NATURA IMPACT STATEMENT IN SUPPORT OF APPROPRIATE ASSESSMENT
OF THE PUBLIC REALM PLAN FOR ATHBOY, CO MEATH
JUNE 2021

fers

June 2021 by:

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EXECUTIVE SUMMARY

The Athboy Public Realm Plan sets out the future approach to the streets and spaces of the town. The aim of the vision statement is to:

"…Improve the public realm of Athboy for all users through enhancing pedestrian movement, exploring new connections and linking amenity spaces. In addition, the street scene should be enhanced by improving the layout, pedestrian crossings and car parking along with protecting the existing trees and vegetation…"

The objectives developed were:

1) *Improve footpaths and connections to all parts of the town;*
2) *Add more regular safe crossing points;*
3) *Remove echelon parking and replace with parallel parking on the main street;*
4) *Relocate the bus stop to the western end of the town;*
5) *Introduce timed parking restrictions;*
6) *Improve access to the community centre;*
7) *Identify and bring derelict sites back into use;*
8) *Extend circular route around the town;*
9) *Enhance the setting and interpretation of Athboy's heritage;*
10) *Rationalise street furniture;*
11) *Strategy to have underground wires;*
12) *Preserve and enhance trees and vegetation in appropriate positions in the town centre; and*
13) *Set out guidance and specifications for materials, furniture, and other public realm fixtures.*

The town of Athboy is situated in an ecologically sensitive location, with the Athboy River, a component of both the River Boyne and River Boyne SAC and the River Boyne and River Blackwater SPA passing through the eastern end of the town. As such, Appropriate Assessment screening of any plan/project in this sensitive location is required. In May of 2021, FERS Ltd was commissioned by Meath Co Council to undertake an Appropriate Assessment screening of the Athboy 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 Athboy, 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 Athboy Public Realm Plan sets out the future approach to the streets and spaces of the town. The aim of the vision statement is to:

"*…Improve the public realm of Athboy for all users through enhancing pedestrian movement, exploring new connections and linking amenity spaces. In addition, the street scene should be enhanced by improving the layout, pedestrian crossings and car parking along with protecting the existing trees and vegetation…*".

The extent of the Athboy Public Realm Plan is indicated in Figure 1, Figure 2, Figure 3 and Figure 5. A map indicating the location of the PRP relative to surrounding habitats is presented in Figure 6. The conceptual layout of the Public Realm Plan is illustrated in Figure 6.

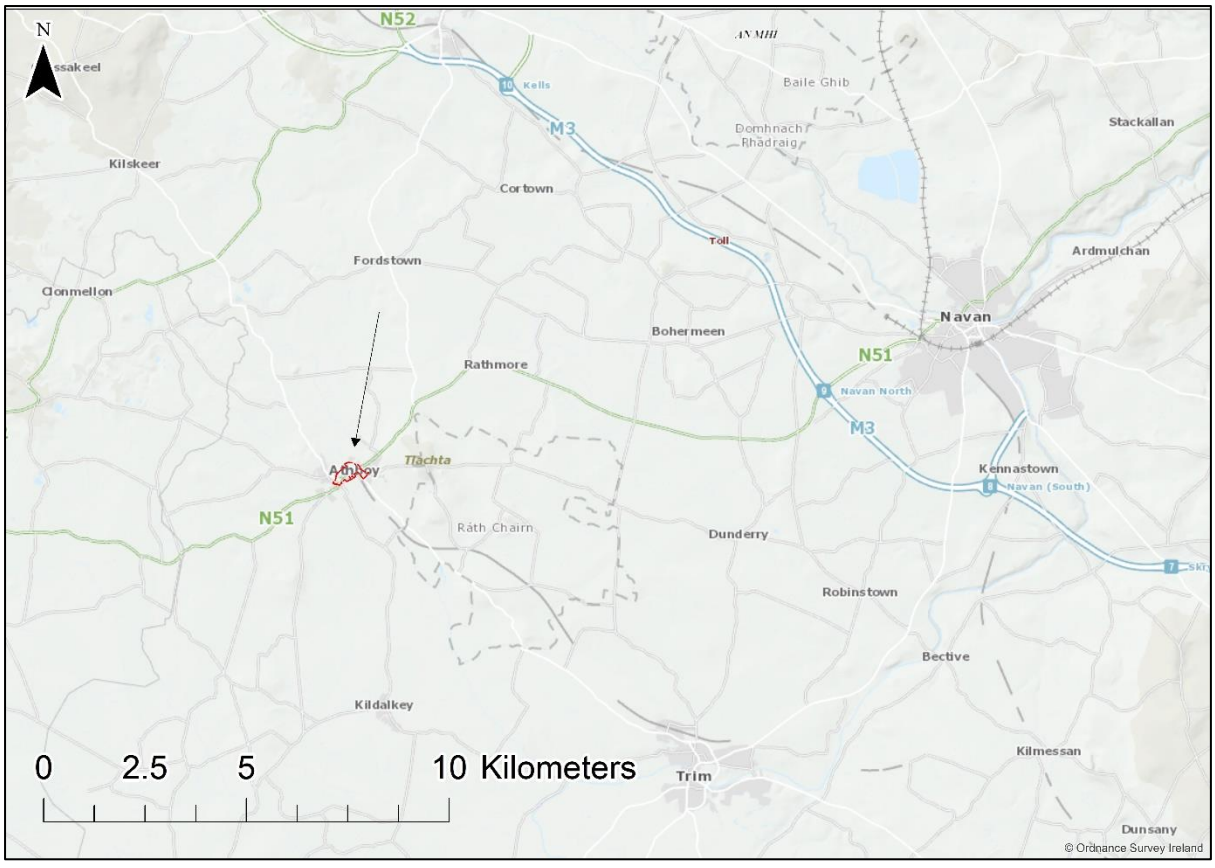

Figure 1: Location of Athboy Public Realm Plan area (1:100,000)

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

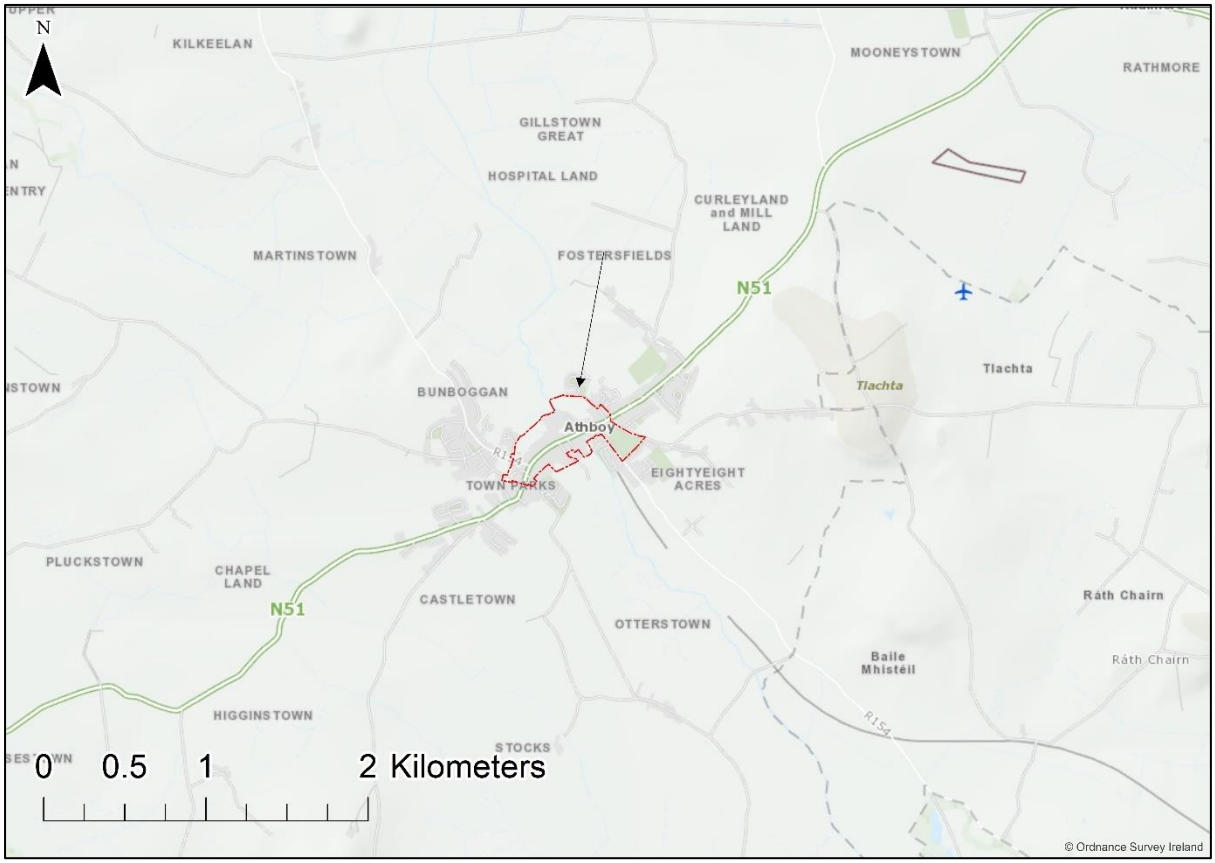

Figure 3: Location of Athboy Public Realm Plan area (1:25,000)

