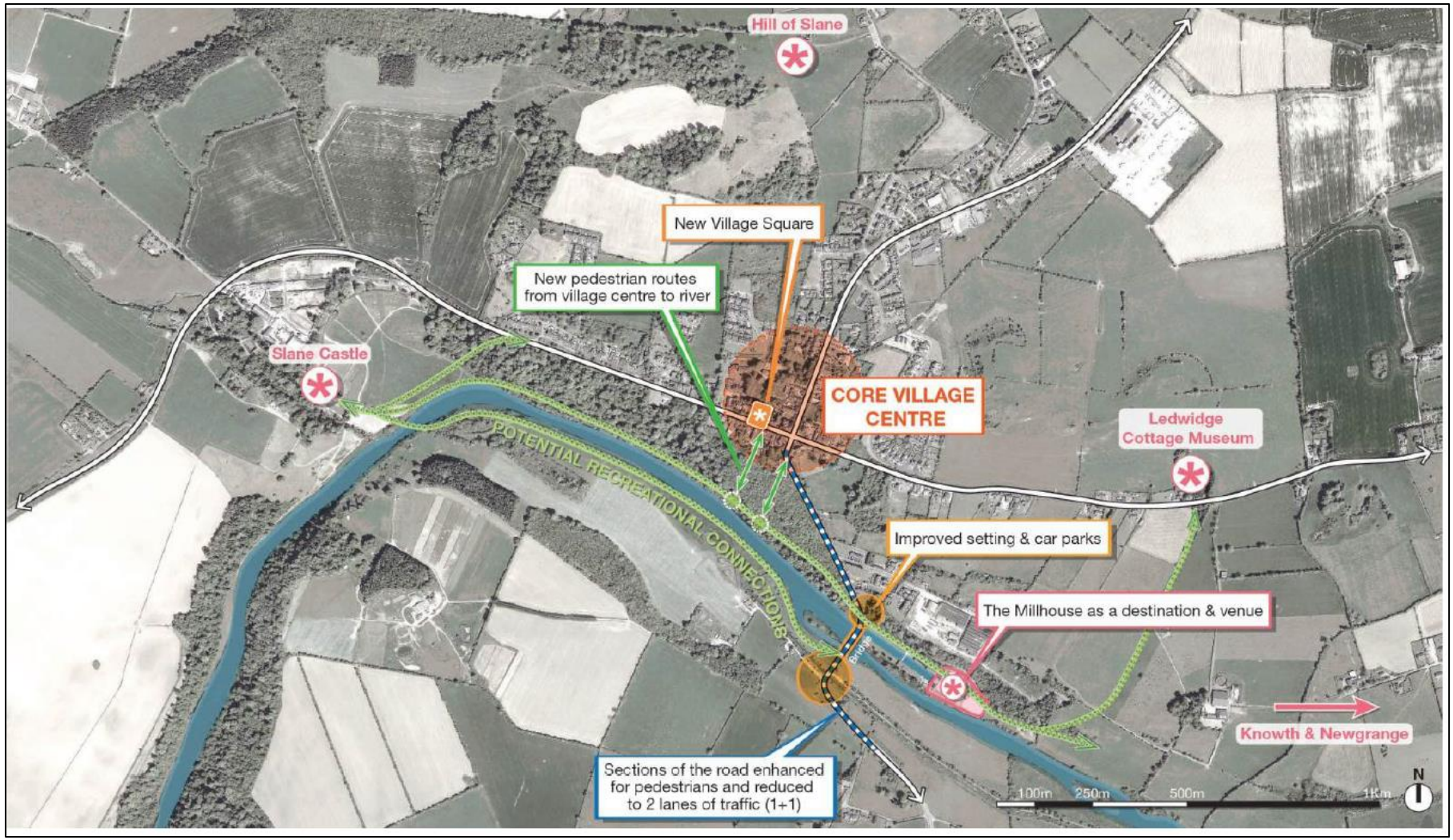

Figure 6: Overall aspirations of Public Realm Plan

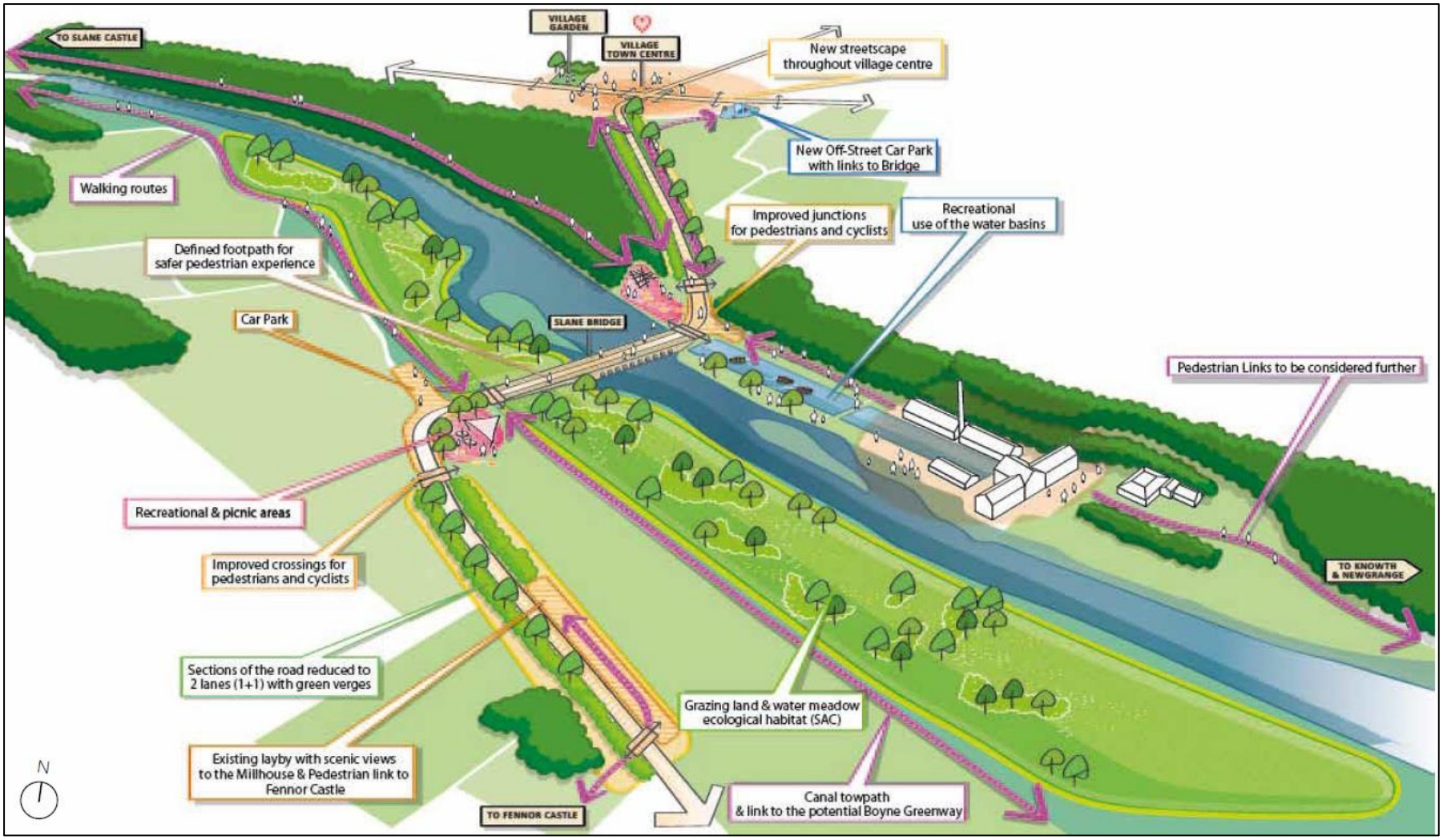

Figure 7: Overall vision for area of Public Realm Plan

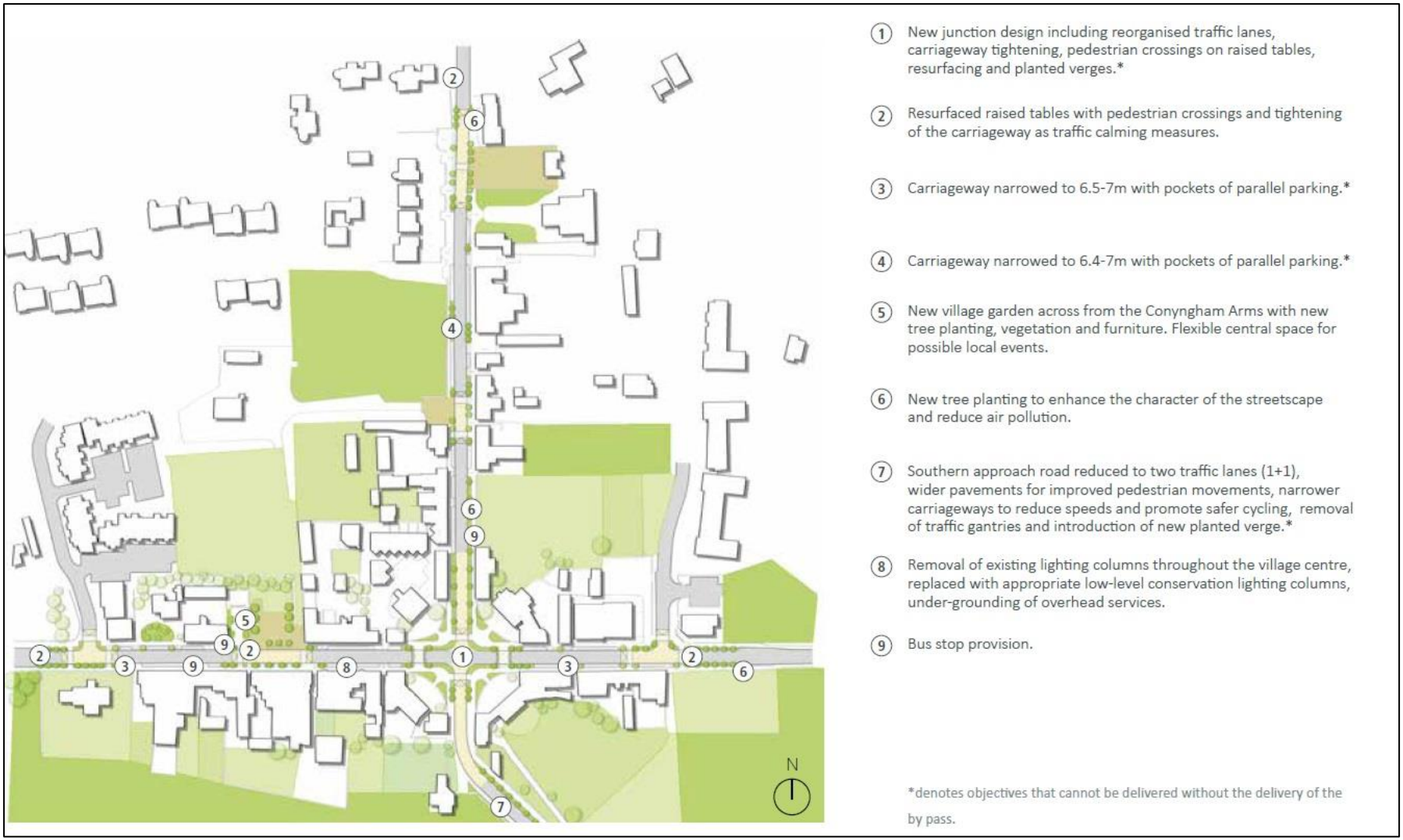

Figure 8: Proposed layout for Village Centre

1. Reorganised carriageway along N2 from the Square to Slane Bridge, including*:
   - Carriageway width reduced to 6.4m with two lanes of traffic (1+1).
   - Wide footpath on northern and sides to improve pedestrian movements and encourage walking.
   - Planted verges with low vegetation on both sides to create a pedestrian friendly environment and reduce air pollution.
   - New planting on northern side to enhance the character of the approach to the village.
   - Removal of traffic gantries.
   - Enhanced public lighting.
2. Pedestrian crossings to improve linkages between the village and amenity sites including the River Boyne. Indicative locations shown.
3. Defined pocket space at the entrance of the Millhouse.
4. Resurfaced Slane Bridge and replaced lighting columns, defined footpaths and crossing points.
5. Existing anglers car parking resurfaced and retained.
6. Improved access and signage to towpath recreational link.
7. Picnic and Recreational area.

*denotes objectives that cannot be delivered without the delivery of the by pass.

Figure 9: Proposed layout for Southern approach

2.2 Description of existing conditions on site

A site visit was undertaken on the 9th of August 2021 by Dr Patrick Moran. Aerial images and photographs of Slane and *environs* illustrating some of the key areas to which the Public Realm Plan are applicable are provided in Figure 10, Figure 12, Figure 13, Figure 14, Figure 15, Figure 17, Figure 18, Figure 19, Figure 20 and Figure 21. Historical mapping of the village of Slane (2nd Edition OSI) is overlain on the aerial imagery (Figure 22) illustrating the change in the extent of the village over the last 100 years. While a large part of the PRP comprises the village area of Slane, comprised primarily of the habitat "Built Land and Artificial Surfaces", a significant component of the PRP area is comprised of the habitat Mixed Modified Woodland (WD1) in Slane Castle Demesne and the River Boyne, an internationally important ecological corridor passes through the PRP area.

Given the habitats present, several species of conservation concern are likely to occur within the area of the Public Realm Plan, including Otter and Kingfisher (Qualifying Interests of the River Boyne and River Blackwater SAC and SPA respectively). Bats are certain to forage along the River Boyne and associated habitat, in particular Slane Castle Demesne. There are numerous suitable roosts present within the area of the Public Realm Plan.

Figure 10: Aerial image of main street

Figure 11: Junction of N2 and Mainstreet

Figure 12: N2 carriage-way passing over the Boyne

Figure 13: Aerial of old mill and *environs*

Figure 14: Aerial of Slane Castle Demesne and the River Boyne

Figure 15: Aerial image of Slane Castle in the distance

Figure 16: Potential new village square

Figure 17: Aerial image of existing car-parks

Figure 18: Tow-path carpark and beginning of greenway

Figure 19: Church on main-street

Figure 20: Main street

Figure 21: Approach into Slane from Navan

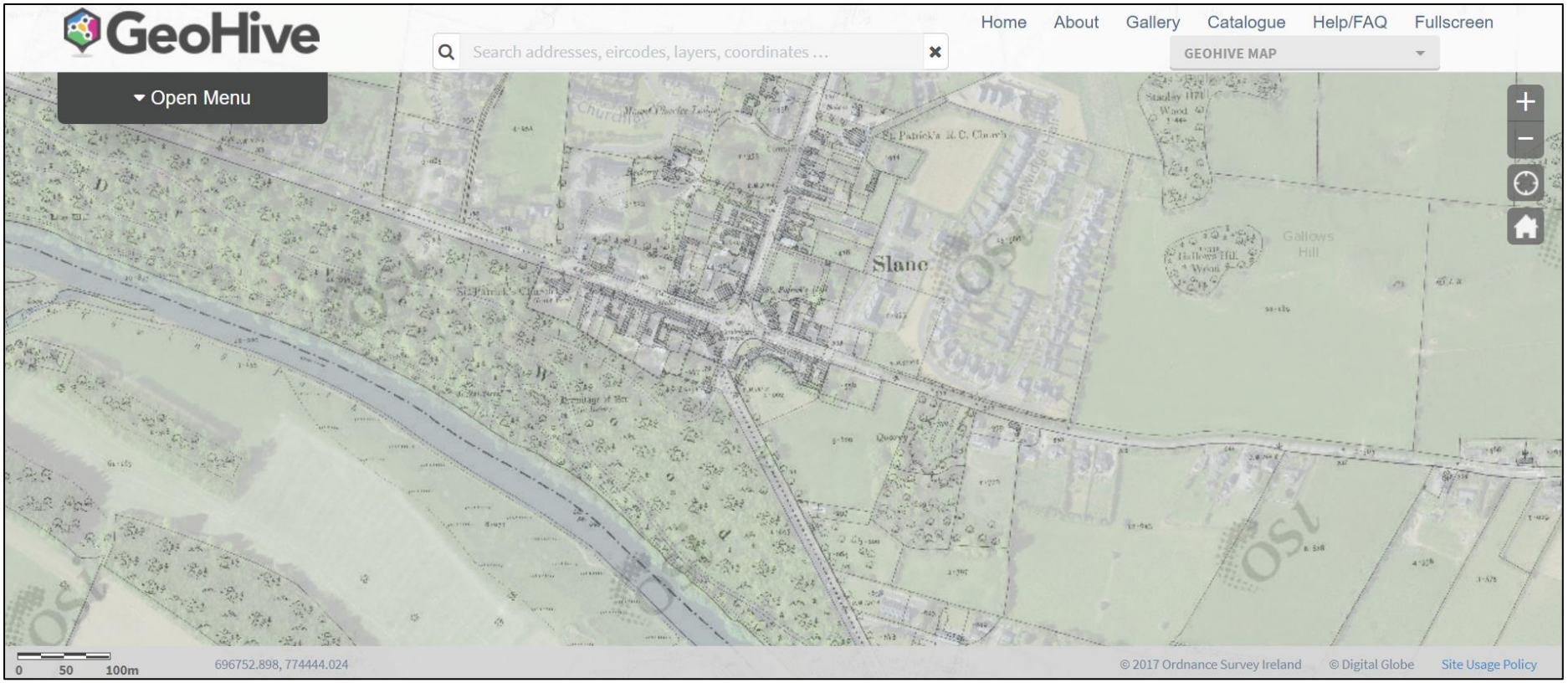

Figure 22: 2nd Edition OSI mapping overlain with aerial imagery indicating that the village has significantly expanded over the last 100 years

2.3 Description of scope

The geographical scope of the assessment is to determine if the proposed works/development has the potential to have any significant negative impact on the Natura 2000 sites occurring within 15 km of the proposed development.

