

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



Prepared  
**June 2021 by:**



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## EXECUTIVE SUMMARY

*The Laytown and Bettystown Public Realm Plan sets out the future approach to the streets and spaces of both areas.*

*The aim of the vision statement for Laytown is to:*

*Improve the public realm through the reintroduction of a beach front park (subject to future environmental studies) and the relocation and control of commuter parking. Links to improved amenities and regeneration opportunities will help enhance the character of the town.*

*The aim of the vision statement for Bettystown is to:*

*Improve the public realm through a reorganisation of the centre of the town with better connections to the beach. Parking should be better organised along the main routes with enhanced gateways to the town and the identification of opportunities for regeneration.*

*Laytown and Bettystown are functional coastal towns situated in an ecologically sensitive location, with numerous Natura 2000 sites potentially impacted upon by any developments. 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 Laytown and Bettystown 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 development (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

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## 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 1<sup>st</sup> 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 1<sup>st</sup> 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 1<sup>st</sup> 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 Laytown and Bettystown, Co Meath. This report provides the information required in order to establish whether or not the proposed plan 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](http://www.npws.ie). Consultations carried out involved querying the NPWS database for information pertaining to Natura 2000 sites within 15 km of the plan area.

### 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 plan area.

### 1.5.3 I-WeBS Data

Each winter over 400 skilled volunteers, NPWS Rangers and BirdWatch Ireland staff monitor wintering waterbird populations at their wetland sites across the Republic of Ireland. The Irish Wetland Bird Survey (I-WeBS) is coordinated by BirdWatch Ireland and funded by the National Parks and Wildlife Service. The available I-WeBS data for the vicinity of the plan was queried.

#### 1.5.4 Other relevant data-sources

Other relevant data-sources were queried, as necessary.

## 2 Screening

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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 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 plan, 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 if 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 Laytown and Bettystown Public Realm Plan sets out the future approach to the streets and spaces of the town.

The vision statement for Laytown is:

*“...To improve the public realm through the reintroduction of a beach front park and the relocation and control of commuter parking. Links to improved amenities and regeneration opportunities will help enhance the character of the town...”*

The key objectives identified for the future of the Public Realm in Laytown are:

- 1) Reintroduce a beach front town park;
- 2) Improve access to the beach;
- 3) Relocate commuter parking to west of railway line;
- 4) Introduce timed restrictions for parking next to shops and for the use of the play/park areas;
- 5) Bring derelict sites and buildings back into use - opportunity for regeneration of site overlooking the beach to the east;
- 6) Introduce traffic-calming for vehicles; and
- 7) Consider access to recreation area south of town centre.

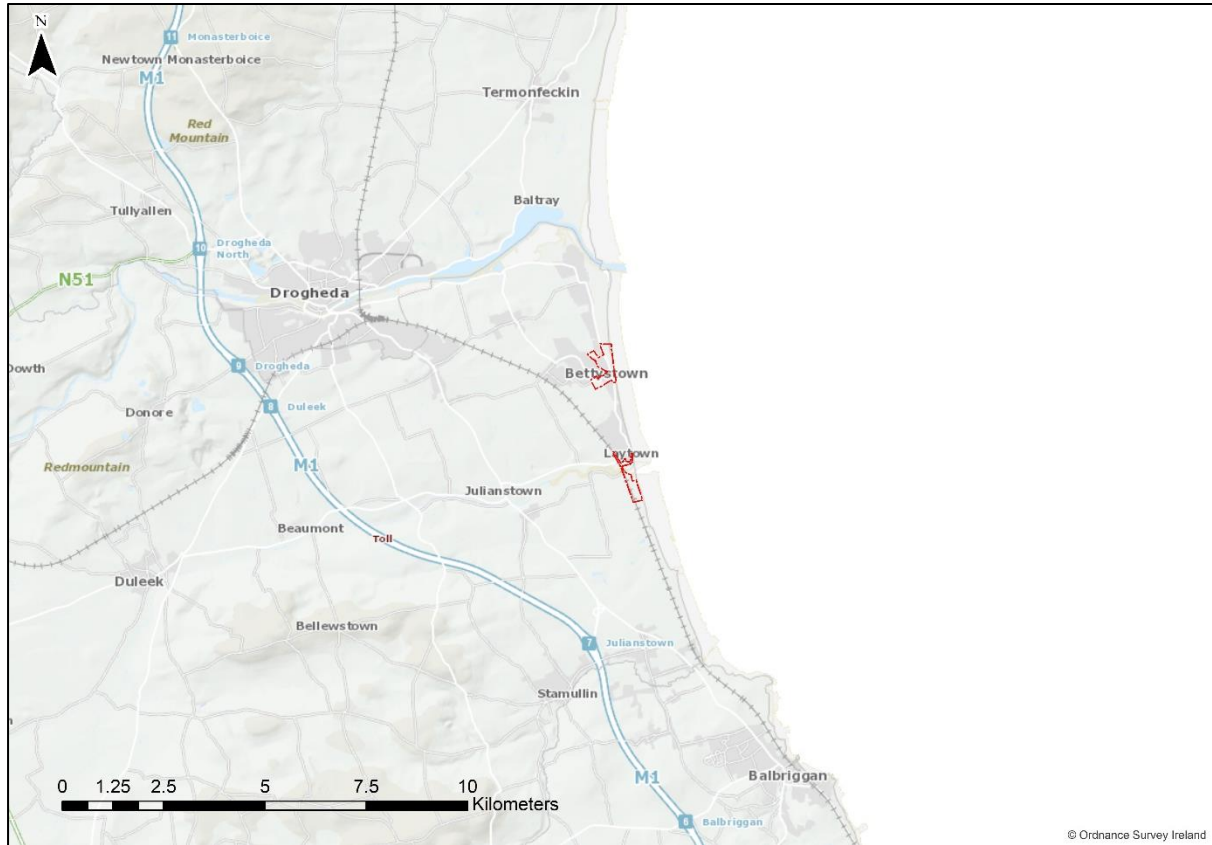
The vision statement for Bettystown is:

*“...To improve the public realm through a reorganisation of the centre of the town with better connections to the beach. Parking should be better organised along the main routes with enhanced gateways to the town and the identification of opportunities for regeneration...”*

The key objectives identified for the future of the Public Realm in Bettystown are:

- 1) Reorganise the town centre;
- 2) Create more regular safe crossing points, especially in the main square;
- 3) Create a pedestrian space/square as a focus to the town centre;
- 4) Introduce traffic-calming measures, but do not create traffic jams;
- 5) Introduce time restrictions for parking in the town centre;
- 6) Bring derelict sites and buildings back in use;
- 7) Improve links to the beach;
- 8) Consider safer cycling with the introduction of Spine road;
- 9) Rationalise street furniture;
- 10) Remove perpendicular parking and replace with parallel;
- 11) Explore new town park associated with Spine road;
- 12) Improve streetlighting throughout the town centre.

The extent of the Laytown and Bettystown Public Realm Plan is indicated in Figure 1, Figure 2, Figure 3 Figure 4 and Figure 5. The conceptual layouts of the Public Realm Plan are illustrated in Figure 6 and Figure 7.



**Figure 1: Extent of Laytown and Bettystown Public Realm Plan (1:100,000)**



Figure 2: Extent of Laytown and Bettystown Public Realm Plan (1:50,000)



Figure 3: Extent of Laytown and Bettystown Public Realm Plan (1:25,000)





Figure 4: Extent of Laytown Public Realm Plan area (1:5,000)



Figure 5: Extent of Bettystown Public Realm Plan area (1:5,000)





Figure 6: Conceptual Laytown Public Realm Plan Layout



Figure 7: Conceptual Bettystown Public Realm Plan Layout



## 2.2 Description of existing conditions on site

A site visit was carried out on June 4<sup>th</sup>, 2021, by Dr Patrick Moran. Aerial Images of Laytown, Bettystown and *environs* illustrating some of the key areas to which the Public Realm Plan are applicable are provided in Figure 8, Figure 9, Figure 10, Figure 11 and Figure 12. A photograph of the centre of Bettystown is presented in Figure 13. The primary habitat of ecological concern is the strand itself, with the vast bulk of the Public Realm Plan area comprising Built Land and Artificial Surfaces. Numerous species of overwintering bird are known to utilise the areas within the estuary of the River Nanny and in the playing fields occurring at the Seafields site. Some photographs are provided in Figure 14, Figure 15 and Figure 16.

Given the habitats present, numerous species of conservation concern are almost certain to occur within the area of the Public Realm Plan and immediately adjacent, primarily overwintering bird species, many of which are Qualifying Interests of adjacent SPAs.



Figure 8: Aerial image of primary location of Laytown Public Realm Plan Area





Figure 9: Aerial image of Seafields, to which better access is proposed



Figure 10: Laytown and Seafields from South





Figure 11: Aerial view of Bettystown and Bettystown strand



Figure 12: Aerial view of strand from Bettystown toward Laytown





Figure 13: Centre of Bettystown



Figure 14: Light-bellied Brent Geese are known to feed at the mouth/estuary of the River Nanny in the winter season





Figure 15: Curlew are known to forage within the playing fields at Seafields during the winter months



Figure 16: Flocks of Sanderling are a common sight at the waters' edge in winter

## 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 08/06/21 to query records occurring within the vicinity of the Public Realm Plan (10 km square, NO17 see Figure 17). The species of conservation concern as recorded within this 10 km square are illustrated in Table 1.

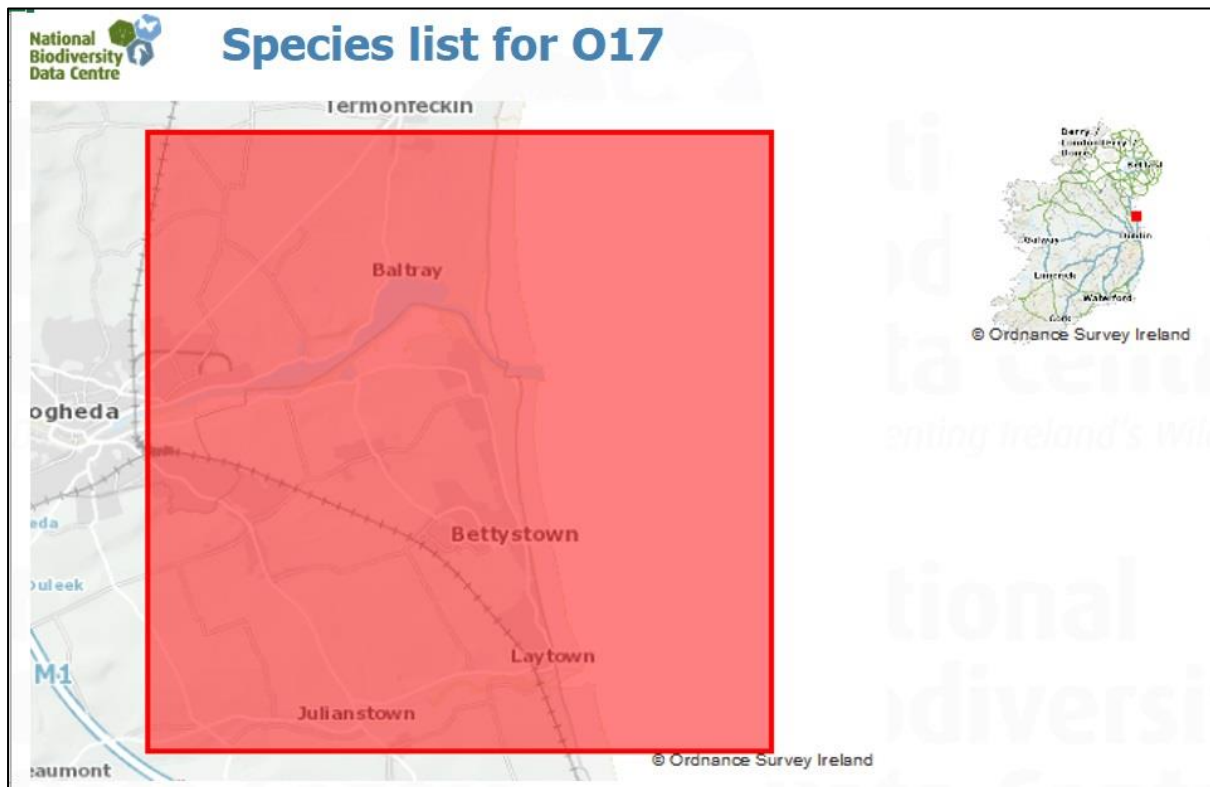


Figure 17: Location of polygon queried (National Biodiversity Data Centre)