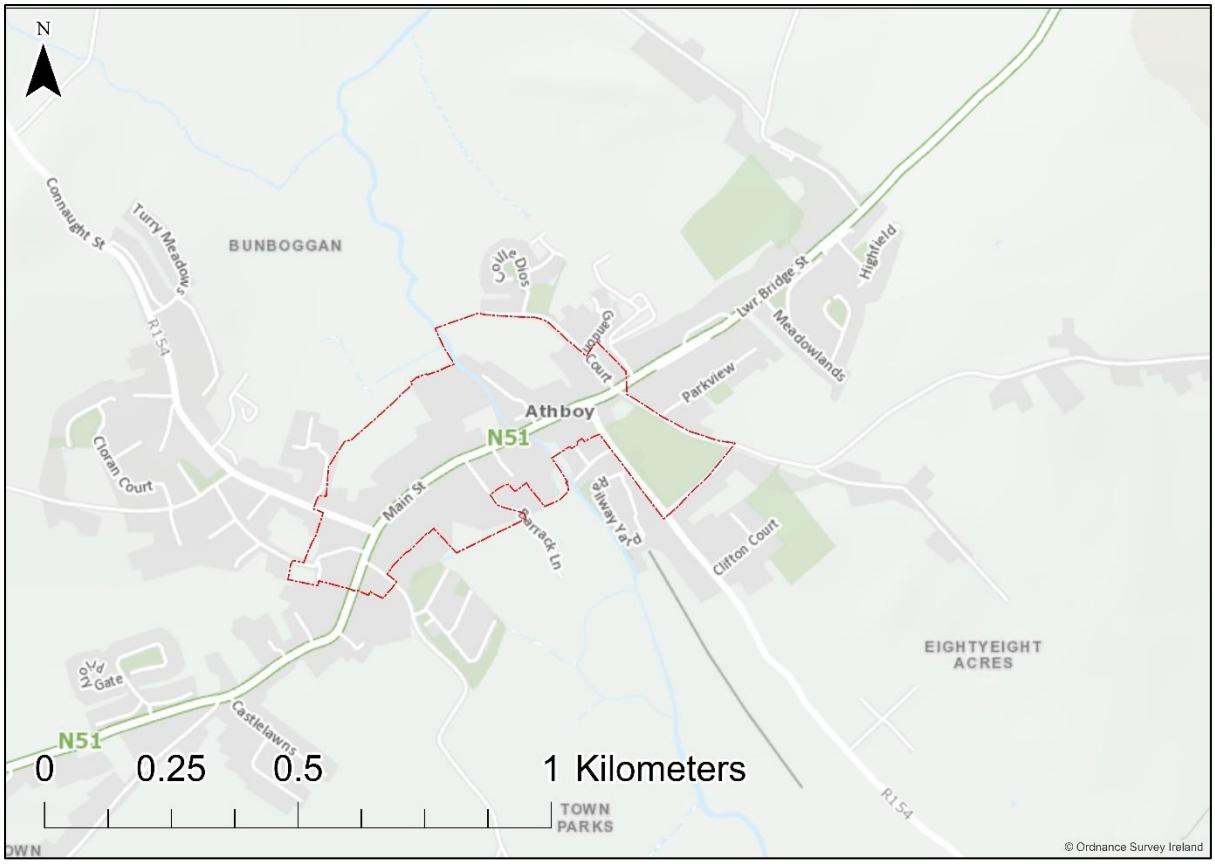

Figure 4: Location of Athboy Public Realm Plan area (1:8,000)

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

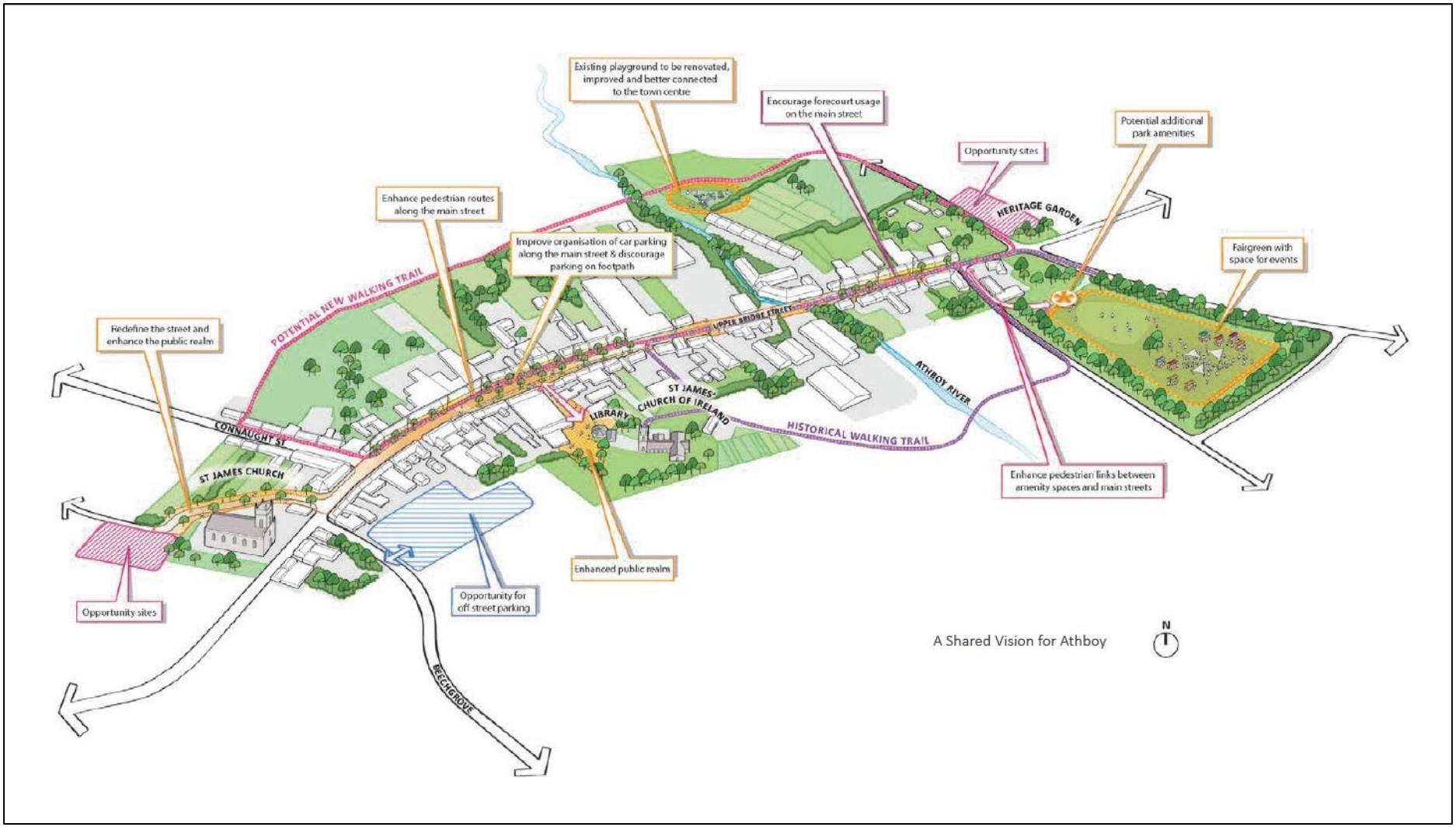

Figure 6: Conceptual Layout of Athboy Public Realm Plan

2.2 Description of existing conditions on site

A site visit was carried out on June 3rd, 2021, by Dr Patrick Moran. Aerial Images of Athboy and *environs* illustrating some of the key areas to which the Public Realm Plan are applicable are provided in Figure 7, Figure 8, Figure 9, Figure 10, Figure 11, Figure 13 and Figure 14. Photographs of the primary areas relevant to the Public Realm Plan are presented in Figure 15, Figure 16, Figure 17, Figure 18, Figure 19 and Figure 20. Historical mapping (2nd Edition OSI) is overlain on the aerial imagery illustrating the relative lack of major change over the last 100 years to the layout of the town in Figure 21.