The NBDC database was accessed on 05/08/21 to query records occurring within the vicinity of the Public Realm Plan (10 km square, N97 see Figure 23). The species of conservation concern as recorded within this 10 km square are illustrated in Table 1.

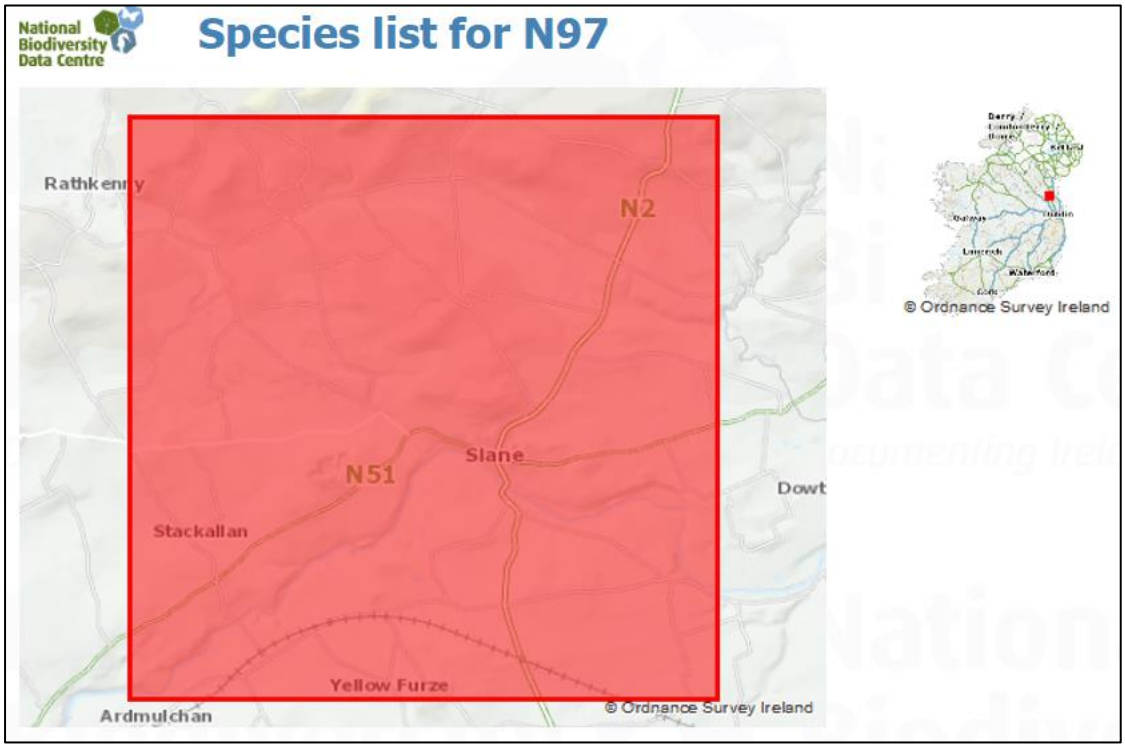

Figure 23: Location of polygon queried (National Biodiversity Data Centre)

Table 1: Species of conservation concern recorded in the vicinity of the proposed development site

Scientific Name	**Common Name**	**Date of last record**
Rana temporaria	Common Frog	02/05/2020
Lissotriton vulgaris	Smooth Newt	30/11/1974
Tyto alba	Barn Owl	31/12/2011
Hirundo rustica	Barn Swallow	31/12/2011
Larus ridibundus	Black-headed Gull	31/12/2011
Locustella naevia	Common Grasshopper Warbler	31/07/1972
Falco tinnunculus	Common Kestrel	31/12/2011

Scientific Name	**Common Name**	**Date of last record**
Alcedo atthis	Common Kingfisher	31/12/2011
Carduelis cannabina	Common Linnet	31/12/2011
Tringa totanus	Common Redshank	31/12/2011
Actitis hypoleucos	Common Sandpiper	25/04/2010
Sturnus vulgaris	Common Starling	31/12/2011
Apus apus	Common Swift	31/12/2011
Crex crex	Corn Crake	31/07/1972
Numenius arquata	Eurasian Curlew	31/12/2011
Passer montanus	Eurasian Tree Sparrow	31/12/2011
Pluvialis apricaria	European Golden Plover	31/12/2011
Larus marinus	Great Black-backed Gull	31/07/1991
Phalacrocorax carbo	Great Cormorant	31/12/2011
Delichon urbicum	House Martin	31/12/2011
Passer domesticus	House Sparrow	31/12/2011
Larus fuscus	Lesser Black-backed Gull	14/05/2012
Egretta garzetta	Little Egret	31/12/2011
Tachybaptus ruficollis	Little Grebe	31/12/2011
Falco columbarius	Merlin	29/02/1984
Cygnus olor	Mute Swan	31/12/2011
Vanellus vanellus	Northern Lapwing	29/02/1984
Milvus milvus	Red Kite	15/11/1951
Riparia riparia	Sand Martin	31/12/2011
Alauda arvensis	Sky Lark	31/12/2011
Muscicapa striata	Spotted Flycatcher	31/12/2011
Columba oenas	Stock Pigeon	31/12/2011
Cygnus cygnus	Whooper Swan	31/12/2011
Emberiza citrinella	Yellowhammer	24/07/2015
Impatiens glandulifera	Indian Balsam	01/11/2020
Fallopia japonica	Japanese Knotweed	20/01/2010
Rhododendron ponticum	Rhododendron ponticum	11/05/2005
Plecotus auritus	Brown Long-eared Bat	24/05/2012
Rattus norvegicus	Brown Rat	08/01/2013

Scientific Name	**Common Name**	**Date of last record**
Myotis daubentonii	Daubenton's Bat	26/08/2014
Sciurus carolinensis	Eastern Grey Squirrel	19/09/2017
Meles meles	Eurasian Badger	03/01/2018
Sorex minutus	Eurasian Pygmy Shrew	31/12/2000
Sciurus vulgaris	Eurasian Red Squirrel	31/12/2012
Lutra lutra	European Otter	16/09/2018
Mus musculus	House Mouse	20/12/1968
Nyctalus leisleri	Lesser Noctule	24/05/2012
Pipistrellus nathusii	Nathusius's Pipistrelle	13/08/2012
Myotis nattereri	Natterer's Bat	24/05/2012
Martes martes	Pine Marten	14/09/2017
Pipistrellus pipistrellus sensu lato	Pipistrelle	24/05/2012
Cervus elaphus	Red Deer	31/12/2008
Pipistrellus pygmaeus	Soprano Pipistrelle	24/05/2012
Erinaceus europaeus	West European Hedgehog	25/04/2018
Myotis mystacinus	Whiskered Bat	25/05/2005

It is evident from the high number of species of conservation concern recorded, including numerous Annex II and Annex IV species (Habitats Directive) and Annex I Bird Species (Birds Directive) that the Slane Public Realm Plan is area is located in an ecologically sensitive area of international importance as is indicated be the presence of two Natura 2000 sites within the area of the Public Realm Plan.

2.4 Identification of Natura 2000 sites potentially impacted upon by the development

It is general practice, when screening a plan or project for compliance with the Habitats Directive, to identify all Natura 2000 sites within the functional area of the plan/project itself and within 15 km of the boundaries of the area the plan/project applies to (with an appropriate "Zone of Influence" identified from any Source-Pathway-Receptor linkages). This approach is currently recommended in the Department of the Environmental, Heritage and Local Government's document Guidance for Planning Authorities and as a precautionary measure, to ensure that all potentially affected Natura 2000 sites are included in the screening process. The maintenance of habitats and species within individual Natura 2000 sites at favourable conservation condition contributes to the overall maintenance of favourable conservation status of those habitats and species at a national level. It is therefore necessary to identify any potential impacts of the proposed development on the conservation status of Natura 2000 sites. The National Parks and Wildlife Service deem that the favourable conservation status of a habitat is achieved when:

- Its natural range, and area it covers within that range, is stable or increasing.
- The ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future.
- The conservation status of its typical species is favourable.

The National Parks and Wildlife Service deem that the favourable conservation status of a species is achieved when:

- Population data on the species concerned indicate that it is maintaining itself.
- The natural range of the species is neither being reduced, or likely to be reduced in the foreseeable future.
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

There are two areas designated as a special area of conservation (SAC) and two areas designated as a Special Protection Area within 15 km of the proposed Public Realm Plan (see Table 2, Figure 24 and Figure 25).

Table 2: Natura 2000 sites within 15km of the Slane Public Realm Plan area

SITE CODE	DESIGNATION	SITE NAME
001957	SAC	BOYNE COAST AND ESTUARY SAC
002299	SAC	RIVER BOYNE AND RIVER BLACKWATER SAC
004080	SPA	BOYNE ESTUARY SPA
004232	SPA	RIVER BOYNE AND RIVER BLACKWATER SPA

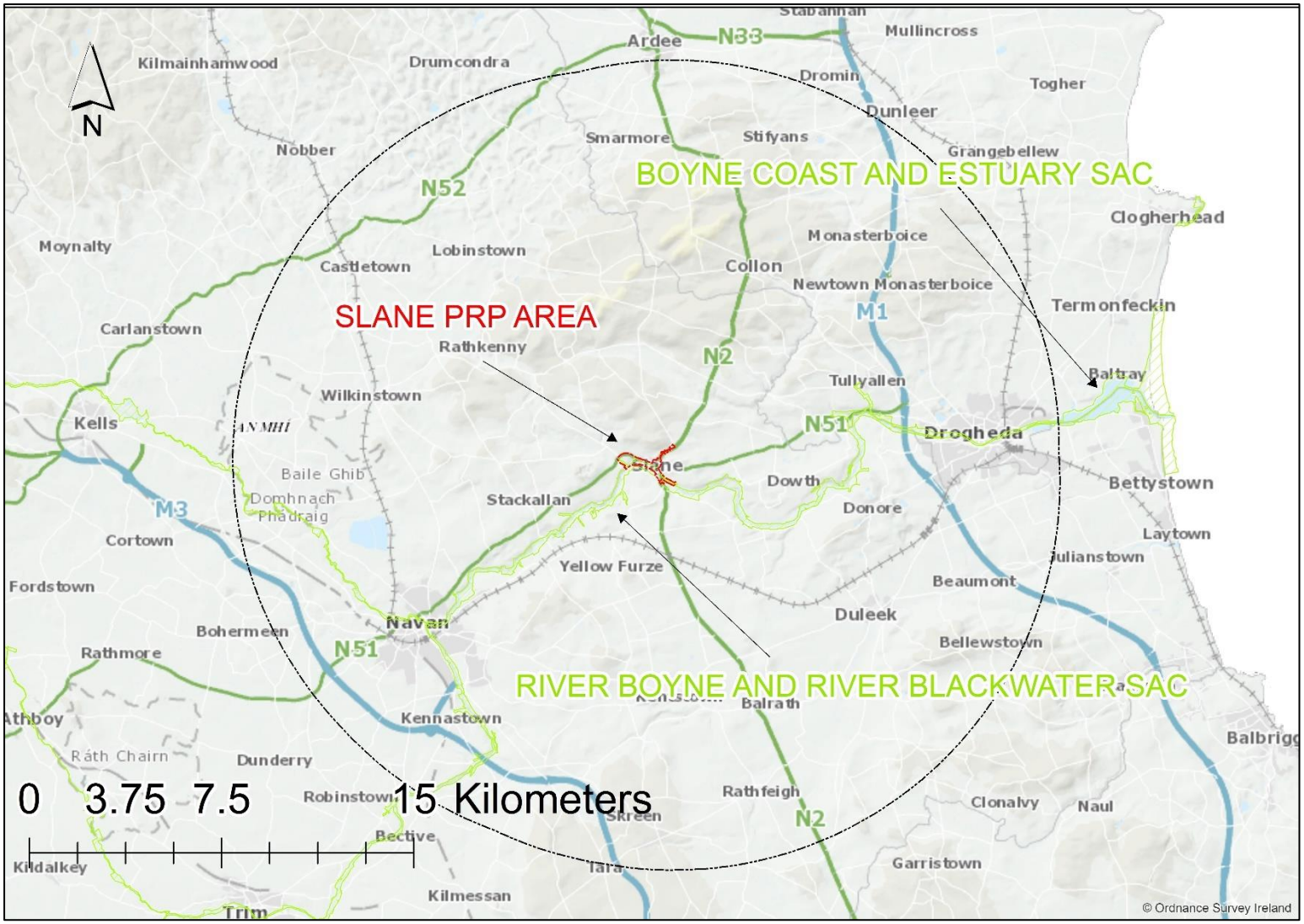

Figure 24: Location of SACs within 15 km of PRP

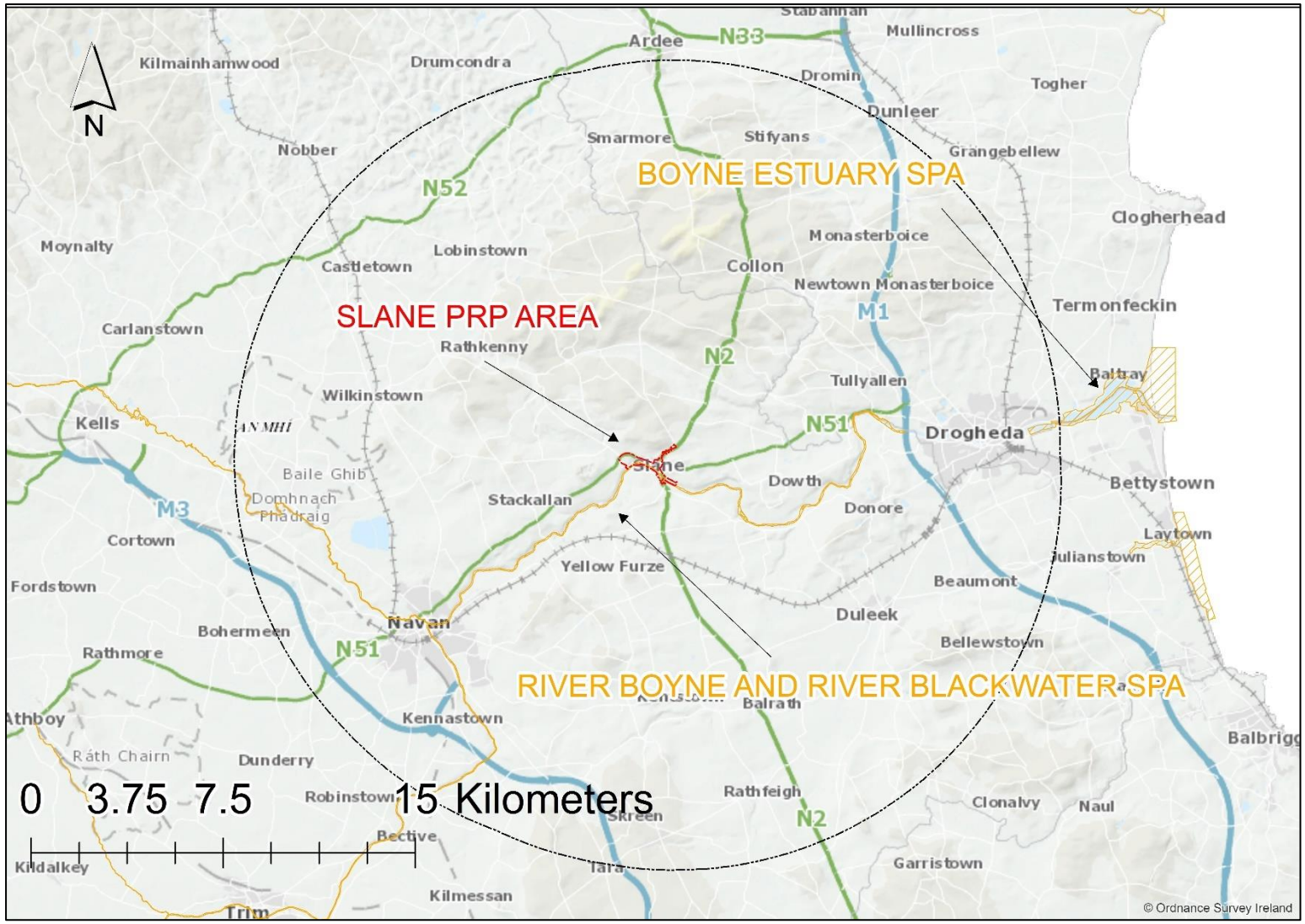

Figure 25: Location of SPAs within 15 km of PRP

2.5 Description of Natura 2000 sites potentially impacted upon by the proposed development

It is the goal of NPWS to draw up conservation plans for all areas designated for nature conservation, and that these plans will, among other things, set clear objectives for the conservation of the features of interest within a site. Where a detailed Conservation Objectives Document is not available, NPWS have provided a site synopsis, generic Conservation Objectives and a Natura 2000 data form from which information is sourced.