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

Scientific Name	Common Name	Date of last record
<i>Lissotriton vulgaris</i>	Smooth Newt	04/04/2018
<i>Sterna paradisaea</i>	Arctic Tern	31/12/2001
<i>Tyto alba</i>	Barn Owl	31/12/2011
<i>Hirundo rustica</i>	Barn Swallow	12/06/2017
<i>Limosa lapponica</i>	Bar-tailed Godwit	31/12/2011
<i>Larus ridibundus</i>	Black-headed Gull	12/06/2017
<i>Rissa tridactyla</i>	Black-legged Kittiwake	19/12/2016
<i>Limosa limosa</i>	Black-tailed Godwit	31/12/2011

Scientific Name	Common Name	Date of last record
<i>Branta bernicla</i>	Brent Goose	04/12/2017
<i>Locustella naevia</i>	Common Grasshopper Warbler	31/07/1972
<i>Tringa nebularia</i>	Common Greenshank	04/12/2017
<i>Uria aalge</i>	Common Guillemot	05/08/1998
<i>Falco tinnunculus</i>	Common Kestrel	31/12/2011
<i>Alcedo atthis</i>	Common Kingfisher	05/09/2016
<i>Carduelis cannabina</i>	Common Linnet	04/12/2017
<i>Tringa totanus</i>	Common Redshank	31/12/2011
<i>Actitis hypoleucos</i>	Common Sandpiper	31/12/2001
<i>Tadorna tadorna</i>	Common Shelduck	12/06/2017
<i>Sturnus vulgaris</i>	Common Starling	31/12/2011
<i>Apus apus</i>	Common Swift	31/12/2011
<i>Sterna hirundo</i>	Common Tern	31/12/2001
<i>Crex crex</i>	Corn Crane	31/07/1972
<i>Calidris alpina</i>	Dunlin	31/12/2011
<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	04/12/2017
<i>Passer montanus</i>	Eurasian Tree Sparrow	31/12/2011
<i>Pluvialis apricaria</i>	European Golden Plover	31/12/2011
<i>Phalacrocorax aristotelis</i>	European Shag	12/06/2017
<i>Larus marinus</i>	Great Black-backed Gull	12/06/2017
<i>Phalacrocorax carbo</i>	Great Cormorant	12/06/2017
<i>Podiceps cristatus</i>	Great Crested Grebe	31/12/2011
<i>Gavia immer</i>	Great Northern Diver	31/12/2011
<i>Anser albifrons</i>	Greater White-fronted Goose	31/12/2001
<i>Pluvialis squatarola</i>	Grey Plover	31/12/2011
<i>Anser anser</i>	Greylag Goose	31/12/2011
<i>Circus cyaneus</i>	Hen Harrier	31/12/2011
<i>Larus argentatus</i>	Herring Gull	12/06/2017
<i>Delichon urbicum</i>	House Martin	31/12/2011
<i>Passer domesticus</i>	House Sparrow	31/12/2011
<i>Larus fuscus</i>	Lesser Black-backed Gull	31/12/2011
<i>Sylvia curruca</i>	Lesser Whitethroat	31/12/2011
<i>Egretta garzetta</i>	Little Egret	12/06/2017
<i>Tachybaptus ruficollis</i>	Little Grebe	31/12/2011
<i>Sternula albifrons</i>	Little Tern	31/12/2011
<i>Puffinus puffinus</i>	Manx Shearwater	05/08/1998
<i>Larus melanocephalus</i>	Mediterranean Gull	31/12/2001
<i>Falco columbarius</i>	Merlin	31/07/1991
<i>Larus canus</i>	Mew Gull	31/12/2011
<i>Cygnus olor</i>	Mute Swan	12/06/2017

Scientific Name	Common Name	Date of last record
<i>Morus bassanus</i>	Northern Gannet	18/06/2016
<i>Oenanthe oenanthe</i>	Northern Wheatear	06/09/2017
<i>Falco peregrinus</i>	Peregrine Falcon	31/12/2011
<i>Calidris canutus</i>	Red Knot	31/12/2011
<i>Gavia stellata</i>	Red-throated Diver	31/12/2011
<i>Charadrius hiaticula</i>	Ringed Plover	12/06/2017
<i>Oxyura jamaicensis</i>	Ruddy Duck	31/12/2001
<i>Philomachus pugnax</i>	Ruff	31/12/2001
<i>Riparia riparia</i>	Sand Martin	05/04/2016
<i>Sterna sandvicensis</i>	Sandwich Tern	11/07/2016
<i>Asio flammeus</i>	Short-eared Owl	31/12/2011
<i>Alauda arvensis</i>	Sky Lark	31/12/2011
<i>Muscicapa striata</i>	Spotted Flycatcher	31/12/2011
<i>Columba oenas</i>	Stock Pigeon	31/12/2011
<i>Rallus aquaticus</i>	Water Rail	31/12/2011
<i>Saxicola rubetra</i>	Whinchat	31/07/1991
<i>Cygnus cygnus</i>	Whooper Swan	31/12/2011
<i>Emberiza citrinella</i>	Yellowhammer	31/12/2011
<i>Arthurdendyus triangulatus</i>	Arthurdendyus triangulatus	23/08/2012
<i>Orobanche minor</i>	Common Broomrape	10/07/2014
<i>Spartina anglica</i>	Common Cord-grass	11/07/2014
<i>Heracleum mantegazzianum</i>	Giant Hogweed	26/06/2014
<i>Fallopia japonica</i>	Japanese Knotweed	24/05/2017
<i>Rhododendron ponticum</i>	Rhododendron ponticum	13/09/2005
<i>Hippophae rhamnoides</i>	Sea-buckthorn	21/10/2013
<i>Tursiops truncatus</i>	Bottle-nosed Dolphin	21/09/2014
<i>Delphinus delphis</i>	Common Dolphin	20/05/2013
<i>Phocoena phocoena</i>	Common Porpoise	04/04/2014
<i>Phoca vitulina</i>	Common Seal	08/07/2019
<i>Halichoerus grypus</i>	Grey Seal	30/07/2019
<i>Globicephala melas</i>	Long-finned Pilot Whale	20/06/2013
<i>Balaenoptera acutorostrata</i>	Minke Whale	01/07/1995
<i>Stenella coeruleoalba</i>	Striped Dolphin	02/09/2006
<i>Potamopyrgus antipodarum</i>	Jenkins' Spire Snail	31/12/1909
<i>Tandonia sowerbyi</i>	Keeled Slug	31/12/1909
<i>Theba pisana</i>	White Snail	31/12/1914
<i>Candidula intersecta</i>	Wrinkled Snail	31/12/1914
<i>Didymodon acutus</i>	Pointed Beard-moss	12/09/2007
<i>Zootoca vivipara</i>	Common Lizard	20/06/2020
<i>Mustela vison</i>	American Mink	11/05/1990



Scientific Name	Common Name	Date of last record
<i>Plecotus auritus</i>	Brown Long-eared Bat	25/06/1998
<i>Rattus norvegicus</i>	Brown Rat	18/03/2015
<i>Myotis daubentonii</i>	Daubenton's Bat	06/08/2012
<i>Sciurus carolinensis</i>	Eastern Grey Squirrel	12/01/2017
<i>Meles meles</i>	Eurasian Badger	19/05/2016
<i>Sorex minutus</i>	Eurasian Pygmy Shrew	25/06/2015
<i>Sciurus vulgaris</i>	Eurasian Red Squirrel	24/04/1969
<i>Lutra lutra</i>	European Otter	06/01/2015
<i>Oryctolagus cuniculus</i>	European Rabbit	04/04/2015
<i>Mus musculus</i>	House Mouse	23/12/2014
<i>Nyctalus leisleri</i>	Lesser Noctule	11/05/2011
<i>Pipistrellus pipistrellus sensu lato</i>	Pipistrelle	11/05/2011
<i>Cervus elaphus</i>	Red Deer	31/12/1978
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	11/05/2011
<i>Erinaceus europaeus</i>	West European Hedgehog	22/08/2016

## 2.4 I-WeBS data

The data regarding latest available annual site peak numbers were obtained from the Bird Watch Ireland website as regards the River Nanny Estuary and Shore SPA and the Boyne Estuary SPA. A comparison of these figures with the baseline figures presented in Naturas 2000 data form indicates that there has been a virtually universal decline in populations of QIs with the exception of Sanderling, the numbers of which have increased at the Boyne Estuary SPA. These comparisons are presented in Table 2 and Table 3.

The overriding objective of the Habitats Directive is to ensure that the habitats and species covered achieve 'favourable conservation status' and that their long-term survival is secured across their entire natural range within the EU. In its broadest sense, favourable conservation status means that an ecological feature is being maintained in a satisfactory condition, and that this status is likely to continue into the future. The vast majority of QIs currently have a conservation status that is unfavourable (declined between 25% and 49.9% of baseline value) or highly unfavourable (>50% decline). In the Conservation Objectives supporting document for the River Nanny Estuary and Shore SPA an assessment of the disturbance activities recorded included:

- Walking (incl. dogs);
- Powered watercraft;

- Shooting;
- Motorised vehicles; and
- Horse-riding.

Table 2: % change since baseline (Natura 2000 data form) in numbers of QIs recorded at the Nanny Estuary and Shore

Code	Common Name	Scientific Name	N2000	Latest I-WeBS (2008/09 - 2017/18)	% Change since baseline
A130	Oystercatcher	<i>Haematopus ostralegus</i>	1014	532	-48
A137	Ringed Plover	<i>Charadrius hiaticula</i>	185	117	-37
A140	Golden Plover	<i>Pluvialis apricaria</i>	1759	1058	-40
A143	Knot	<i>Calidris canutus</i>	1190	335	-72
A144	Sanderling	<i>Calidris alba</i>	240	237	-1
A184	Herring Gull	<i>Larus argentatus</i>	609	11	-98
A999	Wetlands	N/A	N/A	N/A	N/A

Table 3: % change since baseline (Natura 2000 data form) in numbers of QIs recorded at the Boyne Estuary

Code	Common Name	Scientific Name	N2000	Latest I-WeBS (2008/09 - 2017/18)	% Change since baseline
A048	Shelduck	<i>Tadorna tadorna</i>	218	190	-12.8440367
A130	Oystercatcher	<i>Haematopus ostralegus</i>	1099	762	-30.66424022
A140	Golden Plover	<i>Pluvialis apricaria</i>	6070	4480	-26.19439868
A141	Grey Plover	<i>Pluvialis squatarola</i>	98	51	-47.95918367
A142	Lapwing	<i>Vanellus vanellus</i>	4657	1537	-66.99592012
A143	Knot	<i>Calidris canutus</i>	1711	532	-68.90707189
A144	Sanderling	<i>Calidris alba</i>	69	170	146.3768116
A156	Black-tailed Godwit	<i>Limosa limosa</i>	471	396	-15.92356688
A162	Redshank	<i>Tringa totanus</i>	583	507	-13.03602058
A169	Turnstone	<i>Arenaria interpres</i>	175	29	-83.42857143
A195	Little Tern	<i>Sterna albifrons</i>	N/A	N/A	N/A
A999	Wetlands	N/A	N/A	N/A	N/A

## 2.5 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 four areas designated as a special area of conservation (SAC) and five areas designated as a Special Protection Area within 15 km of the proposed development site (see Table 4, Figure 18 and Figure 19).