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 Athboy and associated habitat and there are numerous suitable roosts present within the area of the Public Realm Plan. Dipper are known to nest in the vicinity of the bridge over the River at Mainstreet and indeed Dipper were observed in the vicinity on the day of the survey.

Figure 7: Aerial image of main street looking west

Figure 8: Aerial image of Fair-green and main street

Figure 9: Aerial of Athboy River South of Main Street

Figure 10: Aerial of Athboy Rover South of Main Street

Figure 11: Aerial image of approximate location of crossing of potential new walking trail

Figure 12: Aerial image of crossing point of Athboy river for historical walking trail

Figure 13: Aerial image of "opportunity sites"

Figure 14: Aerial image of existing playground area

Figure 15: View on main street facing east

Figure 16: View on main street facing west

Figure 17: Athboy River South of Main Street

Figure 18: Athboy River North of Main Street

Figure 19: Prescribed "Pollinator Friendly" area along historic river walk

Figure 20: Photograph illustrating the open space known as The Fair Green, which is present on the 1st Edition OSI Mapping

Figure 21: 2nd Edition OSI mapping overlain with aerial imagery indicating that the layout of the town has been largely unchanged for over 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 03/06/21 to query records occurring within the vicinity of the Public Realm Plan (10 km square, N76 see Figure 22). The species of conservation concern as recorded within this 10 km square are illustrated in Table 1.

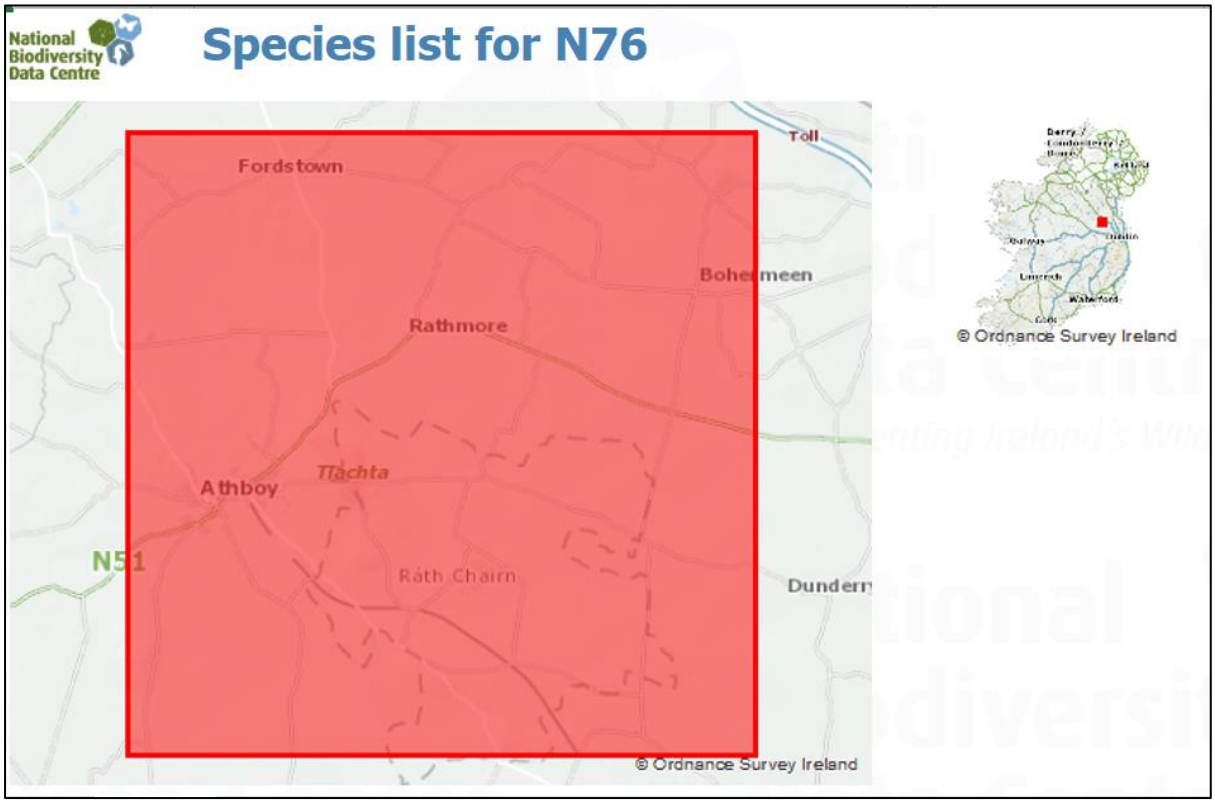

Figure 22: Location of polygon queried (National Biodiversity Data Centre)

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	17/10/2020
Tyto alba	Barn Owl	31/12/2011
Hirundo rustica	Barn Swallow	31/12/2011
Larus ridibundus	Black-headed Gull	31/12/2011
Fulica atra	Common Coot	29/02/1984
Locustella naevia	Common Grasshopper Warbler	31/07/1972

Scientific Name	**Common Name**	**Date of last record**
Falco tinnunculus	Common Kestrel	22/07/2015
Alcedo atthis	Common Kingfisher	31/12/2011
Carduelis cannabina	Common Linnet	31/12/2011
Phasianus colchicus	Common Pheasant	31/12/2011
Gallinago gallinago	Common Snipe	13/04/2016
Sturnus vulgaris	Common Starling	31/12/2011
Apus apus	Common Swift	31/12/2011
Columba palumbus	Common Wood Pigeon	31/12/2011
Crex crex	Corn Crake	31/07/1972
Numenius arquata	Eurasian Curlew	31/12/2011
Anas crecca	Eurasian Teal	01/04/2010
Passer montanus	Eurasian Tree Sparrow	24/10/2015
Scolopax rusticola	Eurasian Woodcock	13/04/2016
Pluvialis apricaria	European Golden Plover	29/02/1984
Phalacrocorax carbo	Great Cormorant	01/04/2010
Perdix perdix	Grey Partridge	31/07/1972
Pluvialis squatarola	Grey Plover	29/02/1984
Delichon urbicum	House Martin	13/04/2016
Passer domesticus	House Sparrow	31/12/2011
Tachybaptus ruficollis	Little Grebe	31/07/1991
Anas platyrhynchos	Mallard	31/12/2011
Falco columbarius	Merlin	29/02/1984
Cygnus olor	Mute Swan	20/04/2010
Vanellus vanellus	Northern Lapwing	31/12/2011
Falco peregrinus	Peregrine Falcon	31/12/2011
Lagopus lagopus	Red Grouse	31/07/1972
Columba livia	Rock Pigeon	31/12/2011
Riparia riparia	Sand Martin	31/12/2011
Alauda arvensis	Sky Lark	19/06/2015
Muscicapa striata	Spotted Flycatcher	31/12/2011
Columba oenas	Stock Pigeon	31/12/2011
Emberiza citrinella	Yellowhammer	31/12/2011

Scientific Name	**Common Name**	**Date of last record**
Huperzia selago	Fir Clubmoss	06/01/2018
Ribes nigrum	Black Currant	23/05/2005
Prunus laurocerasus	Cherry Laurel	25/05/2005
Rhododendron ponticum	Rhododendron ponticum	27/09/2020
Acer pseudoplatanus	Sycamore	25/05/2005
Tandonia budapestensis	Budapest Slug	07/04/1982
Tandonia sowerbyi	Keeled Slug	07/04/1982
Candidula intersecta	Wrinkled Snail	07/04/1982
Leucobryum glaucum	Large White-moss	25/05/1978
Zootoca vivipara	Common Lizard	06/09/2020
Mustela vison	American Mink	08/04/1992
Rattus norvegicus	Brown Rat	24/10/2013
Myotis daubentonii	Daubenton's Bat	20/08/2014
Sciurus carolinensis	Eastern Grey Squirrel	31/12/2012
Meles meles	Eurasian Badger	31/12/2016
Lutra lutra	European Otter	30/09/2010
Oryctolagus cuniculus	European Rabbit	08/09/2013
Nyctalus leisleri	Lesser Noctule	14/07/2014
Martes martes	Pine Marten	09/04/2009
Pipistrellus pipistrellus sensu lato	Pipistrelle	12/08/2014
Pipistrellus pygmaeus	Soprano Pipistrelle	12/08/2014

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 one area designated as a Special Protection Area within 15 km of the proposed Public Realm Plan (see Table 2, Figure 23 and Figure 24).