In this section, the Natura 2000 sites potentially impacted upon by the proposed development are described according to:

1) General description of the site;
2) Qualifying Interests (QI) of the site;
3) Threats, pressures and activities with negative impacts on the site;
4) Conservation Objectives of the site; and
5) Conservation status of the site.

The codes utilized within the Natura 2000 forms are available from http://bd.eionet.europa.eu/activities/Natura_2000/reference_portal

2.5.1 Boyne Coast and Estuary SAC (Site synopsis version date 09/02/16, Natura 2000 form update 09/18, Conservation Objectives Version 1.0)

2.5.1.1 General Description

This moderately sized coastal site, which is situated below the town of Drogheda, comprises most of the estuary of the Boyne River, a substantial river which drains a large catchment. On the seaward side the site extends north and south for several kilometres to include the remaining intact areas of dune systems at Baltray and Mornington, as well as the adjacent beaches and intertidal sand flats. The main channel of the Boyne is contained by training walls for navigable purposes. As well as intertidal sand and mud flats, the inner part of the site has salt marshes and Spartina swards. While the site has a good diversity of coastal habitats, including fixed dunes, most have been modified in some way. The containment of the main tidal channel has altered the tidal pattern which affects the functioning of the various estuarine habitats. Both dune systems were formerly far more extensive but much of the stable areas have now been converted to golf courses. Site is important for wintering waterfowl, supporting nine species in nationally important numbers, including *Pluvialis apricaria*, an Annex I EU Birds Directive species. *Sterna albifrons* breeds or attempts to breed in most years.

2.5.1.2 Qualifying Interests

The qualifying interests of this site are indicated in Table 3.

Table 3

Qualifying Interests	
**** indicates a priority habitat under the Habitats Directive***	
001957	Boyne Coast and Estuary SAC
1130	Estuaries
1140	Mudflats and sandflats not covered by seawater at low tide
1310	Salicornia and other annuals colonizing mud and sand
1330	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
1410	Mediterranean salt meadows (*Juncetalia maritimi*)
2110	Embryonic shifting dunes
2120	Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes')
2130	*Fixed coastal dunes with herbaceous vegetation ('grey dunes')

2.5.1.3 Threats, pressures, and activities with negative impacts on the site

Details as to the threats, pressures, and activities with negative impacts on the site are identified from the Natura 2000 data form for the sites and are illustrated in Table 4.

Table 4: Threats, pressures, and activities with impacts on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
M	D01.05		i
M	J02.01.03		i
H	K02		i
H	L07		b
M	J02.12		i
M	J02.02		i
H	H01		i
L	J02.12.01		i
M	G01.03.02		i
L	E03.03		i
L	G05		i
M	G01.02		o
H	I01		i
M	J02.12		i
M	E01		i
L	G05.04		i
M	E05		b
H	E03.01		b

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
M	D01.01		i
M	J03.03		i
M	G03		i
M	J02		o

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification, T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

2.5.1.4 Conservation Objectives of the site

A detailed Conservation Objectives Document has been prepared for this site and is available to download from:

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001957.pdf

Details from this document are reproduced here. The Conservation Objectives of the site are outlined in Table 5, Table 6, Table 7, Table 8, Table 9, Table 10, Table 11, Table 12.

Table 5

1130	Estuaries		
To maintain the favourable conservation condition of Estuaries in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes. See map 3	Habitat area was estimated as 403ha using OSi data and the defined Transitional Water Body area under the Water Framework Directive
Community distribution	Hectares	Conserve the following community types in a natural condition: Intertidal estuarine mud and fine sand with *Hediste diversicolor* and *Corophium volutator* community; and Subtidal fine sand dominated by polychaetes community. See map 5	Habitat structure was elucidated from intertidal and subtidal surveys undertaken in 2010 (ASU, 2011; EcoServe, 2011)

Table 6

1140	Mudflats and sandflats not covered by seawater at low tide		
To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Habitat area	Hectares	The permanent habitat area is stable or increasing, subject to natural processes. See map 4	Habitat area was estimated using OSi data as 403ha
Community distribution	Hectares	Conserve the following community types in a natural condition: Intertidal estuarine mud and fine sand with *Hediste diversicolor* and *Corophium volutator* community; and Fine sand dominated by bivalves community complex. See map 5	Habitat structure was elucidated from an intertidal survey undertaken in 2010 (ASU, 2011). See marine supporting document for further details

Table 7

1310 Salicornia and other annuals colonizing mud and sand

To restore the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Baltray- 2.91ha, Mornington- 1.14ha. See map 6	Based on data from Saltmarsh Monitoring Project (McCorry and Ryle, 2009). Habitat mapped at two sub-sites surveyed, giving a total estimated area of 4.05ha. NB further unsurveyed areas maybe present within the site. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 6 for known distritbution	Based on data from McCorry and Ryle (2009). Salicornia is an annual species, so its distribution can vary significantly from year to year. At Baltray, saltmarsh is expanding in infilled intertidal zone. Large area of Mornington saltmarsh was reclaimed in the past. See coastal habitats supporting document for further details
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions	Based on data from McCorry and Ryle (2009). Sediment supply is particularly important for this pioneer saltmarsh community, as the distribution of this habitat depends on accretion rates. Sediment supply to saltmarshes at Baltray and Mornington is likely to be affected by the construction of navigation walls and dredging of the main channel. See coastal habitats supporting document for further details
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession	Based on data from McCorry and Ryle (2009). Creeks deliver sediment throughout saltmarsh system. At Baltray and Mornington the structure is modified by drainage channels. See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	This pioneer saltmarsh community requires regular tidal inundation. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from McCorry and Ryle (2009). At Baltray and Mornington there are zonations within the saltmarsh habitats as well as transitions to adjacent sand dune systems. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimeters	Maintain structural variation within sward	Based on data from McCorry and Ryle (2009). At Baltray and Mornington grazing is absent and sward height is variable. See coastal habitats supporting document for further details

Continued overleaf…

1310 Salicornia and other annuals colonizing mud and sand

To restore the favourable conservation condition of *Salicornia* and other annuals colonizing mud and sand in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated	Based on data from McCorry and Ryle (2009). See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover	Maintain the presence of species-poor communities with typical species listed in the Saltmarsh Monitoring Project (McCorry and Ryle, 2009)	Based on data from McCorry & Ryle (2009). See coastal habitats supporting document for further details
Vegetation structure: negative indicator species- *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%	Based on data from McCorry & Ryle (2009). *Spartina* is well established at this site. Swards of *Spartina* are widespread at Baltray and there has been significant expansion of *Spartina* at Mornington since 2000. See coastal habitats supporting document for further details

Table 8

1330	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)		
To maintain the favourable conservation condition of Atlantic salt meadows (*Glauco-Puccinellietalia*) in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Baltray- 17.67ha, Mornington- 8.76ha. See map 6	Based on data from the Saltmarsh Monitoring Project (McCorry and Ryle, 2009). Habitat mapped at two sub-sites surveyed, giveing a total estimated area of 26.43ha. NB further unsurveyed areas maybe present within the site. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 6 for known distribution	Based on data from McCorry and Ryle (2009). At Baltray there has been some extensive recent development of ASM. At Mornington the saltmarsh may have been more extensive in the past. See coastal habitats supporting document for further details
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain natural circulation of sediments and organic matter, without any physical obstructions	Based on data from McCorry and Ryle (2009). At Baltray and Mornington saltmarsh development likely to be affected by the construction of navigation walls in the past and dredging of the main channel. See coastal habitats supporting document for further details
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession	Based on data from McCorry and Ryle (2009). Creek and pan structures are well-developed in some parts of Baltray and Mornington but modified in other areas by drainage channels. See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from McCorry and Ryle (2009). At Baltray and Mornington there are zonations within the saltmarsh habitats as well as transitions to adjacent sand dune systems. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimeters	Maintain structural variation within sward	Based on data from McCorry and Ryle (2009). The saltmarshes at Baltray and Mornington are ungrazed by livestock and the sward height is quite variable. See coastal habitats supporting document for further details
Vegetation structure: vegetation cover	Percentage cover at a representative sample of monitoring stops	Maintain more than 90% of area outside creeks vegetated	See coastal habitats supporting document for further details

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1330	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)		
To maintain the favourable conservation condition of Atlantic salt meadows (*Glauco-Puccinellietalia*) in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub-communities with typical species listed in Saltmarsh Monitoring Project (McCorry and Ryle, 2009)	See coastal habitats supporting document for further details
Vegetation structure: negative indicator species - *Spartina anglica*	Hectares	No significant expansion of common cordgrass (*Spartina anglica*), with an annual spread of less than 1%	Based on data from McCorry and Ryle (2009). *Spartina* is well established at this site. Swards of *Spartina* are widespread at Baltray and there has been significant expansion of *Spartina* at Mornington since 2000. See coastal habitats supporting document for further details

Table 9

1410	Mediterranean salt meadows (*Juncetalia maritimi*)		
The status of Mediterranean salt meadows (*Juncetalia maritimi*) as a qualifying Annex I habitat for Boyne Coast and Estuary SAC is currently under review. The outcome of this review will determine whether a site-specific conservation objective is set for this habitat.			
Attribute	**Measure**	**Target**	**Notes**

Table 10

2110	Embryonic shifting dunes		
To restore the favourable conservation condition of Embryonic shifting dunes in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Baltray- 2.52ha, Mornington- 0.67ha. See map 7	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). Habitat is very difficult to measure in view of its dynamic nature and was recorded at both sub-sites, giving a total estimated area of 3.18ha. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 7 for known distribution	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details
Physical structure: functionality and sediment supply	Presence/ absence of physical barriers	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Based on data from Ryle et al. (2009). Dunes are naturally dynamic systems that require continuous supply and circulation of sand. The training wall at the mouth of the Boyne Estuary has led to an accumulation of sand at Mornington and enhanced the development of dunes at the northern section. The dunes are accreting at the southern end of Baltray, with wide areas of embryonic dune and strandine fronting mobile and fixed dunes. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from Ryle et al. (2009). Both sand dune systems at Baltray and Mornington occur adjacent to extensive estuarine saltmarshes. See coastal habitats supporting document for further details
Vegetation composition: plant health of foredune grasses	Percentage cover	More than 95% of sand couch (*Elytrigia juncea*) and/or lyme-grass (*Leymus arenarius*) should be healthy (i.e. green plant parts above ground and flowering heads present)	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover	Maintain the presence of species-poor communities with typical species: sand couch (*Elytrigia juncea*) and/or lyme-grass (*Leymus arenarius*)	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details

Continued overleaf…

2110 Embryonic shifting dunes

To restore the favourable conservation condition of Embryonic shifting dunes in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle et al. (2009). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea buckthorn (*Hippophae rhamnoides*) should be absent or effectively controlled. See coastal habitats supporting document for further details

Table 11

2120	Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes')		
To restore the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Habitat area	Hectares	Area stable or increasing, subject to natural processes including erosion and succession. For sub-sites mapped: Baltray- 2.97ha, Mornington- 1.99ha. See map 7	Habitat was mapped during the Coastal Monitoring Project (Ryle et al. 2009). Habitat was recorded at both sub-sites, giving a total estimated area of 4.97ha. Habitat is very difficult to measure in view of its dynamic nature. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 7 for known distribution	Based on data from Ryle et al. (2009). Shifting dunes were recorded at both Baltray and Mornington sub-sites. See coastal habitats supporting document for further details
Physical structure: functionality and sediment supply	Presence/ absence of physical barriers	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Dunes are naturally dynamic systems that require continuous supply and circulation of sand. Marram (*Ammophila arenaria*) reproduces vegetatively and requires constant accretion of fresh sand to maintain active growth encouraging further accretion. The training wall at the mouth of the Boyne Estuary has led to an accumulation of sand at Mornington and enhanced the development of dunes at the northern section. The dunes are accreting at the southern end of Baltray, with wide areas of embryonic dune and strandine fronting mobile and fixed dunes. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from Gaynor (2008) and Ryle et al. (2009). Both sand dune systems at Baltray and Mornington occur adjacent to extensive estuarine saltmarshes. See coastal habitats supporting document for further details
Vegetation composition: plant health of dune grasses	Percentage cover	More than 95% of marram (*Ammophila areanaria*) and/or lyme-grass (*Leymus arenarius*) should be healthy (i.e. green plant parts above ground and flowering heads present)	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative number of monitoring stops	Maintain the presence of species-poor communities dominated by marram (*Ammophila arenaria*) and/or lyme-grass (*Leymus arenarius*)	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details

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2120 Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes')

To restore the favourable conservation condition of Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:

Attribute	Measure	Target	Notes
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle et al. (2009). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea buckthorn (*Hippophae rhamnoides*) should be absent or effectively controlled. Ragwort (*Senecio jacobaea*) was recorded from Mobile dunes at both Baltray and Mornington. See coastal habitats supporting document for further details

Table 12

2130	*Fixed coastal dunes with herbaceous vegetation ('grey dunes')		
To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation (grey dunes) in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Habitat area	Hectares	Area increasing, subject to natural processes including erosion and succession. For sub-sites mapped: Baltray-26.41ha; Mornington-20.46ha. See map 7	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). Habitat was recorded at both sub-sites, giving a total estimated area of 46.87ha. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 7 for known distribution	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). Fixed dunes recorded at both Baltray and Mornington. See coastal habitats supporting document for further details
Physical structure: functionality and sediment supply	Presence/ absence of physical barriers.	Maintain the natural circulation of sediment and organic matter, without any physical obstructions	Based on data from the Coastal Monitoring Project (Ryle et al., 2009). The training wall at the mouth of the Boyne Estuary has led to an accumulation of sand at Mornington and enhanced the development of dunes at the northern section. The dunes are accreting at the southern end of Baltray, with wide areas of embryonic dune and strandine fronting mobile and fixed dunes. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from Ryle et al. (2009). Both sand dune systems at Baltray and Mornington occur adjacent to extensive estuarine saltmarshes. See coastal habitats supporting document for further details
Vegetation structure: bare ground	Percentage cover	Bare ground should not exceed 10% of fixed dune habitat, subject to natural processes	Based on data from Gaynor (2008) and Ryle et al. (2009). The estimated area of bare sand at Mornington currently accounts for greater than 10% of the fixed dune habitat. See coastal habitats supporting document for further details
Vegetation composition: sward height	Centimeters	Maintain structural variation within sward	Based on data from Gaynor (2008) and Ryle et al. (2009). See coastal habitats supporting document for further details
Vegetation composition: typical species and sub-communities	Percentage cover at a representative sample of monitoring stops	Maintain range of sub-communities with typical species listed in Ryle et al. (2009)	Based on data from Gaynor (2008) and Ryle et al. (2009). The locally rare species viper's bugloss (*Echium vulgare*) was recorded in the fixed dunes at Baltray. Mornington is the most northerly known site in Ireland for wild clary (*Salvia verbenaca*). See coastal habitats supporting document for further details

Continued overleaf…

2130	*Fixed coastal dunes with herbaceous vegetation ('grey dunes')		
To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation (grey dunes) in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Vegetation composition: negative indicator species	Percentage cover	Negative indicator species (including non-natives) to represent less than 5% cover	Based on data from Ryle et al. (2009). Negative indicators include non-native species, species indicative of changes in nutrient status and species not considered characteristic of the habitat. Sea buckthorn (*Hippophae rhamnoides*) should be absent or effectively controlled. At both Baltray and Mornington, creeping thistle (*Cirsium arvense*), ragwort (*Senecio jacobaea*) and common nettle (*Urtica dioica*) were recorded in fixed dunes. See coastal habitats supporting document for further details
Vegetation composition: scrub/trees	Percentage cover	No more than 5% cover or under control	Based on data from Ryle et al. (2009). See coastal habitats supporting document for further details

2.5.1.5 Baseline Conservation Status of the site

A synopsis of the conservation status of this site is provided in Table 13 and Table 14.