**Table 4: Natura 2000 sites within 15km of the proposed development**

<b>SITE CODE</b>	<b>DESIGNATION</b>	<b>SITE NAME</b>
001459	SAC	CLOGHERHEAD
001957	SAC	BOYNE COAST AND ESTUARY
002299	SAC	RIVER BOYNE AND RIVER BLACKWATER
003000	SAC	ROCKABILL TO DALKEY ISLAND
004014	SPA	ROCKABILL
004080	SPA	BOYNE ESTUARY
004122	SPA	SKERRIES ISLANDS
004158	SPA	RIVER NANNY ESTUARY AND SHORE
004232	SPA	RIVER BOYNE AND RIVER BLACKWATER

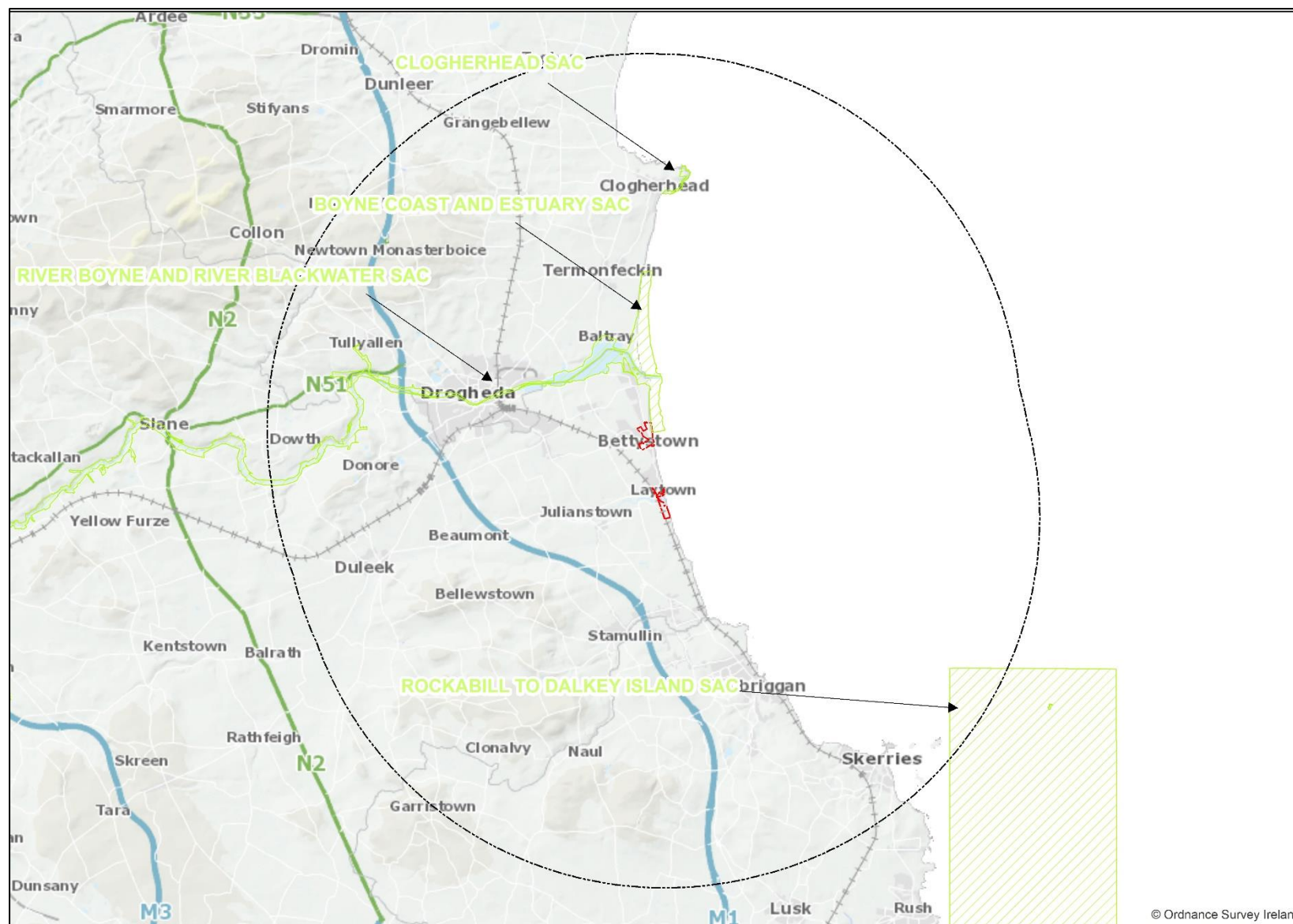


Figure 18: Location of SACs within 15 km of PRP

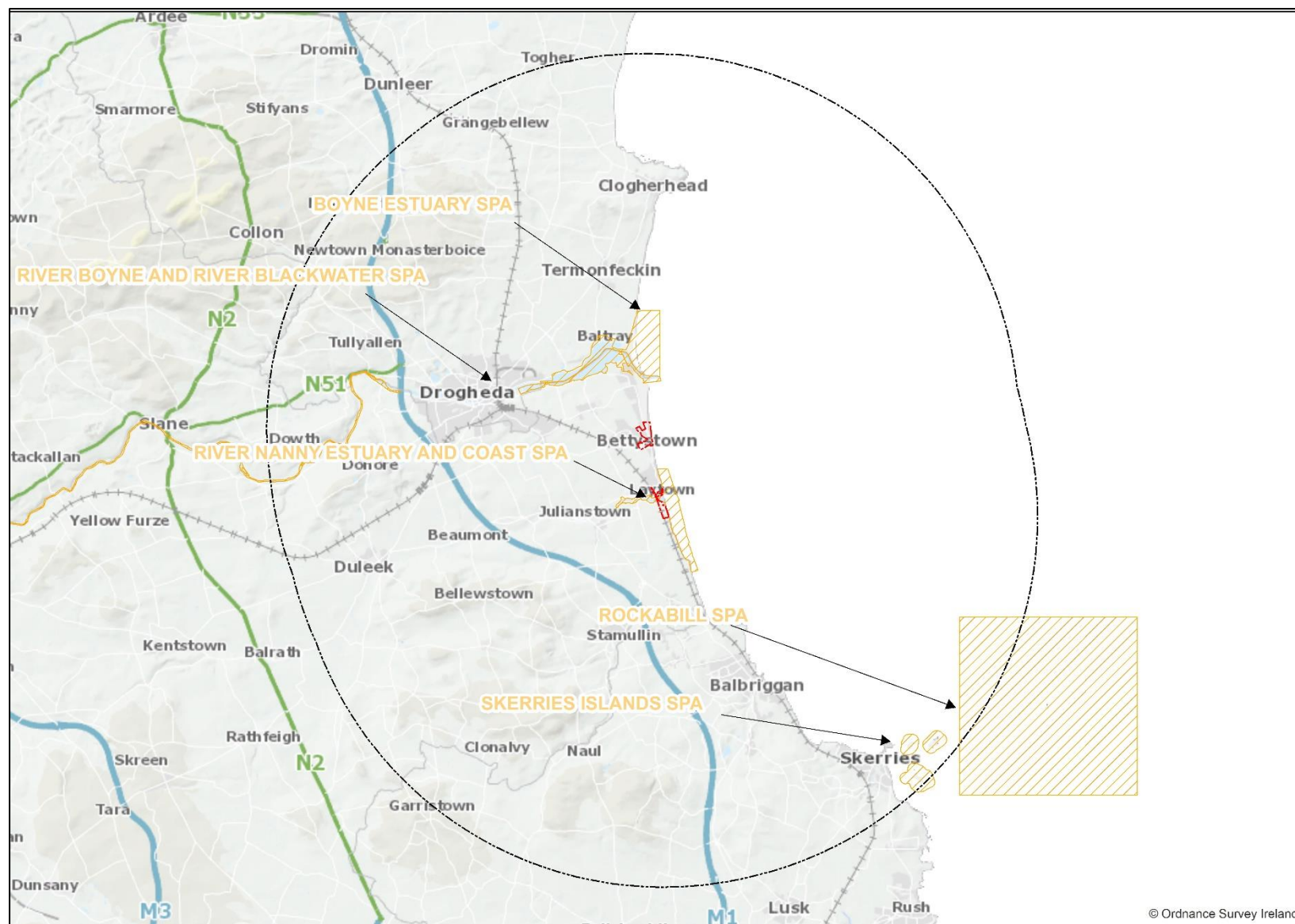


Figure 19: Location of SPAs within 15 km of PRP



## **2.6 Summary of Natura 2000 sites potentially impacted upon by the proposed development**

There are 9 Natura 2000 sites within 15 km of the Public Realm Plan. The River Nanny Estuary and Shore SPA passes through Laytown. There is one SAC within 2 km of the Public Realm Plan (given the sensitive location, scale and nature of the Public Realm Plan, direct impacts are likely to be within a “Zone of Influence” of 0 - 2 km) and two SPAs within 2 km of the Public Realm Plan. A summary of the qualifying interests, availability of detailed conservation objectives, general conservation objectives and whether or not the Natura 2000 site is within 2km of the proposed development is presented in Table 5.

Table 5: Summary of Natura 2000 sites within 15000 km

SITE CODE	SITE NAME	QUALIFYING INTEREST(S)	CONSERVATION OBJECTIVES DOCUMENT	CONSERVATION OBJECTIVES (GENERIC)	WITHIN 2 km OF THE PROPOSED PRP
001459	CLOGHERHEAD SAC	[1230], [4030]	YES	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	NO
001957	BOYNE COAST AND ESTUARY SAC	[1130], [1140], [1210], [1310], [1330], [2110], [2120], [2130] PRIORITY HABITAT	YES	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	YES
002299	RIVER BOYNE AND RIVER BLACKWATER SAC	[7230], [91E0] PRIORITY HABITAT, [1099], [1106], [1355]	NO	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	NO
003000	ROCKABILL TO DALKEY ISLAND SAC	[1170], [1351]	YES	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	NO
004014	ROCKABILL SPA	[A148], [A192], [A193], [A194]	YES	To maintain or restore the favourable conservation condition of the bird species listed as special conservation interests for this SPA	NO
004080	BOYNE ESTUARY SPA	[A048], [A130], [A140], [A141], [A142], [A143], [A144], [A156], [A162], [A169], [A195], [A999]	YES	To maintain or restore the favourable conservation condition of the bird species listed as special conservation interests for this SPA	YES
004122	SKERRIES ISLANDS SPA	[A017], [A018], [A046], [A148], [A169], [A184]	NO	To maintain or restore the favourable conservation condition of the bird species listed as special conservation interests for this SPA	NO
004158	RIVER NANNY ESTUARY AND SHORE SPA	[A130], [A137], [A140], [A143], [A144], [A184], [A999]	YES	To maintain or restore the favourable conservation condition of the bird species listed as special conservation interests for this SPA	YES
004232	RIVER BOYNE AND RIVER BLACKWATER SPA	[A229]	NO	To maintain or restore the favourable conservation condition of the bird species listed as special conservation interests for this SPA	NO

## 2.7 Identification and evaluation of likely significant effects

### 2.7.1 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. This model is applied to all possible impacts (i.e., not just water-based impacts). 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) Pathways 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 Public Realm Plan is of a relatively small scale, but the areas involved are very sensitive as regards ecology. The most likely source of any negative impacts will be associated with:

- Impacts on surface/ground water; or
- Impacts through disturbance.