Table 2: Natura 2000 sites within 15km of the proposed development

SITE CODE	DESIGNATION	SITE NAME
002203	SAC	GIRLEY (DREWSTOWN) BOG SAC
002299	SAC	RIVER BOYNE AND RIVER BLACKWATER SAC
004232	SPA	RIVER BOYNE AND RIVER BLACKWATER SPA

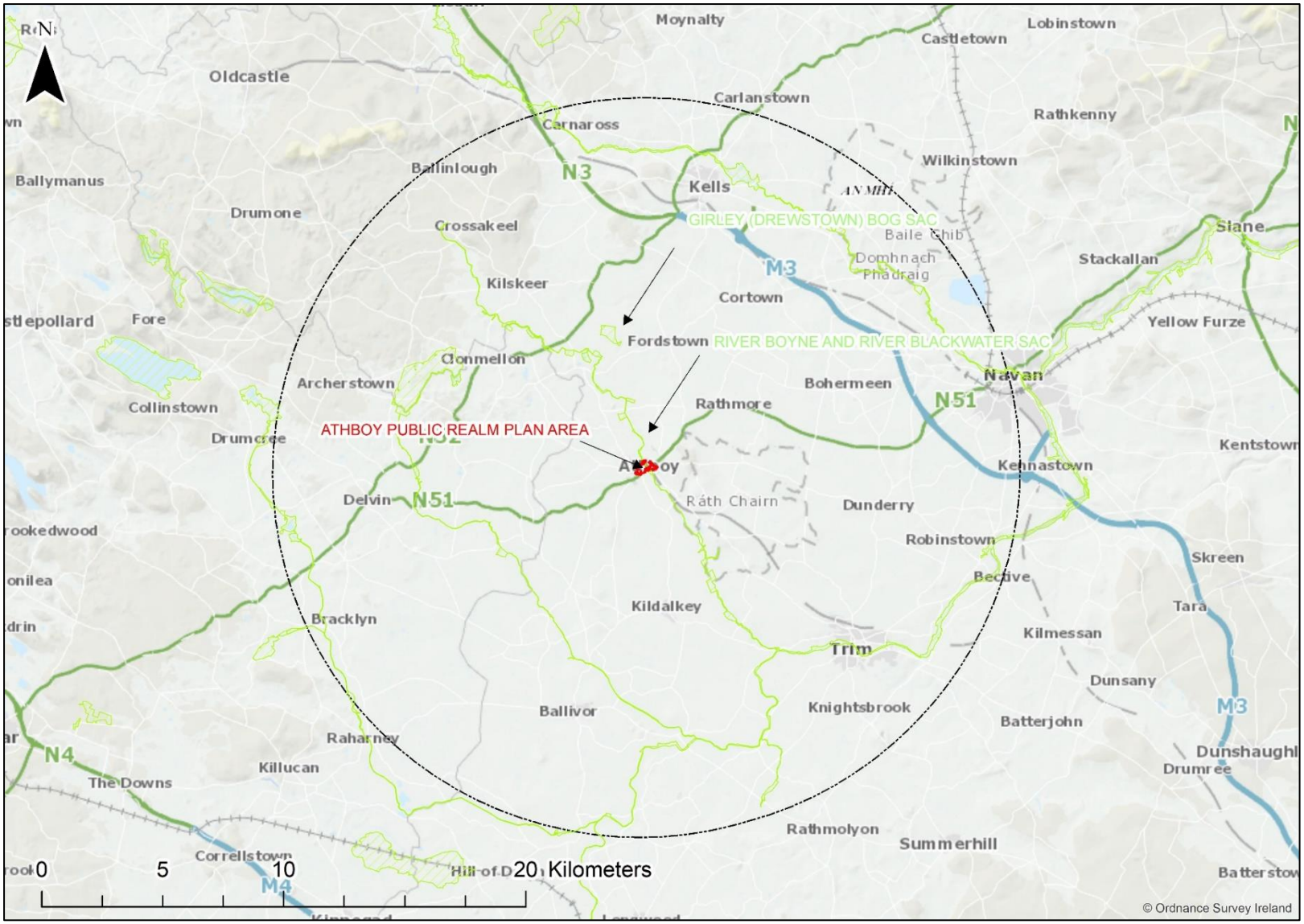

Figure 23: Location of SACs within 15 km of PRP

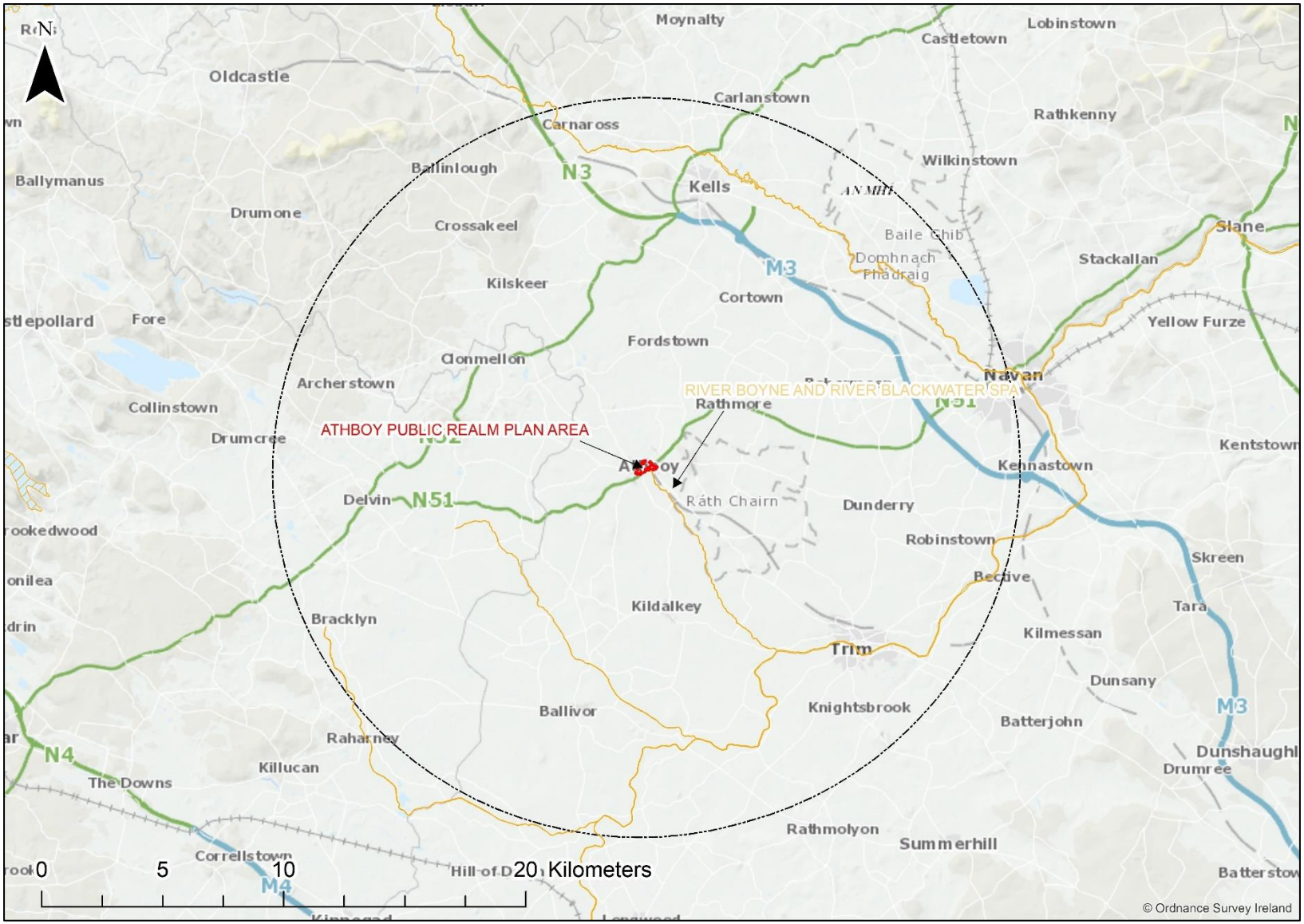

Figure 24: Location of SPAs within 15 km of PRP

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 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)

2.5.1.1 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.

2.5.1.2 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*

2.5.1.3 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 3.