Table 13: Habitat types present on site and assessment for them

Annex I Habitat types						Site assessment			
Code	**PF**	**NP**	**Cover [ha]**	**Cave [number]**	**Data quality**	**A|B|C|D**	**A|B|C**		
						Representativity	**Relative Surface**	**Conservation**	**Global**
1130			119.61		M	C	C	C	C
1140			377.71		M	C	B	C	C
1310			6.3		M	C	C	C	C
1320			6.3		M	D			
1330			18.89		M	B	C	C	C
1410			6.3		M	C	C	C	C
2110			6.3		M	B	C	B	B
2120			6.3		M	C	C	B	C
2130			31.48		M	B	C	C	C

Table 14: Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
B	A052	Anas crecca			w	185	185	i		G	C	B	C	C
B	A050	Anas penelope			w	485	485	i		G	C	B	C	C
B	A053	Anas platyrhynchos			w	160	160	i		G	C	B	C	C
B	A169	Arenaria interpres			w	104	104	i		G	C	B	C	B
B	A046	Branta bernicla			w	142	142	i		G	C	B	C	B
B	A144	Calidris alba			w	93	93	i		G	B	B	C	B
B	A149	Calidris alpina			w	627	627	i		G	C	B	C	C
B	A143	Calidris canutus			w	1599	1599	i		G	B	B	C	A
B	A137	Charadrius hiaticula			w	103	103	i		G	C	B	C	B
B	A130	Haematopus ostralegus			w	922	922	i		G	C	B	C	C
B	A157	Limosa lapponica			w	77	77	i		G	C	C	C	C
B	A156	Limosa limosa			w	414	414	i		G	B	A	C	A
B	A070	Mergus merganser			w	18	18	i		G	C	B	C	C
B	A160	Numenius arquata			w	352	352	i		G	C	B	C	C
B	A017	Phalacrocorax carbo			w	75	75	i		G	C	B	C	C
B	A140	Pluvialis apricaria			w	5338	5338	i		G	B	B	C	B
B	A141	Pluvialis squatarola			w	112	112	i		G	B	B	C	B
B	A195	Sterna albifrons			r		20	p		G	B	B	C	B
B	A048	Tadorna tadorna			w	176	176	i		G	C	B	C	B
B	A162	Tringa totanus			w	539	539	i		G	B	B	C	B
B	A142	Vanellus vanellus			w	4755	4755	i		G	B	B	C	B

2.5.2 River Boyne and River Blackwater SAC (Site synopsis version date 06/01/2014, Natura 2000 form update 09/19, Conservation Objectives (generic) version 8.0)

2.5.2.1 General Description

This site comprises most of the freshwater element of the River Boyne from upriver of the Boyne Aqueduct at Drogheda, the Blackwater River as far as Lough Ramor and the principal Boyne tributaries, notably the Deel, Stoneyford and Tremblestown Rivers. This system drains a considerable area of Cos. Meath and Westmeath and smaller areas of Cavan and Louth. The underlying geology is Carboniferous Limestone for the most part with areas of Upper, Lower and Middle well represented. In the vicinity of Kells Silurian Quartzite is present while close to Trim are Carboniferous Shales and Sandstones. The rivers flow through a landscape dominated by intensive agriculture, mostly of improved grassland but also cereals. Much of the river channels were subject to arterial drainage schemes in the past. Natural floodplains now exist along only limited stretches of river, though often there is a fringe of reed swamp, freshwater marsh, wet grassland or deciduous wet woodland. Along some parts, notably between Drogheda and Slane, are stands of tall, mature mixed woodland. Substantial areas of improved grassland and arable land are included in site for water quality reasons. There are many medium to large sized towns adjacent to but not within the site.

The main channel of the Boyne contains a good example of alluvial woodland of the *Salicetum albo-fragilis* type which has developed on three alluvium islands. Alkaline fen vegetation is well represented at Lough Shesk, where there is a very fine example of habitat succession from open water to raised bog. The Boyne and its tributaries is one of Ireland's premier game fisheries and offers a wide range of angling, from fishing for spring salmon and grilse to sea trout fishing and extensive brown trout fishing. The site is one of the most important in eastern Ireland for *Salmo salar* and has very extensive spawning grounds. The site also has an important population of *Lampetra fluviatilis*, though the distribution or abundance of this species is not well known. *Lutra lutra* is widespread throughout the site. Some of the grassland areas along the Boyne and Blackwater are used by a nationally important winter flock of *Cygnus cygnus*. Several Red Data Book plants occur within the site, with *Pyrola rotundifolia*, *Poa palustris* and *Juncus compressus*. Also occurring are a number of Red Data Book animals, notably *Meles meles*, *Martes martes* and *Rana temporaria*. The River Boyne is a designated Salmonid Water under the EU Freshwater Fish Directive.

2.5.2.2 Qualifying Interests

The qualifying interests for this site are:

- [7230] Alkaline Fens;
- [91EO] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) – PRIORITY HABITAT;
- [1099] *Lampetra fluviatilis;*
- [1106] *Salmo salar; and*
- [1355] *Lutra lutra*

2.5.2.3 Threats, pressures and activities with negative impacts on the site

Details as to the threats, pressures and activities with negative impacts on the site are identified from the Natura 2000 data form for the sites and are illustrated in Table 15.

Table 15: Threats, pressures and activities with impacts on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
M	G02.10		i
H	H01		i
L	D01.05		i
M	A07		i
M	A08		i
M	A05.02		o
L	G01		i
H	J02.15		i
M	A01		i
M	A10.01		i
M	C01.01		i
L	G05.06		i
L	G05		i
M	A10.01		i
M	E05		i
M	E01.04		i
M	J02.11		i
M	J02.10		i
M	D01.02		i
M	E03.02		i
H	E03.04		i
M	J02		i
H	E02		i
H	I01		i
M	B01.02		i

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
M	A03		i
H	J02.05.02		i

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification, T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

2.5.2.4 Conservation Objectives of the site

A detailed Conservation Objectives document for this site has not yet been generated. The (generic) Conservation Objective of this site is to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected. More detailed conservation objectives for habitats/species at this site can be inferred, based on the Conservation Objectives for the same habitat at a different site. Please note although not addressed in the NPWS Conservation Objectives, hydrological changes in association with climate change are possible if not probable. The conservation objective of any qualifying interest dependent on hydrological regime/water quality is, therefore, potentially at risk of impact from climate change.

[7230] Alkaline Fens

Conservation objectives for this habitat at this site can be inferred (see Table 16), based on the Conservation Objectives for the same habitat at a different site – in this case [site code 000268].

Table 16: Conservation Objectives for [7230]

ATTRIBUTE	MEASURE	TARGET
HABITAT AREA	HECTARE	AREA STABLE/INCREASING
HABITAT DISTRIBUTION	OCCURRENCE	NO DECLINE
HYDROLOGICAL REGIME	FLOW RATES, METRES	APPROPRIATE NATURAL HYDROLOGICAL REGIME
PEAT FORMATION	FLOOD DURATION	ACTIVE PEAT FORMATION WHERE APPROPRIATE
WATER QUALITY: NUTRIENTS	WATER CHEMISTRY MEASURES	APPROPRIATE WATER QUALITY
VEGETATION COMPOSITION: TYPICAL SPECEIS	PRESENCE	MAINTAIN VEGETATION COVER OF TYPICAL SPECIES
VEGETATION COMPOSITION: TREES AND SHRUBS	PERCENTAGE	COVER OF SCATTERED NATIVE TREES/SHRUBS LESS THAN 10%
PHYSICAL STRUCTURE: DISTURBED BARE GROUND	PERCENTAGE	COVER OF DISTURBED BARE GROUND LESS THAN 10%
PHYSICAL STRUCTURE: DRAINAGE	PERCENTAGE	AREAS SHOWING SIGNS OF DRAINAGE AS A RESULT OF DRAINAGE DITCHES OR HEAVY TRAMPLING LESS THAN 10%

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

Conservation objectives for this habitat at this site can be inferred (see Table 17), based on the Conservation Objectives for the same habitat at a different site – in this case [site code 002162]

Table 17: Conservation Objectives for [91E0]

ATTRIBUTE	MEASURE	TARGET
HABITAT AREA	HECTARES	AREA STABLE OR INCREASING
HABITAT DISTRIBUTION	OCCURRENCE	NO DECLINE
WOODLAND SIZE	HECTARES	AREA STABLE OR INCREASING
WOODLAND STRUCTURE: COVER AND HEIGHT	PERCENTAGE AND METRES	DIVERSE STRUCTURE
WOODLAND STRUCTURE: COMMUNITY DIVERSITY AND EXTENT	HECTARES	MAINTAIN DIVERSITY AND EXTENT OF COMMUNITY TYPES
WOODLAND STRUCTURE: NATURAL REGENERATION	SEEDLING: SAPLING: POLE RATIO	SEEDLINGS, SAPLINGS AND POLE AGE-CLASSES OCCUR IN ADEQUATE PROPORTIONS TO ENSURE SURVIVAL OF WOODLAND CANOPY
HYDROLOGICAL REGIME: FLOODING DEPTH/HEIGHT OF WATER TABLE	METRES	APPROPRIATE HYDROLOGICAL REGIME
WOODLAND STRUCTURE: DEAD WOOD	NUMBER PER HECTARE	AT LEAST 30M3/HA OF FALLEN TIMBER GREATER THAN 10CM DIAMETER; 30 SNAGS/HA; BOTH CATEGORIES SHOUD INCLUDE STEMS GREATER THAN 40 CM DIAMETER (GREATER THAN 20 CM DIAMETER IN THE CASE OF ALDER)
WOODLAND STRUCTURE: VETERAN TREES	NUMBER PER HECTARE	NO DECLINE
WOODLAND STRUCTURE: INDICATORS OF LOCAL DISTINCTIVENESS	OCCURRENCE	NO DECLINE
VEGETATION COMPOSITION: NATIVE TREE COVER	PERCENTAGE	NO DECLINE. NATIVE TREE COVER NOT LESS THAN 95%
VEGETATION COMPOSITION: TYPICAL SPECIES	OCCURRENCE	A VARIETY OF TYPICAL NATIVE TREE SPECIES PRESENT
VEGETATION COMPOSITION: NEGATIVE INDICATOR SPECIES	OCCURRENCE	NEGATIVE INDICATOR SPECIES, PARTICULARLY NON-NATIVE INVASIVE SPECIES ABSENT OR UNDER CONTROL

[1099] *Lampetra fluviatilis*

Conservation objectives for this species at this site can be inferred (see Table 18), based on the Conservation Objectives for the same species at a different site – in this case [site code 002162]

Table 18: Conservation Objectives for [1099]

ATTRIBUTE	MEASURE	TARGET
DISTRIBUTION: EXTENT OF ANADROMY	% OF RIVER ACCESSIBLE	GREATER THAN 75% OF MAIN STEM AND MAJOR TRIBUTARIES DOWN TO SECOND ORDER ACCESSIBLE FROM ESTUARY
POPULATION STRUCTURE OF JUVENILES	NUMBER OF AGE/SIZE GROUPS	AT LEAST 3 AGE/SIZE GROUPS OF RIVER/BROOK LAMPREY PRESENT
JUVENILE DENSITY IN FINE SEDIMENT	JUVENILES PER M2	MEAN CATCHMENT JUVENILE DENSITY OF BROOK/RIVER LAMPREY AT LEAST 2/M2
EXTENT OF DISTRIBUTION OF SPAWNING HABITAT	M2 AND OCCURRENCE	NO DECLINE IN EXTENT AND DISTRIBUTION OF SPAWNING BEDS
AVAILABILITY OF JUVENILE HABITAT	NUMBER OF POSITIVE SITES IN 2ND ORDER CHANNELS (AND GREATER), DOWNSTREAM OF SPAWNING AREAS	MORE THAN 50% OF SAMPLE SITES POSITIVE

[1106] *Salmo salar*

Conservation objectives for this species at this site can be inferred (see Table 19), based on the Conservation Objectives for the same species at a different site – in this case [site code 002162]

Table 19: Conservation Objectives for [1106]

ATTRIBUTE	MEASURE	TARGET
DISTRIBUTION: EXTENT OF ANADROMY	% OF RIVER ACCESSIBLE	100% OF RIVER CHANNELS DOWN TO SECOND ORDER ACCESSIBLE FROM ESTUARY
ADULT SPAWNING FISH	NUMBER	CONSERVATION LIMIT FOR EACH SYSTEM CONSISTENTLY EXCEEDED
SALMON FRY ABUNDANCE	NUMBER OF FRY/5 MINUTES ELECTROFISHING	CURRENTLY SET AT 17 SALMON FRY/5 MIN ELECTROFISHING
OUTMIGRATING SMOLT ABUNDANCE	NUMBER	NO SIGNIFICANT DECLINE
NO AND DISTRIBUTION OF REDDS	NUMBER AND OCCURRENCE	NO DECLINE IN NUMBER/DISTRIBUTION OWING TO ANTHROPOGENIC CAUSES
WATER QUALITY	EPA Q VALUE	AT LEAST Q4 AT ALL SITES SAMPLED BY EPA

[1355] *Lutra lutra*

Conservation objectives for this species at this site can be inferred (see Table 20), based on the Conservation Objectives for the same species at a different site – in this case [site code 002162].

Table 20: Conservation Objectives for [1355]

ATTRIBUTE	MEASURE	TARGET
DISTRIBUTION	PERCENTAGE POSITIVE SURVEY SITES	NO SIGNIFICANT DECLINE
EXTENT OF TERRESTRIAL HABITAT	HECTARES	NO SIGNIFICANT DECLINE
EXTENT OF MARINE HABITAT	HECTARES	NO SIGNIFICANT DECLINE
EXTENT OF FRESHEWATER HABITAT	HECTARES/KILOMETRES	NO SIGNIFICANT DECLINE
COUCHING SITES AND HOLTS	NUMBER	NO SIGNIFICANT DECLINE
FISH BIOMASS AVAILABLE	KILOGRAMS	NO SIGNIFICANT DECLINE

2.5.2.5 Baseline Conservation Status of the site

A synopsis of the conservation status of this site is provided in Table 21 and Table 22.

Table 21: Habitat types present on site and assessment for them

Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A|B|C|D	A|B|C		
						Representativity	Relative Surface	Conservation	Global
7230			23.21		M	B	C	B	B
91E0			23.21		M	B	B	B	B

Table 22: Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
B	A038	Cygnus cygnus			w	50	200	i		G	C	B	C	B
F	1099	Lampetra fluviatilis			r				P	DD	C	B	C	B
M	1355	Lutra lutra			p				P	DD	C	A	C	A
F	1106	Salmo salar			r				C	DD	C	B	C	B

2.5.3 Boyne Estuary SPA (Site synopsis version date 30/05/15, Natura 2000 form update 09/18, Conservation Objectives version 1.0)

2.5.3.1 General Description

This moderately-sized coastal site, which is situated below the town of Drogheda, comprises most of the estuary of the Boyne River, a substantial river which drains a large catchment. Apart from one section which is over 1 km wide, the width is mostly less than 500 m. The main river channel, which is navigable and dredged, is defined by training walls, the latter being breached in places. Intertidal flats occur on the sides of the channelled river. The sediments vary from fine muds in the innermost areas to sandy muds or sands towards the mouth. The linear stretches of intertidal flats to the north and south of the river mouth are mainly sands. Intertidal areas are fringed by salt marshes in the inner sheltered areas. Spartina is frequent on the flats and salt marshes. The Boyne Estuary is one of the most important sites for wintering waterfowl on the east coast. It has a total of 10 species with populations of national importance - of particular note is that it supports 7.0% of the national total of *Calidris canutus* and 4.0% of the total for *Pluvialis apricaria*. Other species which have populations of national importance include *Tadorna tadorna*, *Haematopus ostralegus*, *Vanellus vanellus*, *Limosa limosa*, *Tringa totanus* and *Arenaria interpres*. The site provides both feeding and roosting areas for the birds. *Sterna albifrons* bred in the past but successful breeding has not occurred since 1996.

2.5.3.2 Qualifying Interests

A detailed Conservation Objectives Document has been prepared for this site. The qualifying interests of the site are identified in Table 23.

Table 23

Qualifying Interests	
** indicates a priority habitat under the Habitats Directive*	
004080	Boyne Estuary SPA
A048	Shelduck *Tadorna tadorna*
A130	Oystercatcher *Haematopus ostralegus*
A140	Golden Plover *Pluvialis apricaria*
A141	Grey Plover *Pluvialis squatarola*
A142	Lapwing *Vanellus vanellus*
A143	Knot *Calidris canutus*
A144	Sanderling *Calidris alba*
A156	Black-tailed Godwit *Limosa limosa*
A162	Redshank *Tringa totanus*
A169	Turnstone *Arenaria interpres*
A195	Little Tern *Sterna albifrons*
A999	Wetlands

2.5.3.3 Threats, pressures, and activities with negative impacts on the site

Details as to the threats, pressures, and activities with negative impacts on the site are identified from the Natura 2000 data form for the sites and are illustrated in Table 24.

Table 24: Threats, pressures and activities with impacts on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
M	E01		o
M	F01		i
M	G02.01		o
H	G01.02		i
H	I01		i
H	J02.11		i
H	J02.01.02		i
H	J02.05		i
L	F02.03		i

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	G02.01		o
M	F01		i
L	F02.03		i

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification, T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

2.5.3.4 Conservation Objectives of the site

A detailed Conservation Objectives Document has been prepared for this site and is available to download from:

https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004080.pdf

Details from this document are reproduced here. The Conservation Objectives of the site are outlined in Table 25, Table 26, Table 27, Table 28, Table 29, Table 30, Table 31, Table 32, Table 33, Table 34, Table 35 and Table 36.