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 any source(s) of impact(s) through disturbance?
- 3) Is there a pathway present between the source of impact and a Natura 2000 site; and
- 4) What are the Natura 2000 sites/qualifying interests potentially impacted upon?

### 2.7.2 Sources of potential impacts

Given the sensitive location, nature and scale of the proposed development, the primary sources of potential impacts are:

- Impacts associated with contamination of surface and/or ground water during construction and/or operation; and
- Impacts associated with disturbance during construction and/or operation.

### 2.7.3 Presence of pathway and receptor

The Public Realm Plan for Laytown and Bettystown involves sensitive coastal locations immediately adjacent to a sensitive ecological receptor (Laytown/Bettystown beach and the Irish Sea). Any construction activity in such close proximity to a sensitive receptor could potentially result in contamination of ground and/or surface water providing a pathway between the proposed development and the adjacent environment. There is potential during the operational phase for impacts associated with, for example, contamination from parked cars leaking hydrocarbons.

The Public Realm Plan includes the footbridge over the River Nanny, the primary component of the River Nanny Estuary and Shore SPA. Of note, the qualifying interests of the River Nanny Estuary and Shore SPA and Boyne Estuary SPA are highly likely to move between the sites. The Boyne Estuary SPA is largely contiguous with the Boyne Coast and Estuary SAC and any impacts should be considered for both sites. The Conservation Status of the Qualifying Interests of these sites is directly or indirectly dependent on water quality. These sites (River Nanny Estuary and Shore SPA, Boyne Estuary SPA and Boyne Coast and Estuary SAC) are the primary receptors of concern given the scale, nature and location of the Public Realm Plan.

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

There is a potential for impacts on the Conservation Objectives of the Qualifying Interests of the River Nanny Estuary and Shore SPA owing to the location of this Natura 2000 site within the Public Realm Plan area. There is also potential for negative impacts associated with the proposed development on Boyne Estuary SPA and the Boyne Coast and Estuary SAC. The Zone of Influence is considered, therefore, to include the following Natura 2000 sites within 15 km of the application site:

- River Nanny Estuary and Shore SPA;
- Boyne Estuary SPA; and
- Boyne Coast and Estuary SAC.

## 2.7.5 Sources of potential Direct, Indirect or Secondary Impacts

### 2.7.5.1 Direct Impacts

There is no habitat for which any relevant Natura 2000 sites are designated that will be lost through land-take, etc. associated with the Public Realm Plan. The footbridge between Seafields and Laytown, however, crosses the River Nanny and there is a potential for direct impact on the River Nanny Estuary and Shore SPA through disturbance associated with any change in the nature of this footbridge (including merely increasing the footfall on the existing structure).

### 2.7.5.2 Indirect Impacts

In addition to proximity to the River Nanny Estuary and Shore SPA, the Public Realm Plan is located immediately adjacent to the Boyne Coast and Estuary SAC, and proximate to the Boyne Estuary SPA (with Qualifying Interests almost certain to move between the River Nanny Estuary and Shore SPA and the Boyne Estuary SPA depending on numerous factors, including disturbance). The qualifying interests of these Natura 2000 sites are directly or indirectly dependent on water quality.

There is potential for indirect impacts associated with both the construction and operation phases of the Public Realm Plan through an impact on water quality.

There is potential for indirect impacts associated with both the construction and operation phases of the Public Realm Plan through disturbance.

### 2.7.5.3 Secondary and or Residual Impacts

Given the location, nature and scale of the Public Realm Plan, there are no significant residual/secondary impacts foreseen presuming any indirect impacts are mitigated against.

A summary of the potential for primary impacts upon Natura 2000 sites within the zone of influence of the proposed development is summarized in Table 6. The potential for impacts upon the Natura 2000 sites identified in the event of negative impacts is summarized in Table 7. The potential impacts on the qualifying interests of identified Natura 2000 sites are summarized in Table 8.

Table 6: 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
CLOGHERHEAD SAC	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
BOYNE COAST AND ESTUARY SAC	NONE FORESEEN	POTENTIAL	NONE FORESEEN	POTENTIAL	NONE FORESEEN	POTENTIAL
IRELAND'S EYE SAC	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
RIVER BOYNE AND RIVER BLACKWATER SAC	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
ROCKABILL TO DALKEY ISLAND SAC	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
ROCKABILL SPA	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
BOYNE ESTUARY SPA SAC	NONE FORESEEN	POTENTIAL	NONE FORESEEN	POTENTIAL	NONE FORESEEN	POTENTIAL
SKERRIES ISLANDS SPA	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
RIVER NANNY ESTUARY AND SHORE SPA	POTENTIAL	POTENTIAL	NONE FORESEEN	POTENTIAL	POTENTIAL	POTENTIAL
RIVER BOYNE AND RIVER BLACKWATER SPA	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN

Table 7: 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
CLOGHERHEAD SAC	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
BOYNE COAST AND ESTUARY SAC	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL
IRELAND'S EYE SAC	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
RIVER BOYNE AND RIVER BLACKWATER SAC	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
ROCKABILL TO DALKEY ISLAND SAC	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
ROCKABILL SPA	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
BOYNE ESTUARY SPA	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL
SKERRIES ISLANDS SPA	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN
RIVER NANNY ESTUARY AND SHORE SPA	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL	POTENTIAL
RIVER BOYNE AND RIVER BLACKWATER SPA	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN	NONE FORESEEN



Table 8: Summary of potential impacts on Qualifying Interests of Natura 2000 sites identified as at risk of impact

Site name	Qualifying Interest	Potential Impact
Boyne Coast and Estuary SAC	1130 Estuaries	Potential impact associated with impacts on water quality
	1140 Mudflats and Sandflats not covered by water at low tide	Potential impact associated with impacts on water quality
	1310 <i>Salicornia</i> and other annuals colonising mud and sand	Potential impact associated with impacts on water quality
	1330 Atlantic Salt Meadows	Potential impact associated with impacts on water quality
	1410 Mediterranean Salt Meadows	Potential impact associated with impacts on water quality
	2110 Embryonic shifting dunes	None foreseen
	2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	None foreseen
	2130 Fixed coastal dunes with herbaceous vegetation (grey dunes) <sup>priority habitat</sup>	None foreseen
Boyne Estuary SPA	Shelduck ( <i>Tadorna tadorna</i> ) [A048]	Potential indirect impacts
	Oystercatcher ( <i>Haematopus ostralegus</i> ) [A130]	Potential indirect impacts
	Golden Plover ( <i>Pluvialis apricaria</i> ) [A140]	Potential indirect impacts
	Grey Plover ( <i>Pluvialis squatarola</i> ) [A141]	Potential indirect impacts
	Lapwing ( <i>Vanellus vanellus</i> ) [142]	Potential indirect impacts
	Knot ( <i>Calidris canutus</i> ) [A143]	Potential indirect impacts
	Sanderling ( <i>Calidris alba</i> ) [A144]	Potential indirect impacts
	Black-tailed Godwit ( <i>Limosa limosa</i> ) [A156]	Potential indirect impacts
	Redshank ( <i>Tringa totanus</i> ) [A162]	Potential indirect impacts
	Turnstone ( <i>Arenaria interpres</i> ) [A169]	Potential indirect impacts
	Little Tern ( <i>Sterna albifrons</i> ) [A195]	Potential indirect impacts
	Wetlands [A999]	None foreseen
River Nanny Estuary and Shore SPA	Oystercatcher ( <i>Haematopus ostralegus</i> ) [A130]	Disturbance, impacts associated with changes in water quality
	Ringed Plover ( <i>Charadrius hiaticula</i> ) [A137]	Disturbance, impacts associated with changes in water quality
	Golden Plover ( <i>Pluvialis apricaria</i> ) [A141]	Disturbance, impacts associated with changes in water quality
	Knot ( <i>Calidris canutus</i> ) [A143]	Disturbance, impacts associated with changes in water quality
	Sanderling ( <i>Calidris alba</i> ) [144]	Disturbance, impacts associated with changes in water quality
	Herring Gull ( <i>Larus argentatus</i> ) [184]	None foreseen
	Wetlands [A999]	None foreseen

## 2.7.6 Potential cumulative/in-combination impacts in association with other plans

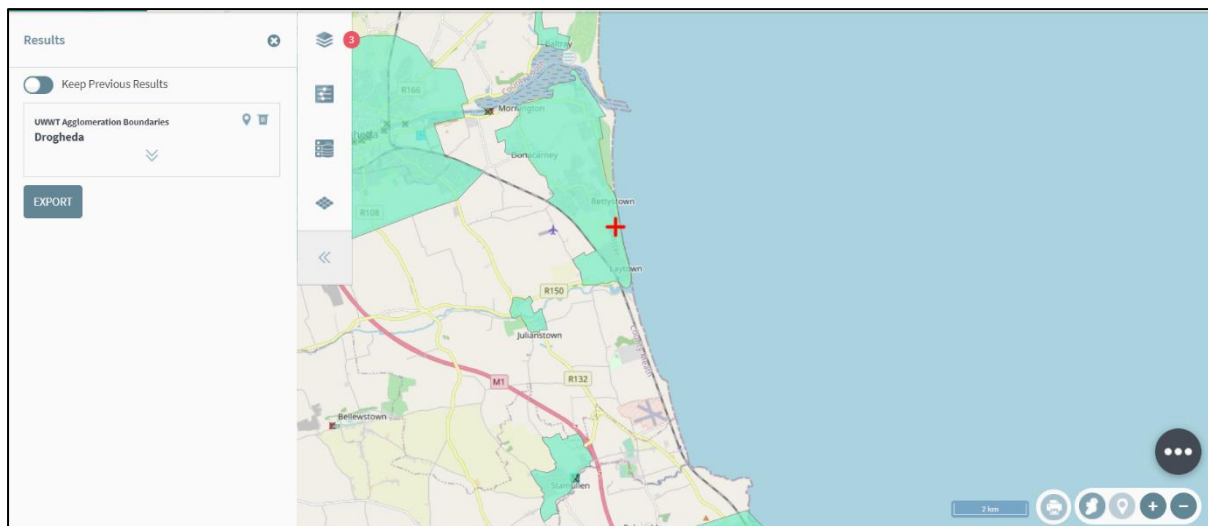
Article 6(3) of the Habitats Directive requires an assessment of a plan/project to consider other plans/projects that might, in combination with the proposed plan/project, have the potential to adversely impact upon Natura 2000 sites. Any plan/project with the potential to impact on water quality/hydrology within the Malahide Estuary and any plan/project with the potential to have an impact through disturbance has the potential to have cumulative/in-combination impacts.