Table 3: Threats, pressures and activities with impacts on the site

RANK	SECTOR	THREATS AND PRESSURES	INSIDE/OUTSIDE/BOTH
HIGH	AGRICULTURE	GRAZING	BOTH
HIGH	AGRICULTURE	CULTIVATION	BOTH
HIGH	AGRICULTURE	FERTILISATION	BOTH
MEDIUM	AGRICULTURE	SYLVICULTURE/AGRICULTURE	OUTSIDE
HIGH	BIOLOGICAL RESOURCE USE (OTHER THAN AGRICULTURE/ FORESTRY)	FISHING	INSIDE
MEDIUM	HUMAN INTRUSIONS AND DISTURBANCES	NAUTICAL SPORTS	INSIDE
MEDIUM	HUMAN INTRUSIONS AND DISTURBANCES	WALKING, HORSERIDING AND NON-MOTORISED VEHICLES	INSIDE
MEDIUM	NATURAL SYSTEM MODIFICATIONS	HUMAN INDUCED CHANGES IN HYDRAULIC CONDITIONS	INSIDE
HIGH	SYLVICULTURE/AGRICULTURE	SYLVICULTURE/AGRICULTURE	INSIDE
HIGH	TRANSPORTATION AND SERVICE CORRIDORS	ROADS, MOTORWAYS	BOTH
HIGH	URBANISATION, RESIDENTIAL AND COMMERCIAL DEVELOPMENT	DISPERSED HABITATION	OUTSIDE
HIGH	URBANISATION, RESIDENTIAL AND COMMERCIAL DEVELOPMENT	URBANISED AREAS, HUMAN HABITATION	OUTSIDE
MEDIUM	URBANISATION, RESIDENTIAL AND COMMERCIAL DEVELOPMENT	DISCHARGES	INSIDE

2.5.1.4 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 4), based on the Conservation Objectives for the same habitat at a different site – in this case [site code 000268].

Table 4: 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 5), based on the Conservation Objectives for the same habitat at a different site – in this case [site code 002162]

Table 5: 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 6), based on the Conservation Objectives for the same species at a different site – in this case [site code 002162]

Table 6: 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 7), based on the Conservation Objectives for the same species at a different site – in this case [site code 002162]

Table 7: 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 8), based on the Conservation Objectives for the same species at a different site – in this case [site code 002162].

Table 8: 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

2.5.1.5 Baseline Conservation Status of the site

A synopsis of the conservation status of this site is provided in Table 9 and Table 10.

Table 9: 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 10: 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

2.5.2 Girley (Drewstown) Bog SAC (Site synopsis version date 14/09/2017, Natura 2000 form update 06/2015, Conservation Objectives (generic) version 8.0)

2.5.2.1 General Description

Girley (Drewstown) Bog (002203) consists of 32.26 ha of raised bog (15.05 ha of high bog and 17.21 ha of cutover bog) which occupies the south-western part of Girley Bog NHA (001580). Girley Bog is a Midland type raised bog developed in a basin. The SAC is bounded by open high bog on its northern and eastern sides, by agricultural land on its western side and by cutover bog with forestry on its southern side. Most of the SAC, and all of the high bog included in the SAC, was completely covered by coniferous forestry, which has been recently clear-felled as part of the restoration program for the site. Most of the conifers in the SAC were removed and the associated intensive drainage system was blocked by 2013 as part of an EU LIFE funded Coillte project (Demonstrating Best Practice in Raised Bog Restoration in Ireland) so as to raise the water table and restore Active Raised Bog (ARB) on the site. With the clear-felling of conifers and blocking of drains, water-levels have risen and remain high throughout most of the year. As a consequence, raised bog vegetation, including typical sphagnum species, has returned to the wetter areas of the high bog. Overall, the high bog appears to be re-wetting with limited areas of wet flats and hummock/hollows. However, the majority of the restored areas have not yet developed vegetation characteristic of the wettest conditions and there is a considerable amount of conifer and birch regeneration occurring in these areas. Two areas in the north-east of the site covering 2.28 ha have been identified by hydrological modelling as Degraded Raised Bog (7120) (DRB) habitat. They now have standing surface water in the hollows and pools for most of the year with considerable areas of rapidly regenerating bog mosses. These wet areas with

regenerating Sphagnum moss are expected to develop into Active Raised Bog habitat within 20 years. However, to ensure that these areas reach their full potential it will be necessary to block the boundary drains in consultation with other stakeholders. The cutover bog to the south of the site is generally drier and is developing into wet and dry woodland dominated currently by Downy Birch scrub with occasional conifers from the former plantation. Cherry Laurel, Rhododendron and conifers are regenerating strongly in this area and are subject to ongoing control programs. The Degraded Raised Bog in Girley (Drewstown) Bog SAC is of conservation significance as it has the potential for restoration to Active Raised Bog which is a priority habitat in the EU and one that is scarce and under threat in Ireland. Despite the relatively small area of Degraded Raised Bog present the restoration actions have resulted in active redevelopment of the habitat towards Active Raised Bog which add significantly to the diversity and scientific value of the site. The site is being actively managed for conservation as part of the Coillte EU LIFE Project and most of the required restoration measures have already been carried out. However, some significant threats remain and an After LIFE management plan is being developed for the future conservation management of the SAC. The SAC is located within the raised bog Girley Bog NHA (001580) the conservation management of which should support the maintenance and improvement of Degraded Raised Bog in the SAC. It is estimated that restoration works carried out on the SAC will in turn benefit the conservation of 0.5 ha of Active Raised Bog and the restoration of 0.5 ha of Degraded Raised Bog in the adjacent area of Girley Bog NHA (001580)

2.5.2.2 Qualifying Interests

The qualifying interests for this site are:

- [7120] Degraded raised bogs still capable of regeneration.

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 11.

Table 11: Threats, pressures and activities with impacts on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	J02.15		b
M	I01		b
M	I02		b
M	J01.01		b

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i|o|b]
H	B02.02		i
M	I02		b
H	J02.01		i
M	J02.15		b
M	I01		b

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.

[7210] Degraded raised bogs still capable of regeneration

Conservation objectives for this habitat at this site are difficult to infer from other sites as the conservation objective for this habitat is typically inherently linked to the conservation objectives for the habitat [7110] Active raised bogs. There are conservation objectives specific to this habitat for Lough Ree SAC (000440) and conservation objectives can (cautiously) be inferred from those at this site (see Table 12)

Table 12: Conservation Objectives for [7230]

Attribute	Measure	Target
Habitat area	Hectares	Restore area of active raised bog to 70.1ha, subject to natural processes
Habitat distribution	Occurrence	Restore the distribution and variability of active raised bog across the SAC. See map 6 for distribution in 2003
High bog area	Hectares	No decline in extent of high bog necessary to support the development and maintenance of active raised bog. See map 5
Hydrological regime: water levels	Centimetres	Restore appropriate water levels throughout the site
Hydrological regime: flow patterns	Flow direction; slope	Restore, where possible, appropriate high bog topography, flow directions and slopes. See map 7 for current situation
Transitional areas between high bog and adjacent mineral soils (including cutover areas)	Hectares; distribution	Restore adequate transitional areas to support/protect active raised bog and the services it provides
Vegetation quality: central ecotope, active flush, soaks, bog woodland	Hectares	Restore 35.1ha of central ecotope/active flush/soaks/bog woodland as appropriate
Vegetation quality: microtopograph-ical features	Hectares	Restore adequate cover of high quality microtopographical features
Vegetation quality: bog moss (*Sphagnum*) species	Percentage cover	Restore adequate cover of bog moss (*Sphagnum*) species to ensure peat-forming capacity

Continued overleaf

Typical ARB species: flora	Occurrence	Restore, where appropriate, typical active raised bog flora
Typical ARB species: fauna	Occurrence	Restore, where appropriate, typical active raised bog fauna
Elements of local distinctiveness	Occurrence	Maintain features of local distinctiveness, subject to natural processes
Negative physical indicators	Percentage cover	Negative physical features absent or insignificant
Vegetation composition: native negative indicator species	Percentage cover	Native negative indicator species at insignificant levels
Vegetation composition: non-native invasive species	Percentage cover	Non-native invasive species at insignificant levels and not more than 1% cover
Air quality: nitrogen deposition	kg N/ha/year	Air quality surrounding bog close to natural reference conditions. The total N deposition should not exceed 5kg N/ha/yr
Water quality	Hydrochemical measures	Water quality on the high bog and in transitional areas close to natural reference conditions

2.5.2.5 *Baseline Conservation Status of the site*

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

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
7120			2.28		G	B	C	C	B

2.5.3 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.

2.5.3.1 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*.

2.5.3.2 Qualifying Interests

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

- Kingfisher, *Alcedo atthis*

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 14.