Table 25

Conservation Objectives for : Boyne Estuary SPA [004080]			
A048	**Shelduck *Tadorna tadorna***		
To maintain the favourable conservation condition of Shelduck in Boyne Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by shelduck, other than that occurring from natural patterns of variation	Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 26

Conservation Objectives for : Boyne Estuary SPA [004080]			
A130	**Oystercatcher *Haematopus ostralegus***		
To maintain the favourable conservation condition of Oystercatcher in Boyne Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing and intensity of use of areas by oystercatcher, other than that occurring from natural patterns of variation	Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 27

Conservation Objectives for : Boyne Estuary SPA [004080]			
A140	**Golden Plover *Pluvialis apricaria***		
To maintain the favourable conservation condition of Golden Plover in Boyne Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of theconservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by golden plover, other than that occurring from natural patterns of variation	Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 28

Conservation Objectives for : Boyne Estuary SPA [004080]			
A141	**Grey Plover *Pluvialis squatarola***		
To maintain the favourable conservation condition of Grey Plover in Boyne Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by grey plover, other than that occurring from natural patterns of variation	Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 29

Conservation Objectives for : Boyne Estuary SPA [004080]			
A142	**Lapwing *Vanellus vanellus***		
To maintain the favourable conservation condition of Lapwing in Boyne Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by lapwing, other than that occurring from natural patterns of variation	Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 30

Conservation Objectives for : Boyne Estuary SPA [004080]			
A143	**Knot *Calidris canutus***		
To maintain the favourable conservation condition of Knot in Boyne Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by knot, other than that occurring from natural patterns of variation	Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 31

Conservation Objectives for : Boyne Estuary SPA [004080]			
A144	**Sanderling *Calidris alba***		
To maintain the favourable conservation condition of Sanderling in Boyne Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by sanderling, other than that occurring from natural patterns of variation	Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 32

Conservation Objectives for : Boyne Estuary SPA [004080]			
A156	**Black-tailed Godwit *Limosa limosa***		
To maintain the favourable conservation condition of Black-tailed Godwit in Boyne Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by black-tailed godwit, other than that occurring from natural patterns of variation	Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 33

Conservation Objectives for : Boyne Estuary SPA [004080]			
A162	**Redshank *Tringa totanus***		
To maintain the favourable conservation condition of Redshank in Boyne Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by redshank, other than that occurring from natural patterns of variation	Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 34

Conservation Objectives for : Boyne Estuary SPA [004080]			
A169	**Turnstone *Arenaria interpres***		
To maintain the favourable conservation condition of Turnstone in Boyne Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Population trend	Percentage change	Long term population trend stable or increasing	Population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	No significant decrease in the range, timing or intensity of use of areas by turnstone, other than that occurring from natural patterns of variation	Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 35

Conservation Objectives for : Boyne Estuary SPA [004080]			
A195	**Little Tern *Sterna albifrons***		
To maintain the favourable conservation condition of Little Tern in Boyne Estuary SPA, which is defined by the following list of attributes and targets:			
Attribute	**Measure**	**Target**	**Notes**
Breeding population abundance: apparently occupied nests (AONs)	Number	No significant decline	Measure based on standard tern survey methods (see Walsh et al., 1995). Mitchell et al. (2004) provides summary population information for Louth. The Seabird Monitoring Programme (SMP) also provides background data (JNCC, 2013). In 2010, 43 breeding pairs were recorded at this colony (Reilly, 2010)
Productivity rate: fledged young per breeding pair	Mean number	No significant decline	Measure based on standard tern survey methods (see Walsh et al., 1995). For 2010, an estimated productivity rate of 2.2 fledged birds per breeding pair was reported (Reilly, 2010)
Distribution: breeding colonies	Number; location; area (Hectares)	No significant decline	Little tern nest in well-camouflaged shallow scapes on sand and shingle beaches, spits or inshore islets (Mitchell et al., 2004). For a description of the area used by the colony in 2010, see Reilly (2010)
Prey biomass available	Kilogrammes	No significant decline	Key prey items: Mainly small, often juvenile, fish; invertebrates, especially crustaceans and insects. Key habitats: Very shallow water, advancing or receding tidelines, brackish lagoons and saltmarsh creeks, sand-banks close to the coast. Foraging range: Max 11km, mean max 6.94km, mean 4.14km (BirdLife International Seabird Database (Birdlife International, 2013))
Barriers to connectivity	Number; location; shape; area (hectares)	No significant increase	Seabird species can make extensive use of the marine waters adjacent to their breeding colonies. Foraging range: Max 11km, mean max 6.94km, mean 4.14km (BirdLife International Seabird Database (Birdlife International, 2013))
Disturbance at the breeding site	Level of impact	Human activities should occur at levels that do not adversely affect the breeding little tern population	Little tern nest in well-camouflaged shallow scrapes on sand and shingle beaches, spits or inshore islets (Mitchell et al., 2004)

Table 36

Conservation Objectives for : Boyne Estuary SPA [004080]			
A999	**Wetlands**		
To maintain the favourable conservation condition of the wetland habitat in Boyne Estuary SPA as a resource for the regularly-occurring migratory waterbirds that utilise it. This is defined by the following attribute and target:			
Attribute	**Measure**	**Target**	**Notes**
Habitat area	Hectares	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 594ha, other than that occurring from natural patterns of variation	The wetland habitat area was estimated as 594ha using OSi data and relevant orthophotographs. For further information see part three of the conservation objectives supporting document

2.5.3.5 Baseline Conservation Status of the site

A synopsis of the conservation status of this site is provided in Table 37.

Table 37: Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
B	A052	Anas crecca			w	230	230	i		G	C	B	C	C
B	A050	Anas penelope			w	454	454	i		G	C	B	C	C
B	A053	Anas platyrhynchos			w	197	197	i		G	C	B	C	C
B	A169	Arenaria interpres			w	175	175	i		G	C	B	C	B
B	A046	Branta bernicla			w	172	172	i		G	C	B	C	C
B	A144	Calidris alba			w	69	69	i		G	C	B	C	B
B	A149	Calidris alpina			w	480	480	i		G	C	B	C	C
B	A143	Calidris canutus			w	1771	1771	i		G	B	B	C	A
B	A137	Charadrius hiaticula			w	80	80	i		G	C	B	C	C
B	A130	Haematopus ostralegus			w	1099	1099	i		G	C	B	C	B
B	A182	Larus canus			w	145	145	i		G	C	B	C	C
B	A179	Larus ridibundus			w	593	593	i		G	C	B	C	C
B	A157	Limosa lapponica			w	76	76	i		G	C	C	C	C
B	A156	Limosa limosa			w	471	471	i		G	B	A	C	A
B	A069	Mergus serrator			w	14	14	i		G	C	B	C	C
B	A160	Numenius arquata			w	395	395	i		G	C	B	C	C
B	A017	Phalacrocorax carbo			w	97	97	i		G	C	B	C	C
B	A140	Pluvialis apricaria			w	6070	6070	i		G	B	B	C	B
B	A141	Pluvialis squatarola			w	98	98	i		G	C	B	C	B
B	A195	Sterna albifrons			r				P	M	C	C	C	C
B	A048	Tadorna tadorna			w	218	218	i		G	C	B	C	B
B	A164	Tringa nebularia			w	6	6	i		G	C	B	C	C
B	A162	Tringa totanus			w	583	583	i		G	C	A	C	B
B	A142	Vanellus vanellus			w	4657	4657	i		G	B	B	C	B

2.5.4 The River Boyne and River Blackwater SPA (Site synopsis version date 25/11/10, Natura 2000 form update 10/2020, Conservation Objectives (generic) Version 8.0.

2.5.4.1 General Description

The River Boyne and River Blackwater SPA is a long linear site that comprises stretches of the River Boyne and several of its tributaries: most of the site is in Co Meath but it extends also into Counties Cavan, Louth and Westmeath. It includes the following river sections: The River Boyne from the M1 motorway bridge, west of Drogheda, to the junction with the Royal Canal, west of Longwood, Co Meath; the River Blackwater from its junction with the River Boyne in Navan to the junction with Lough Ramor in Co Cavan; the Tremblestown River (and Athboy River) from the junction with the River Boyne at Kilnagross Bridge to the bridge in Athboy, Co Meath; the Stoneyford River from its junction with the River Boyne to Stonestone Bridge in Co. Westmeath; the River Deel from its junction with the River Boyne to Cummer Bridge, Co.Westmeath. The site includes the river channel and marginal vegetation. The River Boyne and River Blackwater SPA supports nationally important numbers of *Alcedo atthis*. Other species which occur within the site include *Cygnus olor*, *Anas crecca*, *Anas platyrhynchos*, *Phalacrocorax carbo*, *Ardea cinerea*, *Gallinula chloropus*, *Gallinago gallinago* and *Riparia riparia*.

2.5.4.2 Qualifying Interests

The Qualifying Interest (QI) of the River Boyne and River Blackwater SPA is

- Kingfisher, *Alcedo atthis*

2.5.4.3 Threats, pressures and activities with negative impacts on the site

Details as to the threats, pressures and activities with negative impacts on the site are identified from the Natura 2000 data form for the sites and are illustrated in Table 38.

Table 38: Threats, pressures and activities with impacts on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
M	J02		i
H	E01		o
H	D01.02		i
H	D01.02		o
H	E01.03		o

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
L	X		i

Rank: H = high, M = medium, L = low
Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,
T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions
i = inside, o = outside, b = both

2.5.4.4 Conservation Objectives

The primary conservation objective (generic) of this site is to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:

- Kingfisher (*Alcedo atthis*)

There is currently no detailed conservation objectives document prepared referring specifically to Kingfisher as a Qualifying Interest. It is, therefore, not possible to infer Conservation Objectives for this Qualifying Interest.

2.5.4.5 Baseline Conservation Status

A synopsis of the conservation status of this site is provided in Table 39.

Table 39: Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A|B|C|D	A|B|C		
						Min	Max				Pop.	Con.	Iso.	Glo.
B	A229	Alcedo atthis			r	19	19	p		G	C	B	C	B
B	A052	Anas crecca			w	166	166	i		G	C	B	C	C
B	A053	Anas platyrhynchos			w	219	219	i		G	C	B	C	C
B	A028	Ardea cinerea			w	44	44	i		G	C	B	C	C
B	A017	Phalacrocorax carbo			w	36	36	i		G	C	B	C	C

2.6 Identification and evaluation of likely significant effect

2.6.1 Description of source-pathway-receptor linkages and identification of "Zone of Influence"

The basis for identifying potential impacts/significance thereof and defining the zone of influence is the "Source-Pathway-Receptor" (S-P-R) model. This model underpins all water-protection schemes in Ireland, as well as the EU Water Framework Directive on which both surface water and groundwater regulations are based. When examining S-P-R relationships in regard to impacts on Natura 2000 sites, the main questions to be considered are:

1) Source characterisation – Identification of potential source(s) of the impact(s);
2) Pathway's analysis – Identification of means through which potential impacts could take place, for example is there a hydrogeological or hydrological link that can deliver a pollutant source to a nearby receptor; and
3) Receptor identification – identification of Natura 2000 sites/qualifying interests potentially affected.

The River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA pass through the area of the Public Realm Plan (see Figure 26 and Figure 27).

The conservation objectives of the qualifying interests of the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA (and indeed those species for which the sites are not designated, but which are key to the ecological integrity of the sites) are directly or indirectly dependent on water quality.The sources of impact most likely to impact on these Natura 2000 sites concern impacts on water quality within the Slane Public Realm Plan area associated with components of the plan.

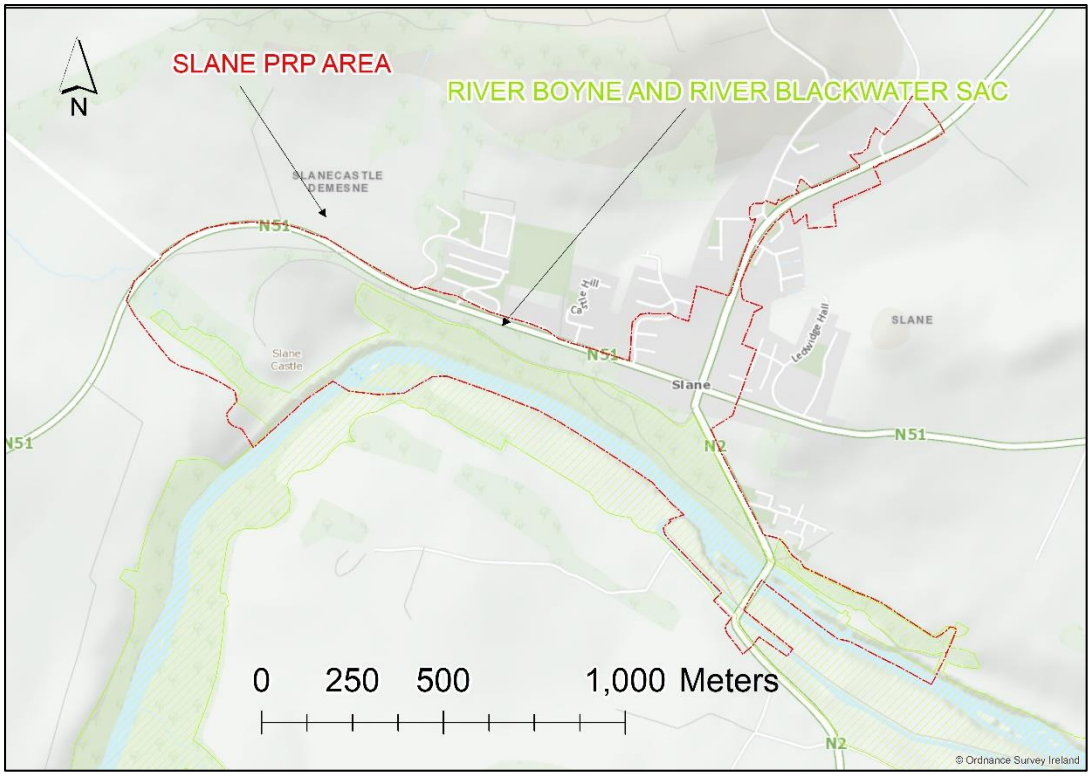

Figure 26: Location of SAC relative to Slane PRP

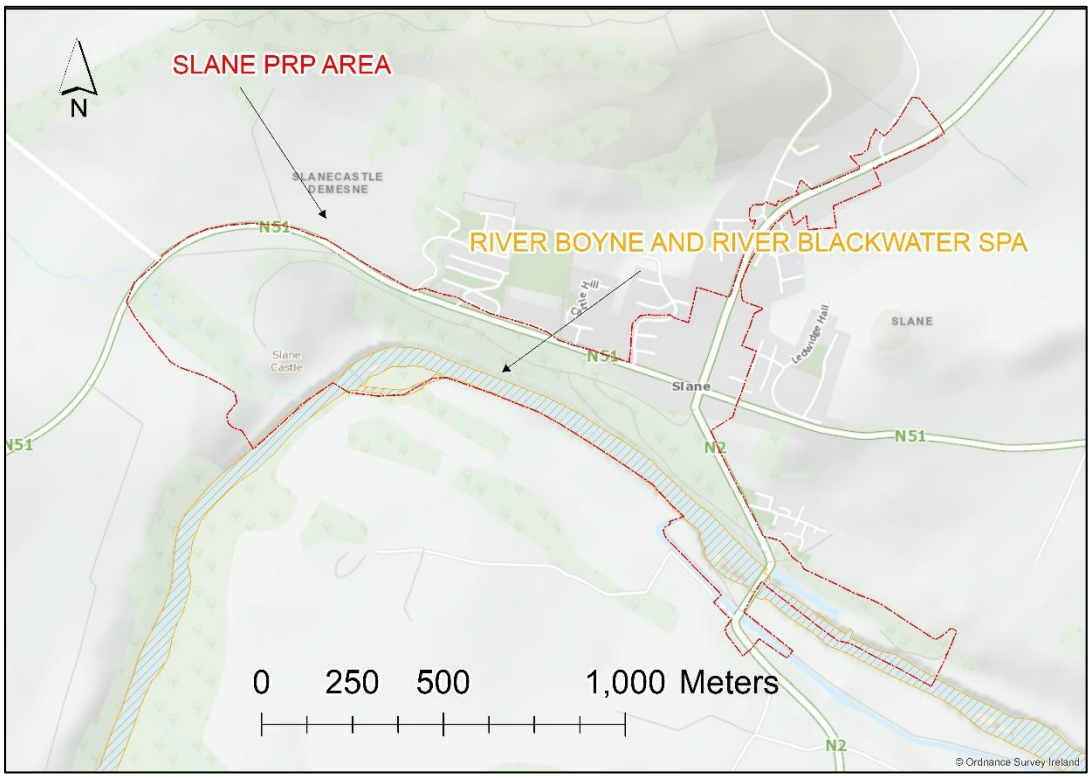

Figure 27: Location of SPA relative to Slane PRP

Therefore, the key questions to be considered are:

1) Is there any source(s) of impact(s) on water quality associated with the proposed development?
2) Is there a pathway present between the source of impact and a Natura 2000 site; and
3) What are the Natura 2000 sites/qualifying interests potentially impacted upon?

2.6.2 Sources of potential impacts

Sources of potential impacts are:

- Impacts associated with contamination of surface and/or ground water during construction and/or operation;
- Increased disturbance of the River Boyne ecological corridor as it passes through the Public Realm Plan area.

2.6.3 Presence of pathway and receptor

The primary receptor of concern is the River Boyne (primary component of both the River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA), which passes through the area of the Slane Public Realm Plan.