**Table 9: Potential cumulative impacts.**

Plan/Project	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 the absence of mitigation measures
Development Plans	Sustainable development of Fingal Co.	None predicted
Local Area Development Plans	Various	None predicted
Meath and Louth County Development Plans	Sustainable development of Counties Louth and Meath	Potential in combination impacts on water quality and disturbance in the absence of mitigation measures
Quarrying activities, water abstraction, discharge, etc	Various	Potential in-combination impacts on water quality in the absence of mitigation measures
Current and future planning permissions –	Various	An Appropriate Assessment Screening exercise of any planning permission would be undertaken.
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 the absence of mitigation measures

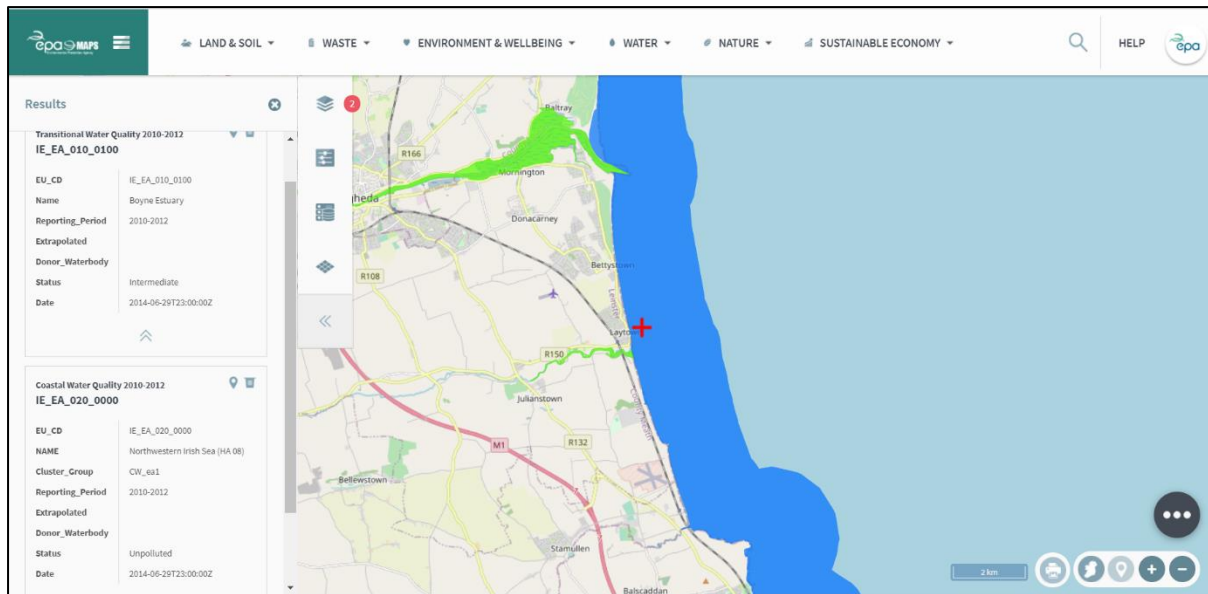
The primary source of any cumulative impacts concerns impacts on ground and/or surface water quality and impacts on the foraging and/or roosting activity of overwintering waders.

As regards any cumulative impacts, **all** future developments must be subject to the Appropriate Assessment process. The primary concern as regards the majority developments is the capacity for foul sewage effluent at the Wastewater Treatment Plant. The area of the Public Realm Plan (which includes potential to re-purpose and upgrade disused toilet facility/changing room at Laytown) proposed development site is within the “Drogheda Agglomeration” as indicated in Figure 20. Of note, Seafields (to which potential improved access is an objective of the Public Realm Plan) is not within this Agglomeration.



**Figure 20: Excerpt from EPA web-resource, indicating agglomeration**

As regards the water quality within the Boyne Estuary and the Irish Sea adjacent to the Public Realm Plan area, the most recent assessment of Boyne Estuary according to the EPA Maps online resource (2010 – 2012) ascribes a water quality of “Intermediate” to the estuary and “Unpolluted” to the Irish Sea (see Figure 21).



**Figure 21: Screenshot from EPA Maps online resource**

The primary source of water contamination within the Boyne Estuary and the Irish Sea adjacent to the proposed development is almost certainly associated with any non-compliances at waste-water treatment plant (WWTP) facilities discharging to the immediate vicinity. The Irish Water Annual Environmental Report (AER) for 2019 from the Drogheda WWTP<sup>1</sup> (to which foul sewage from the majority of the area within the Public Realm Plan) indicates that final effluents were not compliant with Emission Limit Values, with the failing parameter regarding total Nitrogen. Incidents recorded largely entail blocked sewers, network infrastructure and adverse weather conditions. It is noted, however, that the Organic Capacity P.E. as constructed of the WWTP is 101,600 with an Organic Capacity P.E. remaining (2019) of 26,574. The Annual Environmental Report does indicate that “...*The discharge from the wastewater treatment plant does not have an observable negative impact on the Water Framework Directive status...*”.

It is also noted that as regards bathing water quality at Clogherhead and Bettystown/Laytown water quality status was deemed “Excellent” in 2019.

A query of the EIA portal<sup>2</sup> would indicate that there are no projects in the vicinity of the Laytown and Bettystown PRP requiring EIA (see Figure 22).

<sup>1</sup> [https://www.water.ie/docs/aers/2019/D0041-01\\_2019\\_AER.pdf](https://www.water.ie/docs/aers/2019/D0041-01_2019_AER.pdf)

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

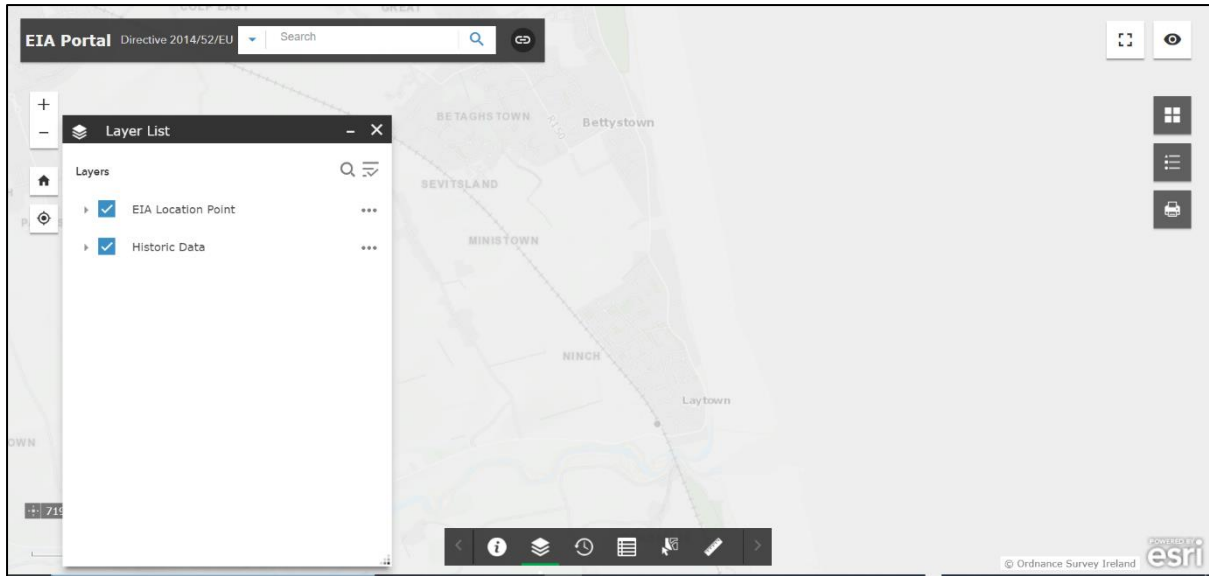


Figure 22: Excerpt of the area of the Laytown and Bettystown PRP from the EIA Portal online resource

A query if recent planning applications in the vicinity of the primary areas covered by the Laytown and Bettystown Public Realm Plan was undertaken. Given the nature of the Public Realm Plan, most of the elements of the Plan will mitigate against any cumulative impacts (for example reducing traffic congestion will likely reduce noise levels, etc.)

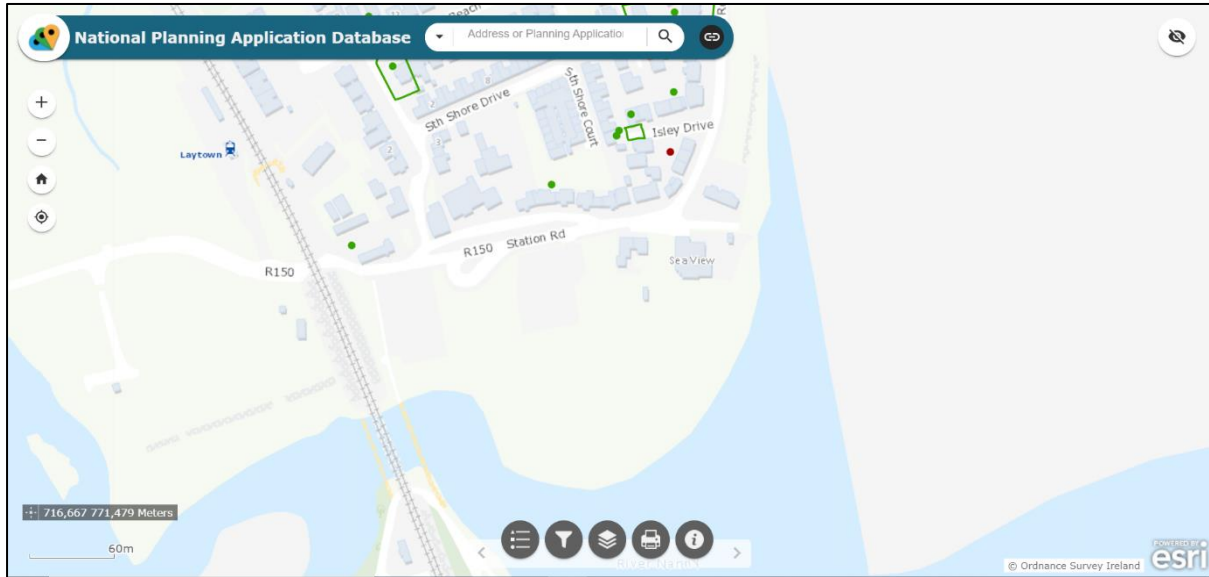


Figure 23: Excerpt from NPAD for Laytown area



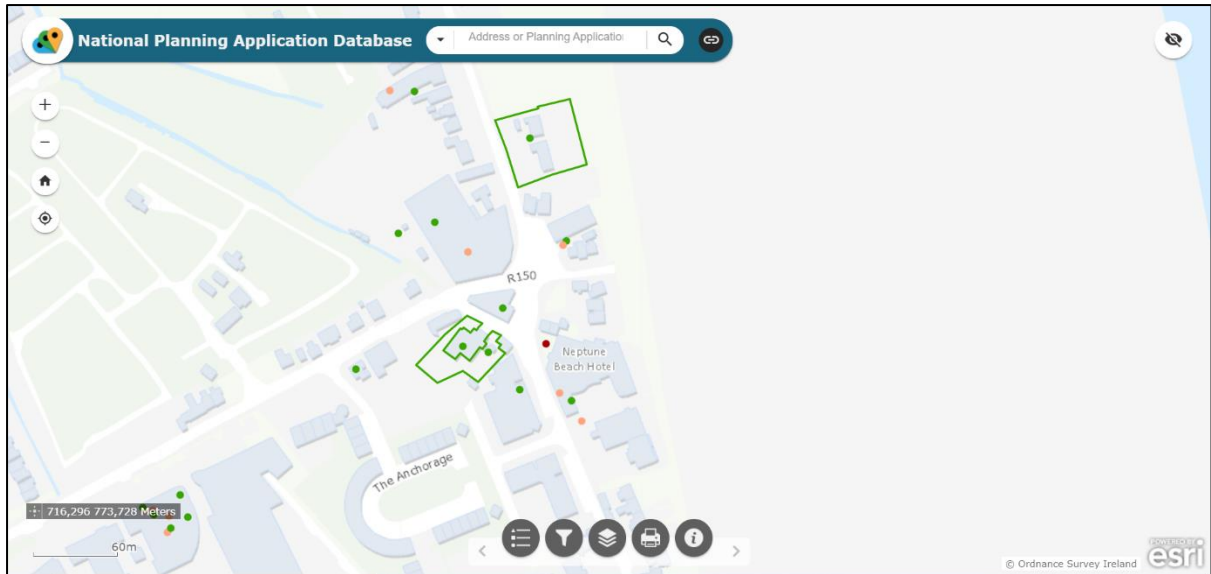


Figure 24: Excerpt from NPAD for Bettystown area

### 2.7.7 “Do nothing” scenario

Any potential negative impacts associated with the Public Realm Plan would be avoided. Of note, the overall objective of the Public Realm Plan is to improve the Public Realm, including as regards environmental impacts.