Table 14: Threats, pressures and activities with impacts on the site

RANK	SECTOR	THREATS AND PRESSURES	INSIDE/OUTSIDE/BOTH
HIGH	URBANISATION, RESIDENTIAL AND COMMERCIAL DEVELOPMENT	ROADS, MOTORWAYS	BOTH
MEDIUM	NATURAL SYSTEM MODIFICATIONS	HUMAN INDUCED CHANGES IN HYDRAULIC CONDITIONS	INSIDE

HIGH	URBANISATION, RESIDENTIAL AND COMMERCIAL DEVELOPMENT	URBANISED AREAS, HUMAN HABITATION	OUTSIDE
HIGH	URBANISATION, RESIDENTIAL AND COMMERCIAL DEVELOPMENT	DISPERSED HABITATION	OUTSIDE

2.5.3.4 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.

2.5.3.5 Baseline Conservation Status

A synopsis of the conservation status of this site is provided in Table 15.

Table 15: 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 passes through the area of the Public Realm Plan (see Figure 25). While the River Boyne and River Blackwater SPA does not pass through the Athboy PRP (see Figure 26), it must be considered based on the Precautionary Principal that for all practical purposes it does.

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 Athboy Public Realm Plan area associated with components of the plan.

Figure 25: Location of SAC relative to Athboy PRP

Figure 26: Location of SPA relative to Athboy 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 Athboy river 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 Athboy River (a 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 Athboy 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.

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. The “Zone of Influence” should include these Natura 2000 sites. There is no Source-Pathway-Receptor linkage between the proposed development site and Girley (Drewstown) Bog SAC.

2.6.5 Sources of potential Direct, Indirect or Secondary Impacts

2.6.5.1 Direct Impacts

One of the components of the Athboy Public Realm Plan is a potential new walking trail along the northern boundary of the plan area, which will cross the Athboy River, potentially having 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 Athboy River. While the latest Q Value at monitoring station RS07A010200 indicates the water quality is good, this data is 15 years old. The Q-Value at monitoring station RS07A010300 (Q year 2020) is Moderate. 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 Athboy river ecological corridor – for instance, the proposed potential new walking trail that will cross the Athboy river along the Northern boundary of the Public Realm Plan area may have the potential to 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 16. The potential for impacts upon the Natura 2000 sites identified in the event of negative impacts is summarized in Table 17. The potential impacts on the qualifying interests of identified Natura 2000 sites is summarized in Table 18.

Table 16: 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**
Girley (Drewstown) Bog 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
River Boyne and River Blackwater SPA	None foreseen	Potential	None foreseen	Potential	Potential	Potential

Table 17: 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
Girley (Drewstown) Bog 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
River Boyne and River Blackwater SPA	Potential	Potential	Potential	Potential	Potential	Potential

Table 18: 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 many 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 19.

Table 19: 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

The primary source of any cumulative impacts concerns impacts on ground and/or surface water. Of note is the presence of the Athboy Wastewater Treatment Plant with discharge reference point TPEFF2300D0124SW001 adjacent, approximately 500m South of the Athboy Public Realm Plan.

According to the latest on-line AER[1], the compliance status of the Emission Limit Values is "Non-compliant". The cause of exceedance is stated as "*…WWTP biological sludge issue (Ammonia 2.8mg/l ELV breach on 22/02/2019) & Breakdown of plant equipment (Ammonia 3.41 mg/l on 26/07/2019)…*". In addition to the WWTP discharge point are two stormwater overflow emission points (Emission IDs TPEFF2300D0124SW002 and TPEFF2300D0124SW003), which according to the Annual Environmental Report are not monitored. There are likely numerous other point sources of emissions that are currently unrecorded.

The cumulative impact of such point 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 27.

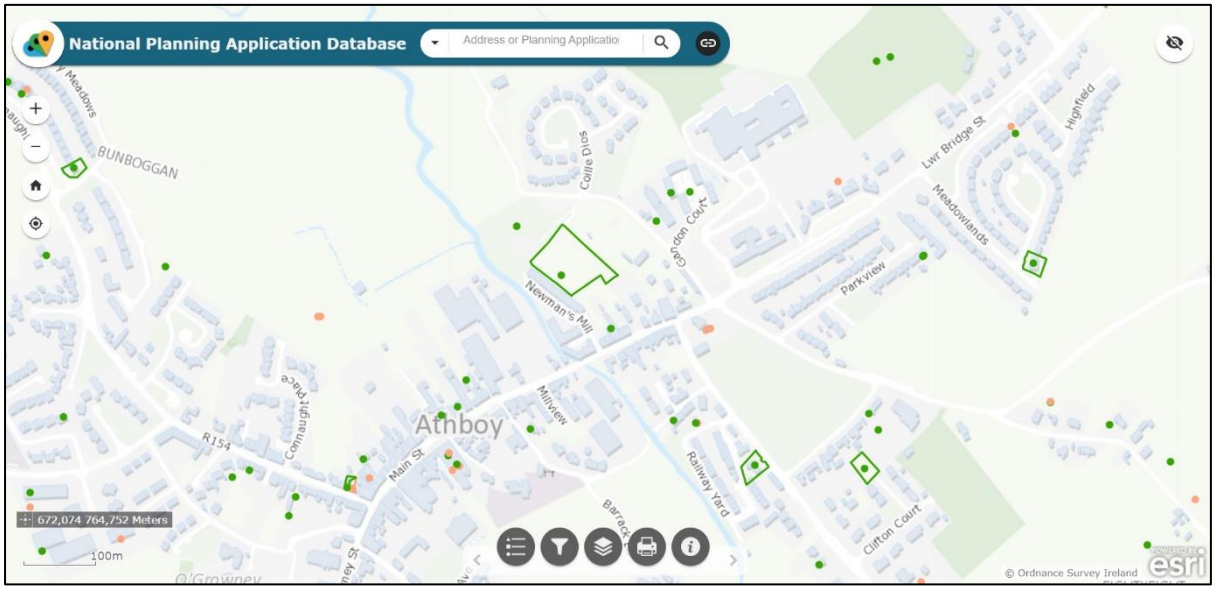

Figure 27: **Excerpt from online National Planning Database application indicating several recent planning permissions in the area of the PRP adjacent to the Athboy River – none are deemed likely to have cumulative impacts with the PRP**

A query of the EIA portal[2] would indicate that there are no projects in the vicinity of the Athboy PRP requiring EIA (see Figure 28).

1 https://www.water.ie/docs/aers/2019/D0124-01_2019_AER.pdf

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

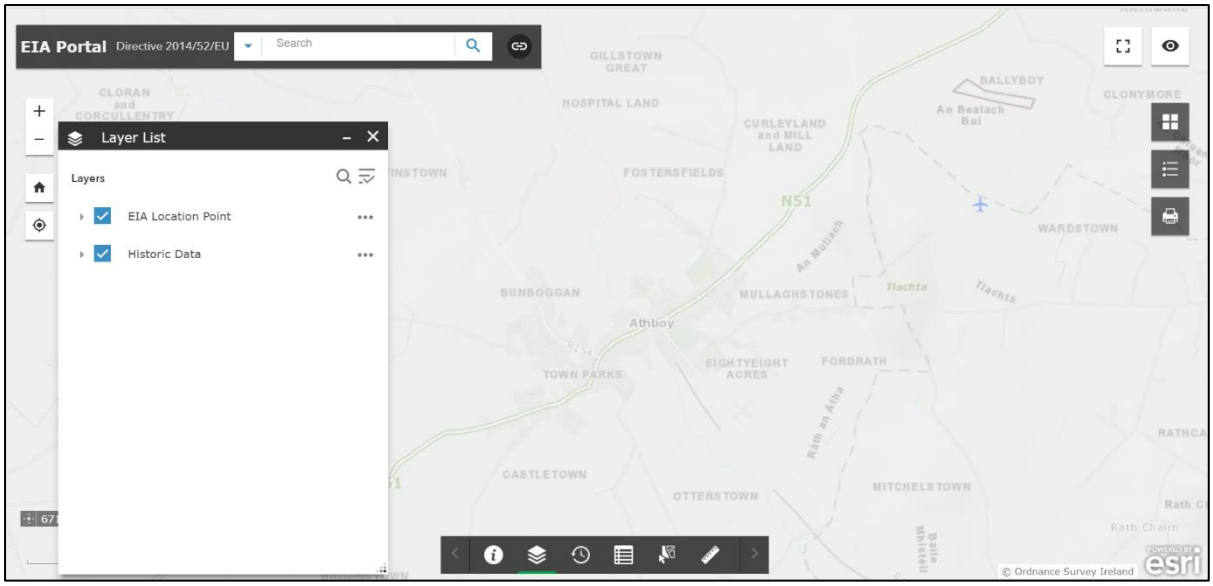

Figure 28: Query of EIA portal for projects requiring EIA in the vicinity of the Athboy PRP

Any potential impacts on water quality must be avoided.

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 20.