Several components of the plan have the potential to impact on ground and/or surface waters during the operation of the proposed development, providing a source-pathway-receptor linkage during the operational phase.

Several components of the plan have the potential to cause disturbance to fauna associated with the River Boyne and ecological corridor during both the construction and operation of the proposed development, providing a source-pathway-receptor linkage during the operational phase.

2.6.4 Natura 2000 site(s) with potential to be impacted upon and Zone of Influence

There is potential for negative impacts on both the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA through any impacts on:

- Hydrology/water quality; and/or
- Disturbance

The nature and scale of the proposed developments with the Public Realm Plan area and the distance of the Slane Public Realm Plan area (almost 15 km) from the Boyne Estuary and Coast SAC and the

Boyne Estuary SPA would indicate that there is no significant potential for there to be any negative impact of the proposed Public Realm Plan on these Natura 2000 sites.

The "Zone of Influence" should, therefore, be limited to:

- The River Boyne and River Blackwater SAC; and
- The River Boyne and River Blackwater SPA.

2.6.5 Sources of potential Direct, Indirect or Secondary Impacts

2.6.5.1 Direct Impacts

One of the components of the Slane Public Realm Plan are proposed new pedestrian routes from the village centre to the River Boyne and along the river. These proposed routes pass through the SAC and the creation of these new routes has the potential to have a direct impact on the Natura 2000 site through land take, habitat loss, etc.

2.6.5.2 Indirect Impacts

Several components of the Public Realm Plan have the potential to impact on the water quality of the River Boyne. The latest Q Value (2020) at monitoring station RS07B042100 (see Figure 28) indicates the water quality is good, with a Q-Value of 4. Any negative impact of the Public Realm Plan on water quality has the potential to impact negatively on the conservation objectives of both the River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA.

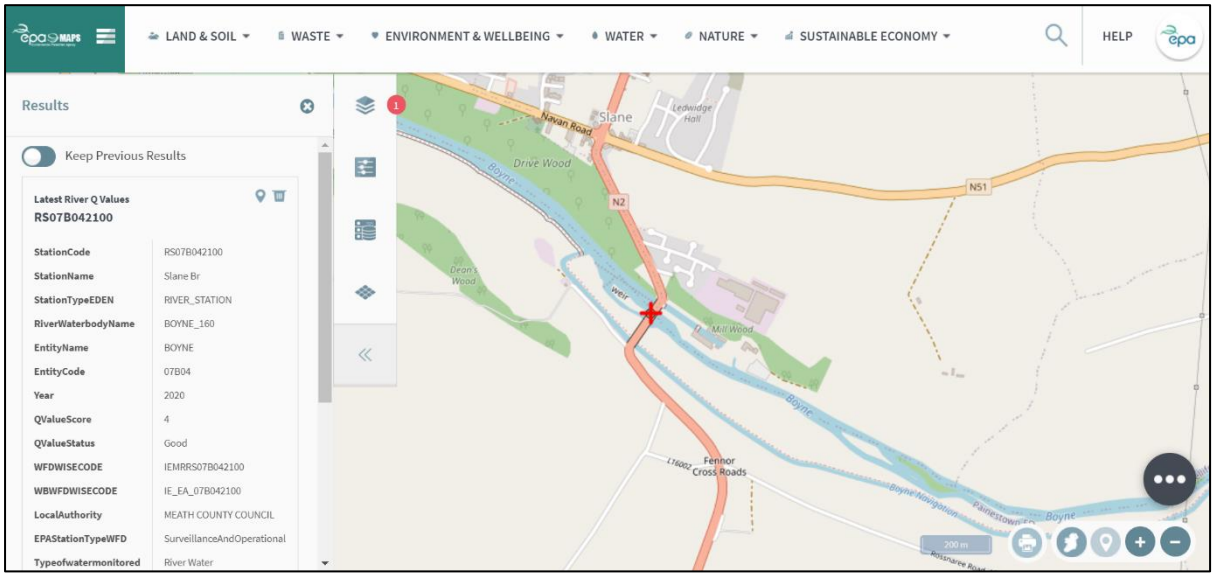

Figure 28: Excerpt from EPA database indicating location of monitoring station

There are a number of components of the Public Realm Plan that also have the potential to increase disturbance levels in the vicinity of the River Boyne and associated ecological corridor – for instance, the proposed new pedestrian routes till result in increased footfall in the vicinity of the river, which may increase disturbance levels to Otter, Kingfisher, etc.

2.6.5.3 Secondary Impacts

Major secondary impacts are unlikely owing to the nature, scale, and location of the proposed plans.

A summary of the potential for impacts upon Natura 2000 sites within the zone of influence of the proposed development is summarized in Table 40. The potential for impacts upon the Natura 2000 sites identified in the event of negative impacts is summarized in Table 41. The potential for impacts on the qualifying interests of identified Natura 2000 sites is summarized in Table 42.

Table 40: Summary of the potential for impacts upon Natura 2000 sites.

Site Name	Direct Impacts	Indirect/ Secondary Impacts	Resource requirements (water abstraction etc.)	Emissions (to land, water or air)	Excavation requirements	Duration of construction, operation and decommissioning
Boyne Coast and Estuary SAC	None foreseen	None foreseen	None foreseen	None foreseen	None foreseen	None foreseen
River Boyne and River Blackwater SAC	None foreseen	Potential	None foreseen	Potential	Potential	Potential
Boyne Estuary SPA	None foreseen	None foreseen	None foreseen	None foreseen	None foreseen	None foreseen
River Boyne and River Blackwater SPA	None foreseen	Potential	None foreseen	Potential	Potential	Potential

Table 41: Summary of the potential for changes to Natura 2000 sites.

Site Name	Reduction of habitat area	Disturbance to key species	Habitat/species fragmentation	Reduction in species density	Changes in Key Indicators of Conservation Value	Climate change
Boyne Coast and Estuary SAC	None foreseen	None foreseen	None foreseen	None foreseen	None foreseen	None foreseen
River Boyne and River Blackwater SAC	Potential	Potential	Potential	Potential	Potential	Potential
Boyne Estuary SPA	None foreseen	None foreseen	None foreseen	None foreseen	None foreseen	None foreseen
River Boyne and River Blackwater SPA	Potential	Potential	Potential	Potential	Potential	Potential

Table 42: Summary of potential impacts on Qualifying Interests of Natura 2000 sites identified as at risk of impact

Site name	Qualifying Interest	Potential Impact
River Boyne and River Blackwater SAC	[7230] Alkaline fens	Habitat is located many kilometres upstream of proposed development – no impact foreseen
	[91E0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (priority)	Habitat is located several kilometres downstream of proposed development – no impact foreseen
	[1099] River Lamprey	Potential impacts associated with changes in hydrology/water quality
	[1106] Atlantic Salmon	Potential impacts associated with changes in hydrology/water quality
	[1355] Otter	Potential impacts associated with changes in hydrology/water quality, impacts on prey items, potential impacts through increased disturbance
River Boyne and River Blackwater SPA	A229 Kingfisher *Alcedo atthis*	Potential impacts associated with changes in hydrology/water quality, impacts on prey items, potential impacts through increased disturbance

2.6.6 Potential cumulative impacts in association with other plans

Article 6(3) of the Habitats Directive requires an assessment of a plan/project to consider other plans/projects that might, in combination with the proposed plan/project, have the potential to adversely impact upon Natura 2000 sites. A generic list of such plans/projects is indicated in Table 43.

Table 43: Potential cumulative impacts.

Plan	Purpose	Cumulative impact
EU Water framework Directive	Maintain and enhance water quality within the EU	None predicted
EU Freshwater Fish Directive	Protect freshwater bodies within the EU suitable for sustaining fish populations	None predicted
EU Groundwater Directive	Maintain and enhance the quality of groundwater within the EU	None predicted
EU Floods Directive	The Floods Directive applies to river basins and coastal areas at risk of flooding	None predicted
Nitrates Directive	Reducing water pollution within the EU	None predicted
Urban Waste-water treatment Directive	Protecting the environment from adverse impacts of waste-water discharge	None predicted
Sewage Sludge Directive	Regulate the use of sewage sludge	None predicted
The IPPC Directive	To achieve a high level of environmental protection	None predicted
National Development Plan	To promote more balanced spatial and economic development	None predicted
National Spatial Strategy	To achieve a better balance of social, economic and physical development across Ireland	None predicted
Eastern CRFAM	Long-term planning for reducing and managing flood risk	Potential in combination impacts on water quality in absence of mitigation measures.
Meath Development Plans	Sustainable development of Co. Meath	None predicted
Local Area Development Plans	Various	None predicted
Quarrying activities, water abstraction, discharge, etc	Various	Potential in-combination impacts on water quality in absence of mitigation measures
Current and future planning permissions –	Various	An Appropriate Assessment Screening exercise of any planning permission would be undertaken.
Meath Co. Council Part 8's	Various	An Appropriate Assessment Screening exercise of any Part 8 would be undertaken
Land spreading of organic waste by farmers in the locality	Fertilising land, disposing of organic waste	Potential in-combination impacts on water quality in absence of mitigation measures
Slane By-pass	Reducing traffic congestion in village	Significant potential for in combination impacts, in particular with regard to any changes to Slane Bridge

The primary source of any cumulative impacts concerns impacts on ground and/or surface water. Of note is the presence of the Slane (D0257-01) Wastewater Treatment Plant with discharge reference

point TPEFF2300D0257SW001. According to the latest on-line AER[1], the compliance status of the Emission Limit Values is "Non-compliant". The cause of exceedance (ortho-Phosphate) is stated as "*…Slane WWTP is not designed for phosphorous removal. …*". It is noted in the Annual Environmental Report that "*…The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status…*". The Organic Capacity (PE) of the WWTP is 610, and the capacity will not be exceeded int the next three years.

There are likely numerous other point and diffuse sources of emissions that are currently unrecorded. The cumulative impact of such sources must be considered through ensuring that the proposed Public Realm Plan has no significant potential to impact on water quality and/or hydrology. An excerpt from the National Planning Application Database is provided in Figure 29.

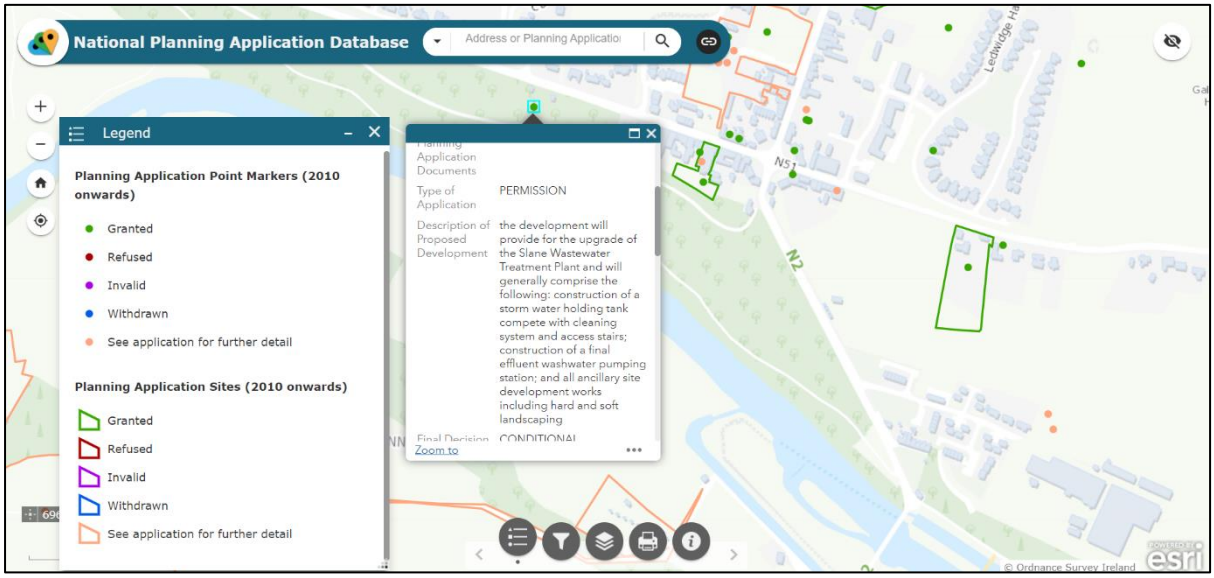

Figure 29: **Excerpt from online National Planning Database application indicating several recent planning permissions in the area of the PRP adjacent to the River Boyne, including planning permission for the upgrading of the Slane WWTP – none are deemed likely to have cumulative negative impacts with the PRP**

A query of the EIA portal[2] would indicate that there are no projects in the vicinity of the Slane PRP requiring EIA (see Figure 30). It must be noted, however, that planning ref 21/424 upstream of the Slane PRP (Painestown, Co. Meath C15 CF38 and townlands of Painestown, Seneschalstown,

1 https://www.water.ie/docs/aers/

2 https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=d7d5a3d48f104ecbb206e7e5f84b71f1

Dollardstown, Hayestown-Carryduff Little & Arcmulchan, Co. Meath) does include "*…new treated effluent rising main from WWTP in Painestown to the River Boyne, Arcmulchan…*".

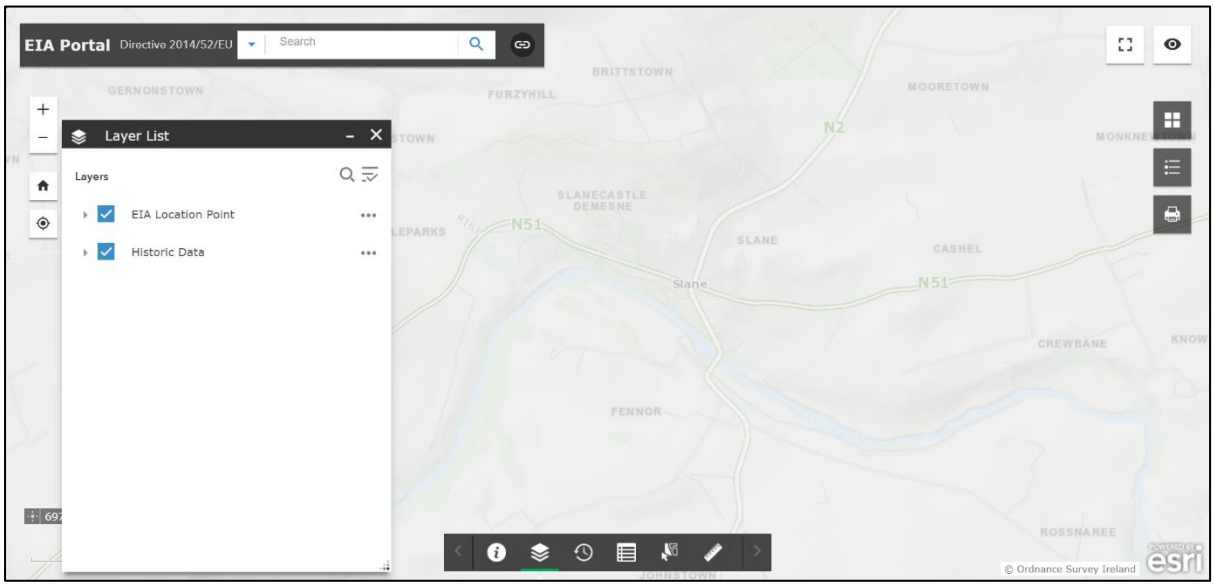

Figure 30: Query of EIA portal for projects requiring EIA in the vicinity of the Slane PRP

Any potential impacts on water quality must be avoided.

Of particular note with regard to cumulative impacts is any proposed new bridge over the River Boyne associated with a bypass of Slane. Any new bridge has a very significant potential to impact negatively on the use of the River Boyne, an internationally important ecological corridor by numerous species of conservation concern. In particular, the impact of any new crossing on the use of the River Boyne by bats must be considered. Any changes to the current Slane Bridge must, therefore, be taken into account.

2.6.7 "Do nothing" scenario

Any potential impacts associated with the Public Realm Plan would be avoided.

2.6.8 Gauging of Impacts on Natura 2000 sites – Integrity of site checklist

The potential impacts of the proposed development on Natura 2000 sites are gauged using a checklist, which aids in determining the potential of development to have a significant impact on any Natura 2000 site. This checklist consists of a number of pertinent questions as set out in Table 44.

Table 44: Potential of the proposed development to impact on Natura 2000 sites in the absence of suitable mitigation/preventative measures

Does the Plan have the potential to:	Yes/No
Cause delays in progress towards achieving the conservation objectives of the Natura 2000 site?	YES
Interrupt progress toward achieving the conservation objectives of the Natura 2000 site?	YES
Disrupt those factors helping to maintain the favourable conditions at the Natura 2000 site?	YES
Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the Natura 2000 site?	YES
Cause changes to the vital defining aspects (e.g., nutrient balance) that determine how the Natura 2000 site functions as a habitat or ecosystem?	YES
Change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the Natura 2000 site?	YES
Interfere with predicted or expected natural changes to the Natura 2000 site (such as water dynamics or chemical composition)?	YES
Reduce the area of key habitats within the Natura 2000 site?	YES
Reduce the population of key species of the Natura 2000 site?	YES
Alter the balance between key species of the Natura 2000 site?	YES
Reduce the biodiversity of the Natura 2000 site?	YES
Result in disturbance that could affect population size or density or the balance between key species within the Natura 2000 site?	YES
Result in fragmentation?	YES
Result in the loss or reduction of key features of Natura 2000 sites?	YES

2.7 Conclusions of screening

According to the guidance published by the NPWS (DoEHLG, 2009), Screening for Appropriate Assessment can either identify that a Natura Impact Statement (NIS) is not required where:

(1) A project/proposal is directly related to the management of the site; or

(2) There is no potential for significant impacts affecting the Natura 2000 network

Where the screening process identifies that significant impacts are certain, likely or uncertain the project must either proceed to Stage II Appropriate Assessment or be rejected.