### 2.7.8 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 10.

**Table 10: 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

## 2.8 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 Laytown and Bettystown 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:

- Boyne Coast and Estuary SAC;
- Boyne Estuary SPA; and
- River Nanny Estuary and Shore 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

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The potential for significant negative impacts of the Laytown and Bettystown Public Realm Plan on the ecological integrity of the following sites, in light of the conservation objectives of those sites, is examined in this section, namely:

- Boyne Coast and Estuary SAC;
- Boyne Estuary SPA; and
- River Nanny Estuary and Shore SPA.

#### 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 affected 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**

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. All of the relevant sites have, in this case, a detailed Conservation Objectives Document available.

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](http://bd.eionet.europa.eu/activities/Natura_2000/reference_portal)

A summary of the Natura 2000 sites potentially impacted upon by the proposed development including general description, qualifying interests, conservation objectives, vulnerability/threats, and conservation status of habitats/species within individual sites and conservation status of qualifying interests on a national basis, is provided as follows.



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

#### 3.2.1.1 General Description

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

#### 3.2.1.2 Qualifying Interests

The qualifying interests of this site are indicated in Table 11.

Table 11

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

### 3.2.1.3 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 12.

Table 12: Threats, pressures, and activities with impacts on the site

Negative Impacts				Positive Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i o b]	Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i o b]
M	D01.05		i	M	D01.01		i
M	J02.01.03		i	M	J03.03		i
H	K02		i	M	G03		i
H	L07		b	M	J02		o
M	J02.12		i				
M	J02.02		i				
H	H01		i				
L	J02.12.01		i				
M	G01.03.02		i				
L	E03.03		i				
L	G05		i				
M	G01.02		o				
H	I01		i				
M	J02.12		i				
M	E01		i				
L	G05.04		i				
M	E05		b				
H	E03.01		b				

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

### 3.2.1.4 Conservation Objectives of the site

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

[https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO001957.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001957.pdf)

Details from this document are reproduced here. The Conservation Objectives of the site are outlined in Table 13, Table 14, Table 15, Table 16, Table 17, Table 18, Table 19, Table 20.

Table 13

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

Table 14

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

Table 15

<b>1310 Salicornia and other annuals colonizing mud and sand</b>			
<b>To restore the favourable conservation condition of <i>Salicornia</i> and other annuals colonizing mud and sand in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:</b>			
<b>Attribute</b>	<b>Measure</b>	<b>Target</b>	<b>Notes</b>
Habitat area	Hectares	Area stable or increasing, subject to natural processes, including erosion and succession. For sub-sites mapped: Baltray- 2.91ha, Mornington- 1.14ha. See map 6	Based on data from Saltmarsh Monitoring Project (McCorry and Ryle, 2009). Habitat mapped at two sub-sites surveyed, giving a total estimated area of 4.05ha. NB further unsurveyed areas maybe present within the site. See coastal habitats supporting document for further details
Habitat distribution	Occurrence	No decline or change in habitat distribution, subject to natural processes. See map 6 for known distribution	Based on data from McCorry and Ryle (2009). <i>Salicornia</i> is an annual species, so its distribution can vary significantly from year to year. At Baltray, saltmarsh is expanding in infilled intertidal zone. Large area of Mornington saltmarsh was reclaimed in the past. See coastal habitats supporting document for further details
Physical structure: sediment supply	Presence/ absence of physical barriers	Maintain/restore natural circulation of sediments and organic matter, without any physical obstructions	Based on data from McCorry and Ryle (2009). Sediment supply is particularly important for this pioneer saltmarsh community, as the distribution of this habitat depends on accretion rates. Sediment supply to saltmarshes at Baltray and Mornington is likely to be affected by the construction of navigation walls and dredging of the main channel. See coastal habitats supporting document for further details
Physical structure: creeks and pans	Occurrence	Maintain creek and pan structure, subject to natural processes, including erosion and succession	Based on data from McCorry and Ryle (2009). Creeks deliver sediment throughout saltmarsh system. At Baltray and Mornington the structure is modified by drainage channels. See coastal habitats supporting document for further details
Physical structure: flooding regime	Hectares flooded; frequency	Maintain natural tidal regime	This pioneer saltmarsh community requires regular tidal inundation. See coastal habitats supporting document for further details
Vegetation structure: zonation	Occurrence	Maintain the range of coastal habitats including transitional zones, subject to natural processes including erosion and succession	Based on data from McCorry and Ryle (2009). At Baltray and Mornington there are zonations within the saltmarsh habitats as well as transitions to adjacent sand dune systems. See coastal habitats supporting document for further details
Vegetation structure: vegetation height	Centimeters	Maintain structural variation within sward	Based on data from McCorry and Ryle (2009). At Baltray and Mornington grazing is absent and sward height is variable. See coastal habitats supporting document for further details

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

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

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



Table 16

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

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

To maintain the favourable conservation condition of Atlantic salt meadows (*Glauco-Puccinellietalia*) in Boyne Coast and Estuary SAC, which is defined by the following list of attributes and targets:

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

Table 17

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

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

Attribute	Measure	Target	Notes

Table 18

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

Continued overleaf...

**2110 Embryonic shifting dunes**

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

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



Table 19

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

Continued overleaf...



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

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

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

Table 20

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

Continued overleaf...

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

### 3.2.1.5 Baseline Conservation Status of the site

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

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

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

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

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

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

#### 3.2.2.1 General Description

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

#### 3.2.2.2 Qualifying Interests

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

Table 23

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



### 3.2.2.3 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 24.

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

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

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

### 3.2.2.4 Conservation Objectives of the site

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

[https://www.npws.ie/sites/default/files/protected-sites/conservation\\_objectives/CO004080.pdf](https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004080.pdf)

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

Table 25

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

Table 26

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

Table 27

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

Table 28

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

Table 29

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

Table 30

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

Table 31

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

Table 32

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

Table 33

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

Table 34

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

Table 35

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

Table 36

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

### 3.2.2.5 Baseline Conservation Status of the site

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



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

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

### 3.2.3 River Nanny Estuary and Shore SPA (Site synopsis version date 20/01/15, Natura 2000 form update 09/18, Conservation Objectives version 1.0)

There is a conservation objectives document for this site ([www.npws.ie](http://www.npws.ie)) from which the following is sourced, in addition to site synopses and Natura 2000 data form.

#### 3.2.3.1 General Description

The site comprises the estuary of the River Nanny and sections of the shoreline to the north and south of the estuary (c.3 km in length). The estuarine channel, which extends inland for almost 2 km, is narrow and well sheltered. Sediments are muddy in character and edged by saltmarsh and freshwater marsh/wet grassland. The shoreline, which is approximately 500 m in width to the low tide mark, comprises beach and intertidal habitats. It is a well-exposed shore, with coarse sand sediments. The well-developed beaches, which are backed in places by clay cliffs, provide high tide roosts for the birds. The village of Laytown occurs on the northern side of the River Nanny estuary. This is an important east coast site, with nationally important populations of *Pluvialis apricaria*, *Haematopus ostralegus*, *Charadrius hiaticula*, *Calidris cantus*, *Calidris alba* and *Larus argentatus*. The population of *Calidris canutus* and *Calidris alba* are of particular note as they represent 4% and 3.8% of the respective all-Ireland totals. A range of other waterfowl species also occur, including *Branta bernicla hrota*, as well as *Larus* gulls.

#### 3.2.3.2 Qualifying Interests

A detailed Conservation Objectives Document has been prepared for this site. The qualifying interests of the site are identified in Table 38.

Table 38

Qualifying Interests		
* indicates a priority habitat under the Habitats Directive		
004158	River Nanny Estuary and Shore SPA	
A130	Oystercatcher <i>Haematopus ostralegus</i>	wintering
A137	Ringed Plover <i>Charadrius hiaticula</i>	wintering
A140	Golden Plover <i>Pluvialis apricaria</i>	wintering
A143	Knot <i>Calidris canutus</i>	wintering
A144	Sanderling <i>Calidris alba</i>	wintering
A184	Herring Gull <i>Larus argentatus</i>	wintering
A999	Wetlands	

### 3.2.3.3 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 39.

Table 39: Threats, pressures and activities impacting on the site

Negative Impacts				Positive Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i o b]	Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i o b]
M	G01.02		i	M	G01.02		i
M	E01.01		o				

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

### 3.2.3.4 Conservation Objectives

A detailed Conservation Objectives Document has been prepared for this site ([www.npws.ie](http://www.npws.ie)). The Conservation Objectives of the site are outlined in Table 40, Table 41, Table 42, Table 43, Table 44, Table 45 and Table 46.

Table 40

Conservation objectives for: River Nanny Estuary and Shore SPA [004158]			
<b>A130 Oystercatcher <i>Haematopus ostralegus</i></b>			
To maintain the favourable conservation condition of Oystercatcher in River Nanny Estuary and Shore SPA, which is defined by the following list of attributes and targets:			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	There should be no significant decrease in the range, timing or intensity of use of areas by oystercatcher other than that occurring from natural patterns of variation	As determined by regular low tide and other waterbird surveys. Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 41

<b>Conservation objectives for: River Nanny Estuary and Shore SPA [004158]</b>			
<b>A137      Ringed Plover <i>Charadrius hiaticula</i></b>			
<b>To maintain the favourable conservation condition of Ringed Plover in River Nanny Estuary and Shore SPA, which is defined by the following list of attributes and targets:</b>			
<b>Attribute</b>	<b>Measure</b>	<b>Target</b>	<b>Notes</b>
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	There should be no significant decrease in the range, timing or intensity of use of areas by ringed plover other than that occurring from natural patterns of variation	As determined by regular low tide and other waterbird surveys. Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 42

<b>Conservation objectives for: River Nanny Estuary and Shore SPA [004158]</b>			
<b>A140      Golden Plover <i>Pluvialis apricaria</i></b>			
<b>To maintain the favourable conservation condition of Golden Plover in River Nanny Estuary and Shore SPA, which is defined by the following list of attributes and targets:</b>			
<b>Attribute</b>	<b>Measure</b>	<b>Target</b>	<b>Notes</b>
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	There should be no significant decrease in the range, timing or intensity of use of areas by golden plover other than that occurring from natural patterns of variation	As determined by regular low tide and other waterbird surveys. Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 43

<b>Conservation objectives for: River Nanny Estuary and Shore SPA [004158]</b>			
<b>A143 Knot <i>Calidris canutus</i></b>			
<b>To maintain the favourable conservation condition of Knot in River Nanny Estuary and Shore SPA, which is defined by the following list of attributes and targets:</b>			
<b>Attribute</b>	<b>Measure</b>	<b>Target</b>	<b>Notes</b>
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	There should be no significant decrease in the range, timing or intensity of use of areas by knot other than that occurring from natural patterns of variation	As determined by regular low tide and other waterbird surveys. Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 44

<b>Conservation objectives for: River Nanny Estuary and Shore SPA [004158]</b>			
<b>A144 Sanderling <i>Calidris alba</i></b>			
<b>To maintain the favourable conservation condition of Sanderling in River Nanny Estuary and Shore SPA, which is defined by the following list of attributes and targets:</b>			
<b>Attribute</b>	<b>Measure</b>	<b>Target</b>	<b>Notes</b>
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	There should be no significant decrease in the range, timing or intensity of use of areas by sanderling other than that occurring from natural patterns of variation	As determined by regular low tide and other waterbird surveys. Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 45

<b>Conservation objectives for: River Nanny Estuary and Shore SPA [004158]</b>			
<b>A184 Herring Gull <i>Larus argentatus</i></b>			
<b>To maintain the favourable conservation condition of Herring Gull in River Nanny Estuary and Shore SPA, which is defined by the following list of attributes and targets:</b>			
Attribute	Measure	Target	Notes
Population trend	Percentage change	Long term population trend stable or increasing	Waterbird population trends are presented in part four of the conservation objectives supporting document
Distribution	Range, timing and intensity of use of areas	There should be no significant decrease in the range, timing or intensity of use of areas by herring gull other than that occurring from natural patterns of variation	As determined by regular low tide and other waterbird surveys. Waterbird distribution from the 2011/2012 waterbird survey programme is discussed in part five of the conservation objectives supporting document

Table 46

<b>Conservation objectives for: River Nanny Estuary and Shore SPA [004158]</b>			
<b>A999 Wetlands</b>			
<b>To maintain the favourable conservation condition of the wetland habitat in River Nanny Estuary and Shore SPA as a resource for the regularly-occurring migratory waterbirds that utilise it. This is defined by the following attribute and target:</b>			
Attribute	Measure	Target	Notes
Wetland habitat	Area (ha)	The permanent area occupied by the wetland habitat should be stable and not significantly less than the area of 230ha, other than that occurring from natural patterns of variation	The wetland habitat area was estimated as 230ha using OSi data and relevant orthophotographs. For further information see part three of the conservation objectives supporting document

### 3.2.3.5 Baseline Conservation Status of site

A synopsis of the conservation status of the site is provided in Table 47.