Table 20: 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 Athboy 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 Athboy 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 Natura 2000 sites relevant to the Stage Two Appropriate Assessment

3.2.1 River Boyne and River Blackwater SAC (Site synopsis version date 06/01/2014, Natura 2000 form update 09/19, Conservation Objectives (generic) version 7.0)

This site is described in the Natura 2000 data form as "*…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…"*

NPWS has not yet drawn up a detailed Conservation Objectives document for this site.

3.2.2 The River Boyne and River Blackwater SPA (Site synopsis version date 25/11/10, Natura 2000 form update 09/2018, Conservation Objectives (generic) Version 7.0.

This site is described in the Natura 2000 data form as "*…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.*

NPWS has not yet drawn up a detailed Conservation Objectives document for this site.

3.3 Summary of qualifying interests of Natura 2000 sites potentially exposed to significant negative impacts

Two Natura 2000 sites have been identified as being potentially exposed to significant negative impacts, which are directly or indirectly dependent on the water quality of the Rivers Boyne and Blackwater.

3.3.1 River Boyne and River Blackwater SAC

All of the qualifying interests of this Natura 2000 site are directly or indirectly dependent on the water quality/hydrology of the Rivers Boyne and Blackwater. Any habitats or species dependent on water quality/hydrological regime within this Natura 2000 site would potentially be at risk from changes in water quality/hydrology associated with the proposed works. A description of the national conservation status (taken from The Status of EU Protected Habitats and Species in Ireland, Vol 1, 2 and 3, 2019) of Qualifying Interest (Annex I habitat(s) and/or the Annex II species for which the SAC has been selected) is given as follows.

3.3.1.1 [7230] Alkaline Fens

Alkaline fens are groundwater-fed, generally peat-forming systems with extensive areas of species-rich small sedge and brown moss communities. They occur in areas where there is a high-water table and a base-rich, often calcareous water supply. Alkaline fens can develop in areas where vertical water movement predominates (topogenous), such as poorly drained basins or hollows and open water transitions; or where horizontal water movement is also important (soligenous), such as flushes, valley fens and the laggs of raised bogs. However, this distinction is not always clear (such as in large floodplain fens which can include both elements). Fen systems are often a complex mosaic of habitats, with tall sedge beds, reedbeds, wet grasslands, springs and open water co-occurring. Alkaline fens are relatively widespread in Ireland. The most extensive areas of alkaline fens are thought to occur in lowland basins associated with limestone groundwater bodies (often in midland areas). Alkaline fens associated with flushes and open water transitions tend to be smaller but may be more widespread than those in lowland basins. The main pressures facing the habitat in Ireland are land abandonment (and associated succession), overgrazing, drainage and pollution. The Overall Status is assessed as Bad with a deteriorating trend due to losses of area and habitat quality, as well as the pressures and threats faced by the habitat.

3.3.1.2 [91EO] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) – PRIORITY HABITAT

A number of variants of Alluvial woodland habitat exist, of which riparian forests of ash (Fraxinus excelsior) and alder (*Alnus glutinosa*) (Alno-Padion) of temperate and Boreal Europe lowland and hill watercourses are the most common in Ireland. All types occur on heavy soils which are periodically inundated by the annual rise of river levels but otherwise well-drained and aerated during low water. The herbaceous layer includes many large species such as meadowsweet (*Filipendula ulmaria*), wild angelica (*Angelica sylvestris*), wood dock (*Rumex sanguineus*) and sedges (*Carex* spp.), vernal species such as lesser celandine (*Ficaria verna*) and wood anemone (*Anemone nemorosa*), and other indicative species such as remote sedge (*Carex remota*), gypsywort (*Lycopus europaeus*), common nettle (*Urtica dioica*) and water avens (*Geum rivale*). In addition, there are gallery forests of tall willows (Salicion albae) alongside river channels and occasionally on river islands, where the tree roots are almost continuously submerged. These are dominated by white willow (*Salix alba*), osier (*S. viminalis*) and almond willow (*S. triandra*), sometimes with grey willow (*S. cinerea*), but alder should be rare. There is a luxuriant herb layer of species such as reed canary-grass (*Phalaris arundinacea*), common nettle and meadowsweet. A number of pressures affect this habitat in Ireland, the most serious being invasive species, particularly sycamore (*Acer pseudoplatanus*), beech (*Fagus sylvatica*), Indian balsam (*Impatiens glandulifera*) and currant species (*Ribes nigrum* and *R. rubrum*). Some native species such as brambles (*Rubus fruticosus* agg.) and common nettle can also become over-vigorous. Small area losses due to clearfelling have also occurred. As a result, the Overall Status is Bad and the trend is declining. This poorer trend since the previous assessment is mainly due to the availability of more accurate data, and the decline is considered to have been ongoing since before the last assessment.

3.3.1.3 [1099] Lampetra fluviatilis

Given the large area of habitat availability and the likelihood that, in certain flow conditions, river lamprey are able to ascend many of the significant weirs on Irish rivers, it is possible that, in reality, they have a favourable conservation status. The inability to distinguish between *L. fluviatilis* and *L. planeri* larvae, however, and the challenges associated with sampling for adult river lamprey, means that an evaluation of their actual range and population size cannot be undertaken and status is assessed as unknown for the current reporting period. This represents a change from the previous reporting period (where a favourable status was assigned) but does not represent a downgrade in status. Data on larval *Lampetra* sp. were used to assign status in the previous reporting period. Records for adult river lamprey, although difficult to obtain, are considered more appropriate for

making a true assessment of this species. A targeted sampling programme for river lamprey will be required for assessing conservation status in the next reporting cycle.

3.3.1.4 [1106] Salmo salar

There is no evidence of a decline in range since the Directive came into force. The current range is considered sufficient for the long-term survival of the species. Therefore, Range has been assessed as Favourable. Increasing trends have been noted in Salmon population size in the last 5 years. However, the current population estimate is 78% of the Favourable Reference Population. Therefore, Population has been assessed as Inadequate. There is sufficient available habitat and ongoing pressures linked with habitat quality are not considered to be compromising the viability of the species. Therefore, Habitat for the species has been assessed as Favourable. Population estimates are unlikely to reach Favourable status in the next 12 years. Therefore, Future prospects have been assessed as Inadequate. The overall conservation status has been assessed as Inadequate with a stable trend. Although a short-term negative trend is reported for this species, the trend has reversed in the last 5 years. Therefore, an overall stable trend is reported.

3.3.1.5 [1355] Lutra lutra

The most recent distribution data shows that the otter continues to be widespread throughout Ireland and present nationwide in a wide variety of habitat types. Although recent studies on territory overlaps and animal movements suggest that refinements to the population estimation formula are needed, the otter population is considered to be stable and none of the threats or pressures identified is considered likely to impact significantly on the species. Overall, the species is assessed as Favourable, and the overall trend is demonstrating an on-going increase. There were no qualifiers for Favourable assessments in 2013.

3.3.2 River Boyne and River Blackwater SPA

Breeding Kingfisher, the Qualifying Interest of this site is dependent on the maintenance of the water quality (for prey items) and hydrological regime (changes could potentially impact on nesting sites of the River Boyne and Blackwater). This species would potentially be at risk from changes in water quality associated with the proposed works. There is currently no description of the national conservation status of Kingfisher.

3.4 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 21. A summary of the Conservation Objectives of each site is presented in Table 22.

Table 21: 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 22: 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

3.5 Summary of pressures, threats and activities with potential for negative impacts on qualifying interests of sites

Using the standard Natura 2000 form for each of the Natura 2000 sites potentially at risk of impact from the proposed works, a summary of the threats, activities, and pressures with negative impacts on qualifying interests of the sites in question is presented in Table 23.