The potential impacts that will arise from the proposed Slane Public Realm Plan have been examined in the context of a number of factors that could potentially impact upon the integrity of the Natura 2000 network. On the basis of the findings of this Screening for Appropriate Assessment, it is concluded that the proposed plan:

(1) Is not directly connected with or necessary to the management of a Natura 2000 site and

(2) May have significant impacts on one or more Natura 2000 sites.

Following an examination, analysis and evaluation of the relevant information and the potential for significant effects on the conservation objectives of Natura 2000 sites, and applying the Precautionary Principle, it is not possible to exclude (on the basis of objective information and in the absence of specific prescribed precautionary/mitigation measures) that the proposed plan individually or in combination with other plans or projects, has the potential to have significant negative impacts on the following Natura 2000 sites:

- River Boyne and River Blackwater SAC; and
- River Boyne and River Blackwater SPA

Screening having identified potential impacts of the proposed plan upon these Natura 2000 sites and in accordance with Article 6(3) of the Habitats Directive, a Stage 2 Appropriate Assessment is required, i.e., "*The consideration of the impact of the project or plan on the integrity of the Natura 2000 Site, either alone or in combination with other projects or plans to the sites structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts.*"

3 Appropriate Assessment

The potential for significant negative impacts of the proposed Slane Public Realm Plan on the ecological integrity of the River Boyne and River Blackwater SAC and River Boyne and River Blackwater SPA, in light of the conservation objectives of these sites, is examined in this section.

3.1 Stage 2 Appropriate Assessment background

Screening having identified potential impacts Stage 2 Appropriate Assessment is carried out to determine if the plan/project will have any significant negative impacts on the integrity of the Natura 2000 site(s) identified as being at risk. For the purposes of Appropriate Assessment, a significant effect is any effect that may affect the Conservation Objectives of the Qualifying Interest for which a site was designated but excluding inconsequential effects. If the effect is not relevant to the conservation objective, then it cannot be a significant effect for the purposes of Appropriate Assessment. A likely significant effect, for the purpose of Appropriate Assessment must be:

(a) Significant;
(b) Relevant to the conservation objective for that site; and
(c) The possibility of effects cannot be reasonably excluded.

This stage of the Appropriate Assessment process includes:

1) Impact Prediction - the potential impact of the proposed development on the ecological integrity of Natura 2000 sites in terms of the conservation objectives of those sites is assessed; and
2) Mitigation Measures – mitigation/preventative measures are identified (either in place or to be implemented) in relation to any significant negative impacts associated with the proposed development on the Natura 2000 sites as described herein.

This stage of the Appropriate Assessment process involves the identification of potentially impacted sites, the identification of the qualifying interests of those sites, and an assessment of the significance of impacts on the conservation objectives of those sites. Any negative impacts on the integrity of structure, function or conservation objectives of these sites will require the implementation of avoidance or mitigation measures to avoid progression to Stages 3 and 4 of the Appropriate Assessment process.

3.2 Summary of Conservation Objectives of Natura 2000 sites potentially exposed to significant negative impacts

The focus of the Appropriate Assessment process at the second stage must be on the integrity of European sites "in light of their conservation objectives." A detailed analysis of Natura 2000 sites is given in Section 2.5 as regards:

- General Description;
- Qualifying Interests;
- Threats, Pressures and Activities with negative impacts;
- Conservation Objectives; and
- Conservation Status

A summary of the current conservation status of the qualifying interests (Nationally as indicated in the NPWS document "Status of EU Protected Habitats and Species in Ireland (2019)", and site specific as recorded in the individual Natura 2000 form) and conditions underpinning site integrity is presented in Table 45. A summary of the Conservation Objectives of each site is presented in Table 46.

Table 45: Summary of Conservation Status of Qualifying Interests and conditions underpinning site integrity

SITE NAME/CODE	QUALIFYING INTERESTS HABITAT/SPECIES CODE	NATIONAL CONSERVATION STATUS (2019)		SITE ASSESSMENT OF CONSERVATION STATUS (NATURA 2000 DATA FORM)		CONDITIONS UNDERPINNING SITE INTEGRITY
RIVER BOYNE AND RIVER BLACKWATER SAC						
	[7230]	RANGE	FAVOURABLE	REPRESENTATIVITY	B	• WATER QUALITY • APPROPRIATE AGRICULTURAL PRACTICES • SURFACE AND GROUND WATER QUALITY • APPROPRIATE LEVELS OF DISTURBANCE • WATER LEVELS • AIR QUALITY • TIDAL CURRENTS (LOWER REACHES)
		AREA	INADEQUATE ↓	RELATIVE SURFACE	C	
		STRUCTURES AND FUNCTIONS	BAD (unknown)	CONSERVATION	B	
		FUTURE PROSPECTS	UNFAVOURABLE/BAD	GLOBAL	B	
		OVERALL STATUS	BAD (↓)			
		OVERALL TREND	DETERIORATING			
	91E0 (PRIORITY HABITAT)	RANGE	FAVOURABLE (=)	REPRESENTATIVITY	B	
		AREA	BAD (↓)	RELATIVE SURFACE	B	
		STRUCTURES AND FUNCTIONS	INADEQUATE (↓)	CONSERVATION	B	
		FUTURE PROSPECTS	BAD	GLOBAL	B	
		OVERALL STATUS	BAD↓			
		OVERALL TREND	DETERIORATING			
	[1099]	RANGE	UNKNOWN	REPRESENTATIVITY	C	
		POPULATION	UNKNOWN	RELATIVE SURFACE	B	
		HABITAT	FAVOURABLE (=)	CONSERVATION	C	
		FUTURE PROSPECTS	UNKNOWN	GLOBAL	B	
		OVERALL STATUS	UNKNOWN			
		OVERALL TREND	UNKNOWN			
	[1106]	RANGE	FAVOURABLE (=)	REPRESENTATIVITY	C	
		POPULATION	INADEQUATE (↓)	RELATIVE SURFACE	B	
		HABITAT	FAVOURABLE (=)	CONSERVATION	C	
		FUTURE PROSPECTS	UNFAVOURABLE/INADEQUATE	GLOBAL	B	
		OVERALL STATUS	INADEQUATE (=)			
		OVERALL TREND	STABLE			

SITE NAME/CODE	QUALIFYING INTERESTS HABITAT/SPECIES CODE	NATIONAL CONSERVATION STATUS (2019)		SITE ASSESSMENT OF CONSERVATION STATUS (NATURA 2000 DATA FORM)		CONDITIONS UNDERPINNING SITE INTEGRITY
	[1355]	RANGE	FAVOURABLE (=)	REPRESENTATIVITY	C	
		POPULATION	FAVOURABLE (↑)	RELATIVE SURFACE	A	
		HABITAT	FAVOURABLE (=)	CONSERVATION	C	
		FUTURE PROSPECTS	FAVOURABLE	GLOBAL	A	
		OVERALL STATUS	FAVOURABLE (↑)			
		OVERALL TREND	IMPROVING			
RIVER BOYNE AND RIVER BLACKWATER SPA						
	[A229]	N/A	N/A	POPULATION	C	• WATER QUALITY • APPROPRIATE AGRICULTURAL PRACTICES • SURFACE AND GROUND WATER QUALITY • APPROPRIATE LEVELS OF DISTURBANCE • WATER LEVELS • AIR QUALITY • TIDAL CURRENTS (LOWER REACHES)
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	

Table 46: Summary of Conservation Objectives of relevant Natura 2000 sites

SITE NAME/CODE	QUALIFYING INTERESTS	CONSERVATION OBJECTIVE
RIVER BOYNE AND RIVER BLACKWATER SAC		
	ALKALINE FENS [7230]	To maintain or restore favourable conservation condition
	ALLUVIAL FORESTS WITH ALNUS GLUTINOSA AND FRAXINUS EXCELSIOR [91E0] (PRIORITY HABITAT)	To maintain or restore favourable conservation condition
	RIVER LAMPREY [1099]	To maintain or restore favourable conservation condition
	ATLANTIC SALMON [1106]	To maintain or restore favourable conservation condition
	OTTER [1355]	To maintain or restore favourable conservation condition
RIVER BOYNE AND RIVER BLACKWATER SPA		
	KINGFISHER [A229]	To maintain or restore favourable conservation condition

3.3 Impact Prediction

3.3.1 Identified Pathways

As identified in Section 2, the Public Realm Plan area includes the ecological corridor associated with the River Boyne, the primary component of the River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA. There is potential for numerous components of the proposed Public Realm Plan to impact on the Conservation Objectives of the Qualifying Interests of these Natura 2000 sites. The ambition of the Slane Public Realm Plan is "…*to offer solutions to reorganise the street layout across the village centre and further to the south along Dublin Road to create a functional yet pleasant environment to move around, shop and interact. The proposal includes the redesign of the junction on the square, the creation of a new village square, the general reorganisation of the two main roads crossing the village and finally the creation of more pedestrian friendly and improved .recreational connections along the southern approach of the village*…".

For ease of interpretation, the location of the primary components of the proposed layout for the Slane Public Realm Plan area are identified in Figure 31.

One of the primary components with the potential to impact negatively on the conservation status of the qualifying interests of the Natura 2000 site is the proposed and/or enhanced access to existing walkways highlighted in pink in Figure 31 and associated activities such as recreational use of the water basins and the use of the Millhouse as a venue for events and touristic destination (see Figure 34). These elements will require at minimum a comprehensive Ecological Impact Assessment and EIA screening in order to determine the extent of the potential for impacts on biodiversity, including the ecological integrity of the River Boyne and associated ecological corridor. For example, it is highly likely that the Millhouse and associated buildings are utilised by numerous species of roosting bats – both for maternity and hibernation roosts given the proximity to an internationally important ecological corridor and Slane Castle Demesne.

The primary impact of the components of the PRP (excluding new pathways linking the village centre and the Boyne corridor) concerned with the proposed layout of the village centre is an impact on water quality.

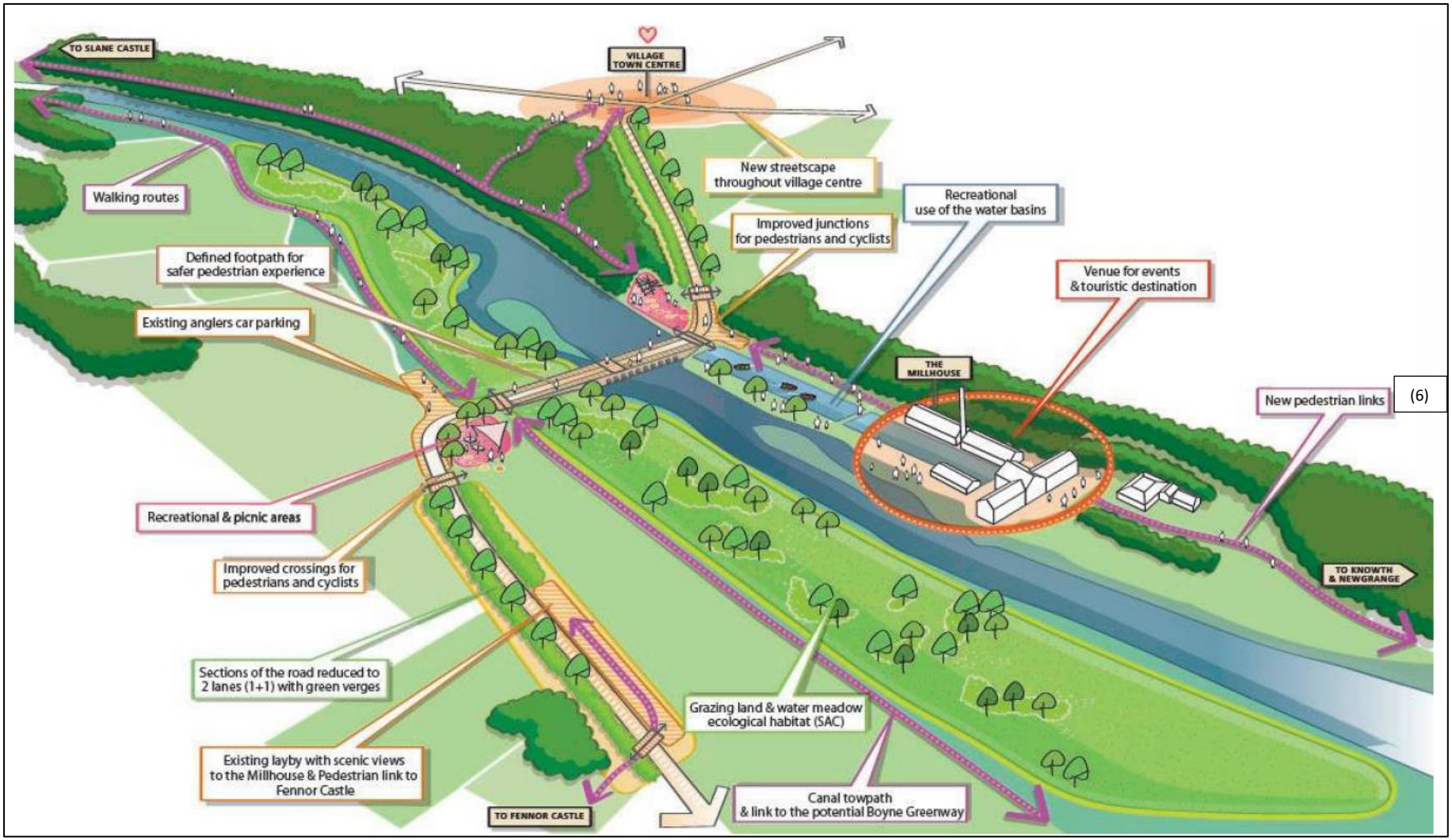

Figure 31: Primary components of Slane Public Realm Plan

The primary impact of the components of the PRP (excluding pathway development) concerned with the proposed Southern Approach are:

- Potential impacts on water quality – particularly with regards to any resurfacing works; and
- Potential impacts associated with disturbance, primarily through changes in lighting and increased footfall. While many species of fauna may have habituated to vehicles crossing the bridge, the presence of pedestrians, dogs, etc. may have a profound impact.

Figure 32: Old Millhouse and *environs*

Figure 33: Slane Bridge - proposed plans will have impact of increasing footfall over bridge

3.3.2 Potential Impacts on Qualifying Interests of sites

The Qualifying Interests (habitat/species), Primary Location of Qualifying Interests, Sensitivities of Qualifying Interests and Potential Impacts affecting Qualifying Interests is indicated in Table 47. The location of the Primary Locations of two Qualifying Interest habitats (both within the River Boyne and River Blackwater SAC – [7230] and [91E0]) are indicated in Figure 34 and Figure 35.