Table 47: 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	A053	<a href="#">Anas platyrhynchos</a>			w	76	76	i		G	C	B	C C
B	A169	<a href="#">Arenaria interpres</a>			w	59	59	i		G	C	B	C C
B	A046	<a href="#">Branta bernicla</a>			w	145	145	i		G	C	B	C C
B	A144	<a href="#">Calidris alba</a>			w	240	240	i		G	B	A	C A
B	A149	<a href="#">Calidris alpina</a>			w	721	721	i		G	C	B	C C
B	A143	<a href="#">Calidris canutus</a>			w	1190	1190	i		G	B	A	C B
B	A137	<a href="#">Charadrius hiaticula</a>			w	185	185	i		G	C	B	C B
B	A130	<a href="#">Haematopus ostralegus</a>			w	1014	1014	i		G	C	B	C B
B	A184	<a href="#">Larus argentatus</a>			w	609	609	i		G	C	B	C C
B	A182	<a href="#">Larus canus</a>			w	66	66	i		G	C	B	C C
B	A179	<a href="#">Larus ridibundus</a>			w	926	926	i		G	C	B	C C
B	A157	<a href="#">Limosa lapponica</a>			w	63	63	i		G	C	B	C C
B	A160	<a href="#">Numenius arquata</a>			w	107	107	i		G	C	B	C C
B	A017	<a href="#">Phalacrocorax carbo</a>			w	35	35	i		G	C	B	C C
B	A140	<a href="#">Pluvialis apricaria</a>			w	1759	1759	i		G	C	B	C C
B	A141	<a href="#">Pluvialis squatarola</a>			w	55	55	i		G	C	B	C C
B	A162	<a href="#">Tringa totanus</a>			w	150	150	i		G	C	B	C C
B	A142	<a href="#">Vanellus vanellus</a>			w	1112	1112	i		G	C	B	C C

### **3.3 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 48.

**Table 48: 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
Boyne Estuary and Coast SAC	[1130]	RANGE	FAVOURABLE (=)	REPRESENTATIVITY	B	<ul style="list-style-type: none"><li>• WATER QUALITY</li><li>• NATURAL EROSION/ SEDIMENTATION PROCESSES</li><li>• APPROPRIATE AGRICULTURAL AND SILVICULTURAL PRACTICES</li><li>• SURFACE AND GROUND WATER QUALITY</li><li>• APPROPRIATE LEVELS OF DISTURBANCE</li><li>• AIR QUALITY</li></ul>
		AREA	FAVOURABLE (=)	RELATIVE SURFACE	C	
		STRUCTURES AND FUNCTIONS	INADEQUATE √	CONSERVATION	B	
		FUTURE PROSPECTS	UNFAVOURABLE/INADEQUATE	GLOBAL	B	
		OVERALL STATUS	INADEQUATE √			
		OVERALL TREND	DECLINING			
	[1140]	RANGE	FAVOURABLE (=)	REPRESENTATIVITY	B	
		AREA	FAVOURABLE (=)	RELATIVE SURFACE	B	
		STRUCTURES AND FUNCTIONS	INADEQUATE √	CONSERVATION	B	
		FUTURE PROSPECTS	UNFAVOURABLE/INADEQUATE	GLOBAL	B	
		OVERALL STATUS	INADEQUATE √			
		OVERALL TREND	DECLINING			
	[1310]	RANGE	FAVOURABLE =	REPRESENTATIVITY	C	
		AREA	FAVOURABLE =	RELATIVE SURFACE	B	
		STRUCTURES AND FUNCTIONS	FAVOURABLE =	CONSERVATION	C	
		FUTURE PROSPECTS	FAVOURABLE	GLOBAL	B	
		OVERALL STATUS	FAVOURABLE =			
		OVERALL TREND	STABLE			
	[1330]	RANGE	FAVOURABLE =	REPRESENTATIVITY	C	
		AREA	INADEQUATE √	RELATIVE SURFACE	B	
		STRUCTURES AND FUNCTIONS	INADEQUATE =	CONSERVATION	C	
		FUTURE PROSPECTS	UNFAVOURABLE/INADEQUATE	GLOBAL	B	
		OVERALL STATUS	INADEQUATE √			
		OVERALL TREND	DECLINING			

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
	[1410]	RANGE	FAVOURABLE =			
		AREA	INADEQUATE ∇			
		STRUCTURES AND FUNCTIONS	INADEQUATE =			
		FUTURE PROSPECTS	UNFAVOURABLE/INADEQUATE			
		OVERALL STATUS	INADEQUATE ∇			
		OVERALL TREND	DECLINING			
	[2110]	RANGE	FAVOURABLE =			
		AREA	FAVOURABLE =			
		STRUCTURES AND FUNCTIONS	INADEQUATE =			
		FUTURE PROSPECTS	UNFAVOURABLE/INADEQUATE			
		OVERALL STATUS	INADEQUATE =			
		OVERALL TREND	STABLE			
	[2120]	RANGE	FAVOURABLE =			
		AREA	INADEQUATE ∇			
		STRUCTURES AND FUNCTIONS	FAVOURABLE =			
		FUTURE PROSPECTS	INADEQUATE			
		OVERALL STATUS	INADEQUATE =			
		OVERALL TREND	STABLE			
	[2130] – PRIORITY HABITAT	RANGE	FAVOURABLE =			
		AREA	INADEQUATE =			
		STRUCTURES AND FUNCTIONS	BAD ∇			
		FUTURE PROSPECTS	BAD			
		OVERALL STATUS	BAD ∇			
		OVERALL TREND	DECLINING			

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
BOYNE ESTUARY SPA	A048	N/A	N/A	POPULATION	C	<ul style="list-style-type: none"> <li>• WATER QUALITY</li> <li>• APPROPRIATE AGRICULTURAL AND SILVICULTURAL PRACTICES</li> <li>• NATURAL EROSION/ SEDIMENTATION PROCESSES</li> <li>• SURFACE AND GROUND WATER QUALITY</li> <li>• APPROPRIATE LEVELS OF DISTURBANCE</li> <li>• AIR QUALITY</li> </ul>
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	
	A130	N/A	N/A	POPULATION	C	
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	
	A140	N/A	N/A	POPULATION	B	
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	
	A141	N/A	N/A	POPULATION	C	
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	
	A142	N/A	N/A	POPULATION	B	
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	
	A143	N/A	N/A	POPULATION	B	
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	A	

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
	A144	N/A	N/A	POPULATION	C	<ul style="list-style-type: none"> <li>• WATER QUALITY</li> <li>• APPROPRIATE AGRICULTURAL AND SILVICULTURAL PRACTICES</li> <li>• NATURAL EROSION/ SEDIMENTATION PROCESSES</li> <li>• SURFACE AND GROUND WATER QUALITY</li> <li>• APPROPRIATE LEVELS OF DISTURBANCE</li> <li>• AIR QUALITY</li> </ul>
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	
	A156	N/A	N/A	POPULATION	B	
		N/A	N/A	CONSERVATION	A	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	A	
	A162	N/A	N/A	POPULATION	C	
		N/A	N/A	CONSERVATION	A	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	
	A169	N/A	N/A	POPULATION	C	
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	
	A195	N/A	N/A	POPULATION	C	
		N/A	N/A	CONSERVATION	C	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	C	
	A999	N/A	N/A	POPULATION	N/A	
		N/A	N/A	CONSERVATION	N/A	
		N/A	N/A	ISOLATION	N/A	
		N/A	N/A	GLOBAL	N/A	



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 Nanny Estuary and shore SPA	A130	N/A	N/A	POPULATION	C	<ul style="list-style-type: none"> <li>• WATER QUALITY</li> <li>• APPROPRIATE AGRICULTURAL AND SILVICULTURAL PRACTICES</li> <li>• NATURAL EROSION/ SEDIMENTATION PROCESSES</li> <li>• SURFACE AND GROUND WATER QUALITY</li> <li>• APPROPRIATE LEVELS OF DISTURBANCE</li> <li>• AIR QUALITY</li> </ul>
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	
	A137	N/A	N/A	POPULATION	C	
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	
	A140	N/A	N/A	POPULATION	C	
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	C	
	A143	N/A	N/A	POPULATION	B	
		N/A	N/A	CONSERVATION	A	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	B	
	A144	N/A	N/A	POPULATION	B	
		N/A	N/A	CONSERVATION	A	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	A	
	A184	N/A	N/A	POPULATION	C	
		N/A	N/A	CONSERVATION	B	
		N/A	N/A	ISOLATION	C	
		N/A	N/A	GLOBAL	C	
	A999	N/A	N/A	POPULATION	N/A	
		N/A	N/A	CONSERVATION	N/A	
		N/A	N/A	ISOLATION	N/A	
		N/A	N/A	GLOBAL	N/A	

### 3.4 Impact Prediction

#### 3.4.1 Identified Pathways

As identified in Section 2, the Public Realm Plan area includes the ecological corridor associated with the River Nanny, a chief component of the River Nanny Estuary and Shore SPA. The Public Realm Plan area has the potential to impact on two further Natura 2000 sites – the Boyne Coast and Estuary SAC and the Boyne Estuary 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 regards Laytown and Bettystown and the identification of pathways associated with these components are laid out in the following sections.

##### 3.4.1.1 Laytown

The guiding principles for Laytown are:

- 1) Reintroduce a beach front town park (in conjunction with future environmental studies) – potential for impacts as regards water quality and disturbance of Qualifying Interests in absence of mitigation measures;
- 2) Improve access to the beach - potential for impacts as regards water quality and disturbance of Qualifying Interests in absence of mitigation measures;
- 3) Relocate commuter parking to the west of the railway line – no potential impacts are foreseen; this will likely improve the situation as regards both water quality (dedicated car park with attendant facilities) and disturbance (less cars/people adjacent to the SPA);
- 4) Introduce a timed restriction for parking next to the shops and for the use of the play/park areas – no impacts foreseen;
- 5) Bring derelict sites and buildings back into use – opportunity for the regeneration of the site over-looking the beach to the east - potential for impacts as regards water quality and disturbance of Qualifying Interests in absence of mitigation measures;
- 6) Introduce traffic-calming measures for traffic – no significant impacts foreseen;
- 7) Consider access to recreation area south of the town centre (Seafields) - potential for impacts as regards water quality and disturbance of Qualifying Interests in absence of mitigation measures.