Table 23: Summary of threats, pressures and activities on relevant Natura 2000 sites

SITE NAME/CODE	PRESSURE/THREAT/ACTIVITY	INSIDE/OUTSIDE /BOTH	RANK
RIVER BOYNE AND RIVER BLACKWATER SAC			
	GRAZING	BOTH	HIGH
	CULTIVATION	BOTH	HIGH
	FERTILISATION	BOTH	HIGH
	SYLVICULTURE/AGRICULTURE	OUTSIDE	MEDIUM
	FISHING	INSIDE	HIGH
	NAUTICAL SPORTS	INSIDE	MEDIUM
	WALKING, HORSERIDING AND NON-MOTORISED VEHICLES	INSIDE	MEDIUM
	HUMAN INDUCED CHANGES IN HYDRAULIC CONDITIONS	INSIDE	MEDIUM
	SYLVICULTURE/AGRICULTURE	INSIDE	HIGH
	ROADS, MOTORWAYS	BOTH	HIGH
	DISPERSED HABITATION	OUTSIDE	HIGH
	URBANISED AREAS, HUMAN HABITATION	OUTSIDE	HIGH
	DISCHARGES	INSIDE	MEDIUM
RIVER BOYNE AND RIVER BLACKWATER SPA			
	ROADS, MOTORWAYS	BOTH	HIGH
	HUMAN INDUCED CHANGES IN HYDRAULIC CONDITIONS	INSIDE	MEDIUM
	URBANISED AREAS, HUMAN HABITATION	OUTSIDE	HIGH
	DISPERSED HABITATION	OUTSIDE	HIGH

3.6 Impact Prediction

3.6.1 Identified Pathways

As identified in Section 2, the Public Realm Plan area includes the ecological corridor associated with the Athboy River, a component of the River Boyne and River Blackwater SAC and the River Boyne and River Blackwater SPA. There is potential for some components of the proposed Public Realm Plan to impact on the Conservation Objectives of the Qualifying Interests of these Natura 2000 sites. For ease of interpretation, the primary components of the Public Realm Plan as identified in Figure 29 in addition to potential for impacts.

1) Redefine the streets and enhance the public realm – no significant pathway identified;
2) Enhance pedestrian routes along the main street – no significant pathway identified;
3) Improve organisation of car parking and discourage parking on footpath no significant pathway identified;
4) Existing playground to be renovated, improved and better connected to the town centre – significant pathway identified – potential impacts on water quality and potential impacts on disturbance levels;
5) Encourage forecourt usage on the main street - no significant pathway identified;
6) Opportunity sites – at distance from Athboy river – in absence of further detail, no significant pathway identified;
7) Potential additional park amenities - no significant pathway identified;
8) Fair green with space for events – at enough distance from ecological corridor - no significant pathway identified;
9) Enhance pedestrian links between amenity spaces and main streets - potential impacts on water quality and potential impacts on disturbance levels;
10) Enhanced Public Realms - no significant pathway identified;
11) Opportunity for off-street parking - in absence of further detail, assuming best practice guidelines applied for example with regards run-off, no significant pathway identified;
12) Opportunity sites – at distance from Athboy river – in absence of further detail, no significant pathway identified;
13) Potential new walking trail - potential impacts on water quality and potential impacts on disturbance levels; and
14) Historical walking trail - potential impacts on water quality and potential impacts on disturbance levels.

Figure 29: Primary components of Athboy Public Realm Plan

3.6.2 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 24. 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 30 and Figure 31.

Table 24: 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

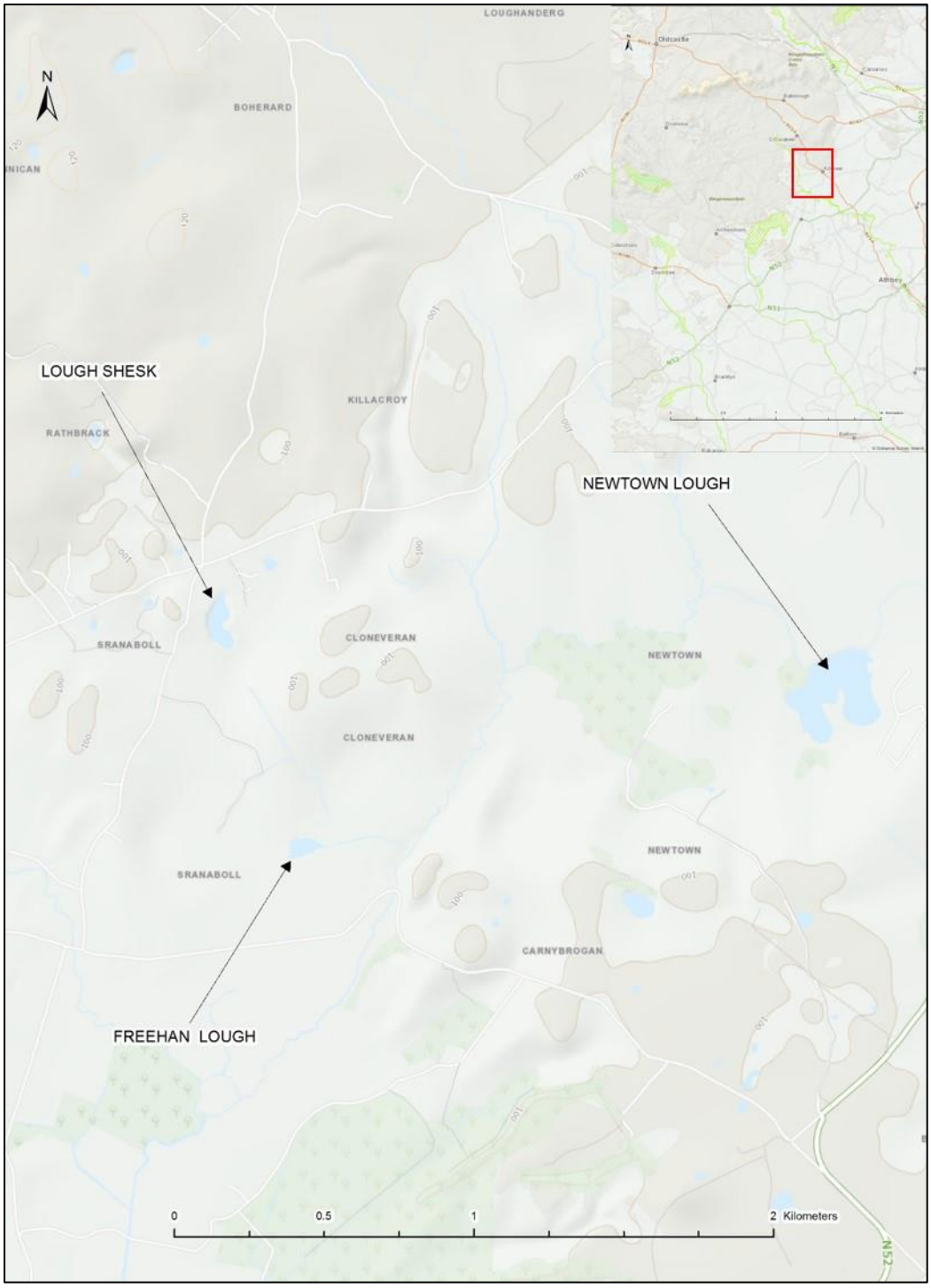

Figure 30 Map illustrating location of three loughs within the River Boyne and River Blackwater where [7230] occurs

Figure 31: Map illustrating location of Boyne Islands, on which [91E0], a priority habitat occurs

3.6.3 Sources of Potential Impacts associated with proposed Public Realm Plan

The sources of potential 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 25.

Table 25: 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
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	• CONTAMINATION OF SURFACE WATER DURING CONSTRUCTION/OPERATION • CONTAMINATION OF GROUND WATER DURING CONSTRUCTION/OPERATION

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

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

1) Existing playground to be renovated, improved and better connected to the town centre – significant pathway identified. The existing playground is immediately adjacent to the Athboy River and associated ecological corridor. Any renovation or changes to connectivity with the rest of the town (and inherent likelihood of 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 or access over the Athboy River would be of particular potential concern with regards to both construction and operation;
2) Enhance pedestrian links between amenity spaces and main streets. Any such measures (and inherent likelihood of 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 or access over the Athboy River would be of particular potential concern with regards to both construction and operation;
3) Potential new walking trail - Any new walking trail involving crossing the Athboy River and creating new routes for pedestrians in the vicinity of the Athboy River has the potential to impact upon water quality of the Athboy River and disturbance levels during both the construction and operation phases. Any such potential new walking trail must be informed by a detailed ecological impact 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 or access over the Athboy River would be of particular potential concern with regards to both construction and operation;
4) Historical walking trail – While the Historical Walking Trail is currently in place, increased usage associated with the Public Realm Plan has the potential to impact upon water quality of the Athboy River and disturbance levels as regards cumulative impacts with the proposed new potential walking trail. A detailed ecological impact assessment examining the routes over the Athboy River should be undertaken in order to inform any plans.

3.8 Mitigation Measures – avoiding potential impacts

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

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

3.8.1 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 Athboy 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 Athboy River associated with 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 Athboy River. 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 Athboy River;
2) Vehicular access to any pathways crossing the Athboy River 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.

3.8.2 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 any aspects of the Public Realm Plan with the potential to increase disturbance should be undertaken in order to inform the mitigation measures necessary. The optimal procedure would be for the design of any such components of the Public Realm Plan to be informed by the Ecological Assessment. The significance of potential impacts on the conservation objectives of qualifying interests following the implementation of mitigation measures is outlined in Table 26.

Table 26: 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 Athboy 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.