Table 47: Summary of potential impacts on Qualifying Interests of relevant Natura 2000 sites

SITE NAME/CODE	QUALIFYING INTERESTS	PRIMARY LOCATION	SENSITIVITIES	POTENTIAL IMPACTS (INCLUDING THOSE ASSOCIATED WITH CLIMATE CHANGE)
RIVER BOYNE AND RIVER BLACKWATER SAC				
	ALKALINE FENS [7230]	LOUGH SHESK, FREEHAN LOUGH AND NEWTOWN LOUGH - APPROXIMATELY 30 KM (UPSTREAM) FROM OPERATIONS (SEE MAP A)	• DISRUPTION TO AND/OR ACIDIFICATION OF WATER FEEDING FEN	• CHANGES IN HYDROLOGICAL REGIME
	ALLUVIAL FORESTS WITH ALNUS GLUTINOSA AND FRAXINUS EXCELSIOR [91E0] (PRIORITY HABITAT)	BOYNE ISLANDS, 2.5 KM WEST OF DROGHEDA, APPROIXIMATELY 22 KM (DOWNSTREAM) FROM OPERATIONS (SEE MAP B)	• CHANGES IN HYDROLOGICAL REGIME • ALIEN INVASIVE PLANT SPECIES	• CHANGES IN HYDROLOGICAL REGIME
	RIVER LAMPREY [1099]	THROUGHOUT	• CHANGES IN HYDROLOGICAL REGIME • CHANGES IN WATER QUALITY • ALIEN INVASIVE PLANT SPECIES	• CHANGES IN HYDROLOGICAL REGIME • CHANGE IN CHEMICAL AND/OR NUTRIENT STATUS OF WATER AND/OR SILT • CHANGES IN DEPOSITION OF SILT IN HABITAT • IMPACTS ON FEEDING AMMOCOETES THROUGH SILTATION AND/OR BIOACCUMULATION
	ATLANTIC SALMON [1106]	THROUGHOUT	• CHANGES IN HYDROLOGICAL REGIME • CHANGES IN WATER QUALITY • ALIEN INVASIVE PLANT SPECIES	• CHANGES IN HYDROLOGICAL REGIME • CHANGE IN CHEMICAL AND/OR NUTRIENT STATUS OF WATER • BIOACCUMULATION OF CONTAMINANTS

SITE NAME/CODE	QUALIFYING INTERESTS	PRIMARY LOCATION	SENSITIVITIES	POTENTIAL IMPACTS (INCLUDING THOSE ASSOCIATED WITH CLIMATE CHANGE)
River Boyne and River Blackwater SPA	OTTER [1355]	THROUGHOUT	• CHANGES IN HYDROLOGICAL REGIME • CHANGES IN WATER QUALITY • ALIEN INVASIVE PLANT SPECIES • DISTURBANCE	• CHANGES IN HYDROLOGICAL REGIME • CHANGE IN CHEMICAL/NUTRIENT STATUS COULD IMPACT ON PREY SPECIES • BIOACCUMULATION OF CONTAMINANTS
	KINGFISHER [A229]	THROUGHOUT	• CHANGES IN HYDROLOGICAL REGIME • CHANGES IN WATER QUALITY • ALIEN INVASIVE PLANT SPECIES • DISTURBANCE	• CHANGES IN HYDROLOGICAL REGIME • CHANGE IN CHEMICAL/NUTRIENT STATUS COULD IMPACT ON PREY SPECIES • BIOACCUMULATION OF CONTAMINANTS

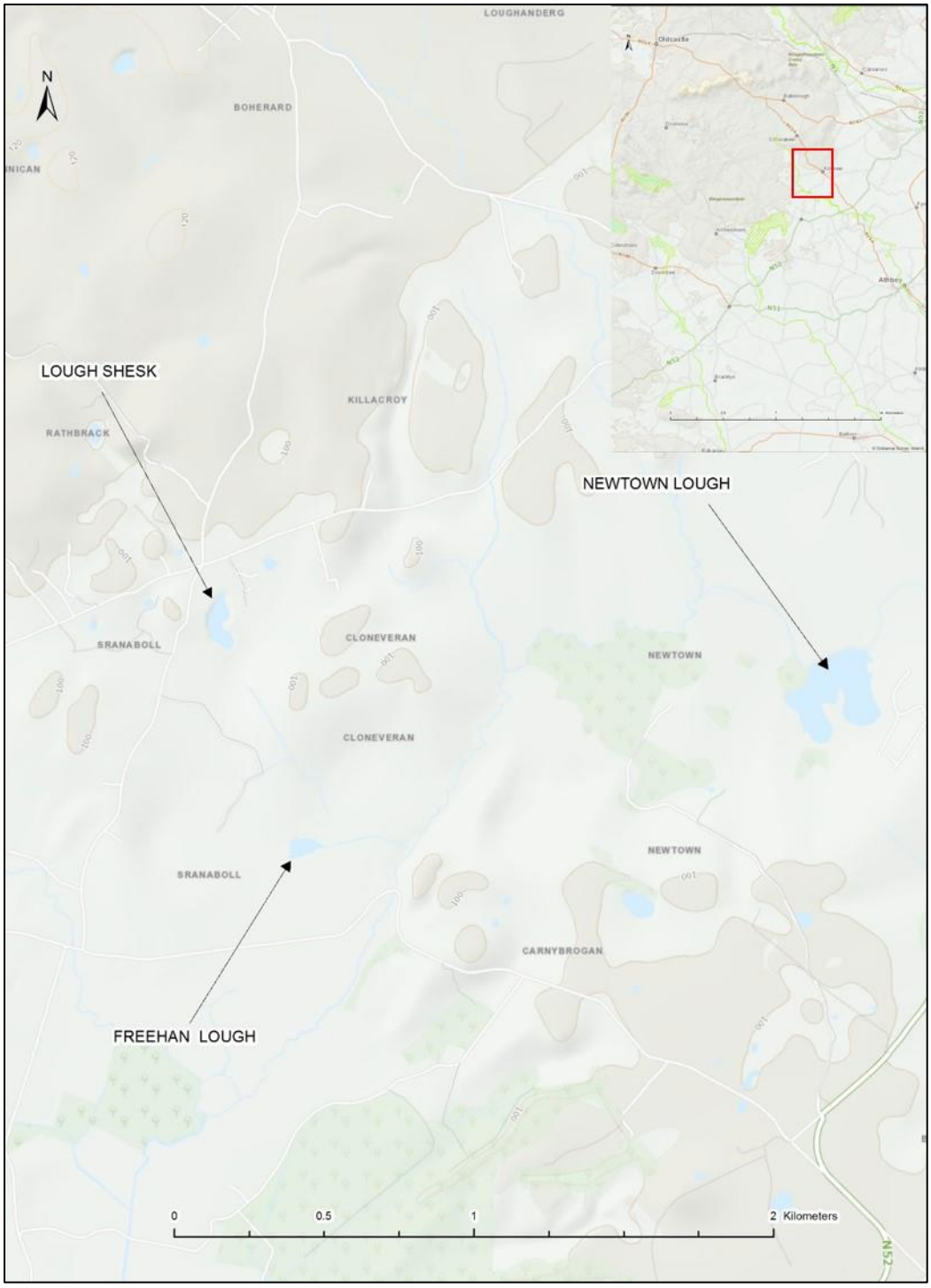

Figure 34 Map illustrating location of three loughs within the River Boyne and River Blackwater where [7230] occurs

Figure 35: Map illustrating location of Boyne Islands, on which [91E0], a priority habitat occurs

3.3.3 Sources of Potential Impacts associated with proposed Public Realm Plan

The sources of potential direct, indirect and secondary impacts related to the proposed plan are identified in Section 2.6. The sources of impacts are primarily associated with:

- Impacts on water quality; and
- Impacts associated with disturbance.

A summary of potential impacts on Qualifying Interests of relevant Natura 2000 sites and the sources of potential impacts are provided in Table 48.

Table 48: Summary of potential impacts on Qualifying Interests of relevant Natura 2000 sites and the sources of potential impacts

SITE NAME/CODE	QUALIFYING INTERESTS	POTENTIAL IMPACTS	SOURCE(S) OF IMPACT(S) ASSOCIATED WITH PROPOSED PLAN
RIVER BOYNE AND RIVER BLACKWATER SAC			
	ALKALINE FENS [7230]	• CHANGES IN HYDROLOGICAL REGIME	• None foreseen
	ALLUVIAL FORESTS WITH ALNUS GLUTINOSA AND FRAXINUS EXCELSIOR 91E0 (PRIORITY HABITAT)	• CHANGES IN HYDROLOGICAL REGIME	• None foreseen
	RIVER LAMPREY [1099]	• CHANGE IN CHEMICAL AND/OR NUTRIENT STATUS OF WATER AND/OR SILT • CHANGES IN DEPOSITION OF SILT IN HABITAT • IMPACTS ON FEEDING AMMOCOETES THROUGH SILTATION AND/OR BIOACCUMULATION • CHANGES IN HYDROLOGICAL REGIME	• CONTAMINATION OF SURFACE WATER DURING CONSTRUCTION/OPERATION • CONTAMINATION OF GROUND WATER DURING CONSTRUCTION/OPERATION
	ATLANTIC SALMON [1106]	• CHANGE IN CHEMICAL AND/OR NUTRIENT STATUS OF WATER • BIOACCUMULATION OF CONTAMINANTS • CHANGES IN HYDROLOGICAL REGIME	• CONTAMINATION OF SURFACE WATER DURING CONSTRUCTION/OPERATION • CONTAMINATION OF GROUND WATER DURING CONSTRUCTION/OPERATION
	OTTER [1355]	• CHANGE IN CHEMICAL/NUTRIENT STATUS COULD IMPACT ON PREY SPECIES • BIOACCUMULATION OF CONTAMINANTS • INCREASED DISTURBANCE IMPACTING HABITAT USAGE • CHANGES IN HYDROLOGICAL REGIME	• CONTAMINATION OF SURFACE WATER DURING CONSTRUCTION/OPERATION • CONTAMINATION OF GROUND WATER DURING CONSTRUCTION/OPERATION • DISTURBANCE
RIVER BOYNE AND RIVER BLACKWATER SPA			
	KINGFISHER [A229]	• CHANGE IN CHEMICAL/NUTRIENT STATUS COULD IMPACT ON PREY SPECIES • BIOACCUMULATION OF CONTAMINANTS • CHANGES IN HYDROLOGICAL REGIME • INCREASED DISTURBANCE IMPACTING HABITAT USAGE	• CONTAMINATION OF SURFACE WATER DURING CONSTRUCTION/OPERATION • CONTAMINATION OF GROUND WATER DURING CONSTRUCTION/OPERATION • DISTURBANCE

3.4 Summary of Elements of Public Realm Plan with potential for significant negative impacts on Conservation Objectives of Qualifying Interests

Several elements of the proposed Slane Public Realm Plan have the potential, in the absence of mitigation measures, to impact negatively on the Natura 2000 network:

1) Addition of new walking routes and upgrading of walking routes. Any additional or new changes to connectivity including new walking routes linking the village with the River Boyne (and inherent increased usage) must be informed by detailed ecological assessment in order to determine the extent of potential impacts on water quality and or disturbance of ecological elements including (but not limited to) Qualifying Interests of the River Boyne and River Blackwater SPA. Any changes in lighting adjacent to the River would be of particular potential concern with regards to both construction and operation;
2) Recreational use of the Millhouse and associated water basins. The water basins likely provide optimal foraging habitat for bat species such as Daubenton's Bat and proximity of suitable roosting habitat (Millhouse and associated buildings) and woodland habitat in addition to an ecological corridor of international importance (River Boyne).; Any change of the use of these features must be informed by a comprehensive, year-long survey of the fauna utilising the habitats present in order to determine the extent of potential impacts on water quality and or disturbance of ecological elements including (but not limited to) Qualifying Interests of the River Boyne and River Blackwater SAC/SPA. Any changes in lighting adjacent the River Boyne (or indeed the Boyne Navigation Canal) would be of particular potential concern with regards to both construction and operation;
3) Planned resurfacing works, particularly in the immediate vicinity of the River Boyne have the potential to impact on water quality. Planned resurfacing of Slane Bridge and the development of enhanced pedestrian facilities (and any associated services such as changes to lighting) may have the potential to cause increased disturbance also. Any potential impacts of a new crossing associated with the Slane Bypass must also be taken into account.

3.5 Mitigation Measures – avoiding potential impacts

The primary sources of potential impacts associated with (limited components of) the Slane Public Realm Plan are:

- Impacts on water quality; and
- Impacts associated with increased disturbance.

3.5.1 Impacts on water quality

The primary source of potential negative impacts on the conservation objectives of both the River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA regards the potential for impacts on the water quality of the River Boyne and any drains, etc. discharging to the river.

The primary mitigation measures to be implemented will involve the protection of water quality. During any works, protection of water quality is paramount, and should be ensured by implementing the following mitigation measures in addition to any site-specific mitigation measures identified by the site engineer, etc.:

The Contractor shall undertake all proposed works in such a manner as to avoid degradation of water quality either by pollution (in particular, from any paint-chips, chemicals utilised to remove paint/rust, etc.) from oil spills, or contamination due to concreting or grouting operations, or by causing turbidity due to disturbance of silt or spoil from operations.

Specific measures to be taken to prevent the above shall include the following:

- The Undertaker shall take special precautions in relation to protection of watercourses. Temporary environmental screens shall be erected sufficient to prevent construction debris (paint chips/rust, etc.), abrasive materials, oils, chemicals or other construction materials from entering any watercourse/drain for the duration of the works. The Undertaker's method statement should make specific reference to measures for the protection of river quality;
- Undertaker's plant, equipment etc. shall be free of any mechanical defects, and be well maintained so as to prevent soil or fuel leaks into the river;
- Undertaker's plant, equipment etc. must arrive on site free of propagules of any plant species listed on Part (1) of the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations of 2011;
- The Undertaker shall so arrange that the cleaning out of concrete delivery trucks and equipment does not cause run-off to enter any watercourse/drains, etc.;

- The Undertaker's method statement should make specific reference to measures for the protection of river water quality, to include measures to ensure no spillage of fuel or cement/lime-based material or any other leakages occur to any drains/water courses for the duration of the works;
- All works will be undertaken in accordance with the following best practice guidelines for working alongside watercourses:
    - CIRIA Control of Water Pollution from Construction sites – Guidance for Consultants and Contactors (2001).
    - Eastern Regional Fisheries Board Guidance Notes 'Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites' (Eastern Regional Fisheries Board, 2006);
    - NRA Guidelines (2006) NRA Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes.

It is essential that there be no impact on water quality of the River Boyne or any water-course associated with the River Boyne owing to the operation of the proposed Public Realm Plan. To this end:

1) There must be no changes in discharge of any kind (including storm drains, etc.) to the River Boyne. There must be, for example, protective elements put in place associated with any new car parking areas such that any contamination during operation (leaking hydrocarbons from cars/ water associated with the extinguishing of a fire, etc.) does not enter the River;
2) Vehicular access to any new pedestrian pathways must be prevented. For example, it should not be possible to drive "Scrambling Motor Bikes" over these pathways as this could result in greatly increased disturbance and the potential for contamination of the watercourse.

3.5.2 Impacts associated with disturbance

There is potential for increased disturbance of both Qualifying Interests of the relevant Natura 2000 sites and other fauna of conservation concern – in particular, bats. A comprehensive ecological impact assessment of those aspects of the Public Realm Plan with the potential to increase disturbance should be undertaken in order to inform the mitigation measures necessary. Screening for EIA will also be required for these elements (in particular the proposed new pathways and any change of use as regards the Millhouse and associated habitats). The significance of potential impacts on the conservation objectives of qualifying interests following the implementation of mitigation measures is outlined in Table 49.

Table 49: Significance of potential impacts following implementation of mitigation measures

SITE NAME/CODE	QUALIFYING INTERESTS	POTENTIAL IMPACTS	SIGNIFICANCE OF IMPACTS ON QI FOLLOWING IMPLEMENTATION OF MITIGATION MEASURES
RIVER BOYNE AND RIVER BLACKWATER SAC			
	ALKALINE FENS [7230]	• NO IMPACTS FORESEEN	NOT SIGNIFICANT
	ALLUVIAL FORESTS WITH ALNUS GLUTINOSA AND FRAXINUS EXCELSIOR [91E0] (PRIORITY HABITAT)	• NO IMPACTS FORESEEN	NOT SIGNIFICANT
	RIVER LAMPREY [1099]	• CHANGE IN CHEMICAL AND/OR NUTRIENT STATUS OF WATER AND/OR SILT • CHANGES IN DEPOSITION OF SILT IN HABITAT • IMPACTS ON FEEDING AMMOCOETES THROUGH SILTATION AND/OR BIOACCUMULATION	NOT SIGNIFICANT
	ATLANTIC SALMON [1106]	• CHANGE IN CHEMICAL AND/OR NUTRIENT STATUS OF WATER • BIOACCUMULATION OF CONTAMINANTS	NOT SIGNIFICANT
RIVER BOYNE AND RIVER BLACKWATER SPA	OTTER [1355]	• CHANGE IN CHEMICAL/NUTRIENT STATUS COULD IMPACT ON PREY SPECIES • BIOACCUMULATION OF CONTAMINANTS	NOT SIGNIFICANT
	KINGFISHER [A229]	• CHANGE IN CHEMICAL/NUTRIENT STATUS COULD IMPACT ON PREY SPECIES • BIOACCUMULATION OF CONTAMINANTS	NOT SIGNIFICANT

4 Conclusions

In order for AA to comply with the criteria set out in the Habitats Directive and the Planning and Development Act 2000, an AA undertaken by the Competent Authority must include an examination, analysis, evaluation, findings, conclusions, and a final determination.

Following the identification of a potential impact(s) upon one or more Natura 2000 sites through an Appropriate Assessment Screening exercise, a Stage 2 Appropriate Assessment of the proposed Slane Public Realm Plan has been carried out in accordance with the requirements of Article 6(3) of the Habitats Directive (Council Directive 92/43/EEC). The information to enable the Competent Authority to perform its statutory function in this regard is presented within this NIS.

Following an examination, analysis, and evaluation of the relevant information, and applying the precautionary principle, it is the professional opinion of the author of this report that there will be no adverse impact on the integrity of any of relevant Natura 2000 sites, assuming the implementation of all mitigation/preventative measures as outlined. Consequently, there will be no risk of adverse effects on Qualifying Interest habitats or species, nor the attainment of specific conservation objectives, either alone or in-combination with other plans or projects, for the relevant Natura 2000 sites. The ecological integrity of the Natura 2000 sites concerned (connected with qualifying interests for which the sites have been designated) will not be significantly impacted.

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www.meath.ie – official website of Meath County Council.

www.npws.ie – website of the National Parks and Wildlife Service, source of information for data regarding Natura 2000 sites and Article 17 Conservation Assessments.

www.europa.eu – official website of the European Union, source of information on EU Directives.