Figure 25: Primary components of Laytown area Public Realm Plan

#### 3.4.1.2 Bettystown

The guiding principles for Bettystown are:

- 1) Re-organise the centre of the town - potential for impacts as regards water quality and disturbance of Qualifying Interests in absence of mitigation measures;
- 2) Create more regular safe crossing points, especially in the main square – no significant impacts foreseen;
- 3) Create a pedestrian space / square as a focus of the town centre – no significant impacts foreseen;
- 4) Introduce traffic calming measures but do not create traffic jams no significant impacts foreseen;
- 5) Introduce time restrictions for parking in the town centre – no significant impacts foreseen;
- 6) Bring derelict sites and buildings back in to use - potential for impacts as regards water quality and disturbance of Qualifying Interests in absence of mitigation measures;
- 7) Improve links to the beach - potential for impacts as regards water quality and disturbance of Qualifying Interests in absence of mitigation measures;
- 8) Consider safer cycling with the introduction of Spine Road – no significant impacts foreseen;
- 9) Rationalise street furniture – no significant impacts foreseen;
- 10) Remove perpendicular parking and replace with parallel – no significant impacts foreseen;
- 11) Explore new town park associated with Spine Road – potential for positive impacts – provisions of foraging/roosting habitat for Qualifying Interests;
- 12) Improve street lighting throughout the town centre - potential for impacts as regards disturbance of Qualifying Interests in absence of mitigation measures;
- 13) Long-term car park extensions – potential positive impact, withdrawing cars from the beach;
- 14) Contained car park facility on the beach to be removed (phased) – positive impact; and
- 15) Potential new lifeguard tower and improved access to the beach - potential for impacts as regards water quality and disturbance of Qualifying Interests in absence of mitigation measures.



Figure 26: Primary components of the Bettystown Public Realm Plan area

### 3.4.2 Potential Impacts on Qualifying Interests of sites

A summary of potential impacts indicating Qualifying Interests (habitat/species), location of Qualifying Interests, Primary Sensitivities of Qualifying Interests and Potential Impacts affecting Qualifying Interests provided in Table 49.



**Table 49: Summary of potential impacts on Qualifying Interests of relevant Natura 2000 sites in the absence of mitigation measures**

SITE	QI	LOCATION	SENSITIVITIES	POTENTIAL IMPACT
BOYNE COAST AND ESTUARY SAC	[1130]	THROUGHOUT IN SUITABLE AREAS	POLLUTION/ALTERATION IN EROSION/SEDIMENTATION	IMPACT ON WATER QUALITY
	[1140]	THROUGHOUT IN SUITABLE AREAS	POLLUTION/ALTERATION IN EROSION/SEDIMENTATION	IMPACT ON WATER QUALITY
	[1310]	THROUGHOUT IN SUITABLE AREAS	POLLUTION/ALTERATION IN EROSION/SEDIMENTATION	IMPACT ON WATER QUALITY
	[1330]	THROUGHOUT IN SUITABLE AREAS	POLLUTION/ALTERATION IN EROSION/SEDIMENTATION	IMPACT ON WATER QUALITY
	[1410]	THROUGHOUT IN SUITABLE AREAS	POLLUTION/ALTERATION IN EROSION/SEDIMENTATION	IMPACT ON WATER QUALITY
	[2110]	THROUGHOUT IN SUITABLE AREAS	POLLUTION/ALTERATION IN EROSION/SEDIMENTATION	NONE FORESEEN
	[2120]	THROUGHOUT IN SUITABLE AREAS	POLLUTION/ALTERATION IN EROSION/SEDIMENTATION	NONE FORESEEN
	[2130] – PRIORITY HABITAT	THROUGHOUT IN SUITABLE AREAS	POLLUTION/ALTERATION IN EROSION/SEDIMENTATION	NONE FORESEEN
BOYNE ESTUARY SPA	A048 Shelduck Tadorna tadorna A130 Oystercatcher Haematopus ostralegus A140 Golden Plover Pluvialis apricaria A141 Grey Plover Pluvialis squatarola A142 Lapwing Vanellus vanellus A143 Knot Calidris canutus A144 Sanderling Calidris alba A156 Black-tailed Godwit Limosa limosa A162 Redshank Tringa totanus A169 Turnstone Arenaria interpres A195 Little Tern Sterna albifrons A999 Wetlands	THROUGHOUT IN SUITABLE AREAS	DISTURBANCE, SECONDARY IMPACTS ON PREY ITEMS	DISTURBANCE, IMPACTS ON PREY/FORAGE ITEMS ASSOCIATED WITH IMPACTS ON WATER QUALITY

RIVER NANNY ESTUARY AND SHORE SPA	A130 Oystercatcher Haematopus ostralegus wintering A137 Ringed Plover Charadrius hiaticula wintering A140 Golden Plover Pluvialis apricaria wintering A143 Knot Calidris canutus wintering A144 Sanderling Calidris alba wintering A184 Herring Gull Larus argentatus wintering A999 Wetlands	THROUGHOUT IN SUITABLE AREAS	DISTURBANCE, SECONDARY IMPACTS ON PREY ITEMS	DISTURBANCE, IMPACTS ON PREY/FORAGE ITEMS ASSOCIATED WITH IMPACTS ON WATER QUALITY
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### 3.4.3 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.

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

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

- 1) Much of the Public Realm Plan addresses changes in car-parking facilities. While these changes have the potential to have negative impacts, the rationalisation of existing car parking facilities and the provision of new parking facilities in accordance with the existing guidance and regulations will, in fact, impact positively on the Natura 2000 network, enhancing water quality and reducing disturbance;
- 2) At Laytown, it is proposed to install a new seaside park, upgrade the existing playground and repurpose/upgrade existing toilet facilities. These components of the PRP have the potential to impact on both water quality and levels of disturbance in the absence of mitigation measures;
- 3) At Laytown, it is proposed to improve access to Seafields site. This has the potential to increase footfall, increasing disturbance. In addition, there are no facilities serviced by mains sewage at Seafields – the improved access cannot be permitted to encourage increased use of the facilities at Seafields in the absence of required infrastructure such as toilet adequate facilities. This component of the PRP has the potential for negative impacts in the absence of mitigation measures;
- 4) Overall, the majority of components of the PRP as relates to Laytown entail improving the aesthetic of the area. Increased public lighting has the potential to impact on Qualifying Interests of the River Nanny Estuary and Shore SPA in the absence of mitigation measures;
- 5) At Bettystown, most of the components of the PRP such as improved parking, etc. although having the potential to have negative impacts, through the rationalisation of existing car parking facilities and the provision of new parking facilities in accordance with the existing guidance and regulations, these components (an in particular the phasing out of on-beach parking) will impact positively on the Natura 2000 network, enhancing water quality and reducing disturbance;
- 6) The provision of better connections from the town centre to the beach at Bettystown has the potential to negatively impact on the adjacent Natura 2000 sites through an increase in the numbers of persons utilising the beach in the absence of mitigation measures;

- 7) The majority of components of the PRP as relates to Bettystown entail improving the aesthetic of the public realm area. Increased public lighting has the potential to impact on Qualifying Interests of proximate SPAs in the absence of mitigation measures.
- 8) Overall, the majority of the components of the Laytown and Bettystown Public Realm Plan will improve the quality of the environment within the Public Realm. The objective must be to do so in a fashion sensitive to the needs, in particular, of overwintering birds that comprise Qualifying Interests of the adjacent SPAs.

### 3.6 Mitigation Measures – avoiding potential impacts

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

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

#### 3.6.1 Impacts on water quality

The primary source of potential negative impacts on the conservation objectives of the Natura 2000 sites in question regards the potential for impacts on water quality.

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 (especially as relates to the proposed improved access to the Seafields site) 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 any water courses/drains/etc. discharging to the Irish Sea 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.). 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 ground and/or surface waters;
- 2) If large scale parking *de novo* is planned, these facilities must be planned with the capacity to deal with worst-case scenarios – for example, the extinguishing of vehicular fires – there must be in place facilities to prevent any water associated with firefighting from impacting on ground and/or surface waters through the use of interceptors, etc.

### 3.6.2 Impacts associated with disturbance

There is potential for increased disturbance of fauna, in particular the Qualifying Interests of the River Nanny Estuary and Shore SPA. 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 primary ecological surveys required concern overwintering wildfowl, and should comprise of High/rising tide surveys, Low/falling tide surveys and post sunset surveys along the strand and in particular within the River Nanny Estuary and Seafields site during the period September – April in order to establish key areas of use by Qualifying Interests. 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 design of any new parks, etc should be informed by a Biodiversity and Habitat Management Plan, the objective of which is to enhance the conservation status of any such parks as regards Qualifying Interests and indeed overall biodiversity.

The significance of potential impacts on the conservation objectives of qualifying interests following the implementation of mitigation measures is outlined in Table 50.

**Table 50: Significance of potential impacts following implementation of mitigation measures**

SITE	QI	LOCATION	POTENTIAL IMPACTS IN ABSENCE OF MITIGATION MEASURES	SIGNIFICANCE OF POTENTIAL IMPACTS FOLLOWING IMPLEMENTATION OF MITIGATION MEASURES
BOYNE COAST AND ESTUARY SAC	[1130]	THROUGHOUT IN SUITABLE AREAS	IMPACT ON WATER QUALITY	NOT SIGNIFICANT
	[1140]	THROUGHOUT IN SUITABLE AREAS	IMPACT ON WATER QUALITY	NOT SIGNIFICANT
	[1310]	THROUGHOUT IN SUITABLE AREAS	IMPACT ON WATER QUALITY	NOT SIGNIFICANT
	[1330]	THROUGHOUT IN SUITABLE AREAS	IMPACT ON WATER QUALITY	NOT SIGNIFICANT
	[1410]	THROUGHOUT IN SUITABLE AREAS	IMPACT ON WATER QUALITY	NOT SIGNIFICANT
	[2110]	THROUGHOUT IN SUITABLE AREAS	NONE FORESEEN	NOT SIGNIFICANT
	[2120]	THROUGHOUT IN SUITABLE AREAS	NONE FORESEEN	NONE FORESEEN
	[2130] – PRIORITY HABITAT	THROUGHOUT IN SUITABLE AREAS	NONE FORESEEN	NONE FORESEEN
BOYNE ESTUARY SPA	A048 Shelduck Tadorna tadorna A130 Oystercatcher Haematopus ostralegus A140 Golden Plover Pluvialis apricaria A141 Grey Plover Pluvialis squatarola A142 Lapwing Vanellus vanellus A143 Knot Calidris canutus A144 Sanderling Calidris alba A156 Black-tailed Godwit Limosa limosa A162 Redshank Tringa totanus A169 Turnstone Arenaria interpres A195 Little Tern Sterna albifrons A999 Wetlands	THROUGHOUT IN SUITABLE AREAS	DISTURBANCE, IMPACTS ON PREY/FORAGE ITEMS ASSOCIATED WITH IMPACTS ON WATER QUALITY	NOT SIGNIFICANT

RIVER NANNY ESTUARY AND SHORE SPA	A130 Oystercatcher Haematopus ostralegus wintering A137 Ringed Plover Charadrius hiaticula wintering A140 Golden Plover Pluvialis apricaria wintering A143 Knot Calidris canutus wintering A144 Sanderling Calidris alba wintering A184 Herring Gull Larus argentatus wintering A999 Wetlands	THROUGHOUT IN SUITABLE AREAS	DISTURBANCE, IMPACTS ON PREY/FORAGE ITEMS ASSOCIATED WITH IMPACTS ON WATER QUALITY	NOT SIGNIFICANT
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## 4 Conclusions

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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 Laytown and Bettystown 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.

## 5 References and Bibliography

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DCHG (2019). The Status of EU Protected Habitats and Species in Ireland 2013. DAHG.

[www.meath.ie](http://www.meath.ie) – official website of Meath County Council.

[www.npws.ie](http://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](http://www.europa.eu) – official website of the European Union, source of information on EU Directives.