Appropriate Assessment Screening Report

for the

Car Park Upgrade at Bremore Castle, Balbriggan in accordance with the requirements of Article 6(3) of the EU Habitats Directive

for: Fingal County Council

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1. Introduction

1.1. Background

CAAS has been appointed by Fingal County Council to carry out an Appropriate Assessment (AA) screening for a proposed upgrade of the existing car park at Bremore Castle, Balbriggan (the proposed development). This Appropriate Assessment (AA) Screening Report (also known as *Stage One* AA) has been prepared to assess whether or not a Natura Impact Statement (NIS) (also known as *Stage Two* AA) is required for the Proposed development. AA is a procedure carried out in accordance with the requirements of Article 6(3) of Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (hereafter referred to as the "Habitats Directive").

1.2. Report Structure

This report sets out the legislative context for the assessment process with reference to relevant guidelines and highlight the experience and qualifications of the author (See Appendix IV for author qualifications). It then details the proposed development and the works associated with this which are then interrogated to identify any possible effects which may be ecologically relevant for European sites. Following this, the metrics for the assessment of 'significance' of these effects are explained and applied to each of the European sites with ecological connectivity to the Proposed development area. This assessment is undertaken in view of the conservation objectives and known sensitivities of the qualifying interests and special conservation interests for each European site. Other plans and projects are then considered to identify any likely in-combination effects which may result in the potential significant effects to European sites.

1.3. Legislative Context

The Habitats Directive provides legal protection for habitats and species of European importance. The overall aim of the Habitats Directive is to maintain or restore the "favourable conservation status" of habitats and species of European Community Interest. These habitats and species are listed in the Habitats and Birds Directives (Habitats Directive as above and Directive 2009/147/EC on the conservation of wild birds) with Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated to afford protection to the most vulnerable among them. These two designations are collectively known and referred to as European sites. Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect such sites. Article 6(3) establishes the requirement for AA. These requirements are implemented in the Republic of Ireland by the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) and the Planning and Development Act 2000 (as amended).

Article 6(3) of the Habitats Directive States:

'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'.

The AA process relates to the protection of species listed in Annex I and Annex II of the Habitats Directive which form the Natura 2000 network (Article 3(1)). Species breeding and resting places of species listed in Annex IV of the Habitats Directive are nationally protected in Ireland as per Articles 15 and 16 of the Habitats Directive. The actual species listed in Annex IV do not form part of the Natura 2000 network as they are not mentioned in Article 3(1) of the Directive which defines the Natura 2000 network.

Article 3(1) of the Habitats Directive States:

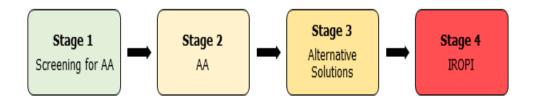
'A coherent European ecological network of special areas of conservation shall be set up under the title Natura 2000. This network, composed of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, shall enable the natural habitat types and the species' habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range'.

AA is an assessment of the likely significant effects arising from a plan or project, either individually or in combination with other plans or projects, to assess if the plan or project will have potential for significant affect any European site concerned including implications in view of the European site's conservation objectives. These sites consist of SACs and SPAs and provide for the protection and long-term survival of Europe's most valuable and threatened species and habitats. Where a formal consent process applies, the AA process is concluded by the relevant competent authority making a determination in accordance with article 6(3) of the Habitats Directive.

1.4. Overview of the Habitats Directive and Appropriate Assessment Process

The Habitats Directive itself promotes a hierarchy of avoidance, mitigation and compensatory measures. This approach aims to avoid any effects on European sites by identifying possible effects early in the plan or project making process and avoiding such effects. Second, the approach involves the application of mitigation measures, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If potential significant effects on European sites remain, and no further practicable mitigation is possible, the approach requires the consideration of alternative solutions. If no alternative solutions are identified and the plan or project is required for imperative reasons of overriding public interest, then compensation measures are required for any remaining adverse effects.

There are four main stages in the AA process:



Stage One: Screening

The process that identifies the likely impacts upon a European site of a project or plan,

either alone or in combination with other projects or plans and considers whether these impacts are likely to be significant.

Stage Two: Appropriate Assessment

The consideration of the impact on the integrity of the European site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse effects mitigation measures are required to avoid or minimise potential effects. The details of these mitigation measures are then assessed in the context of the ecological integrity of the plan/project characteristics to ensure no significant adverse effects on European sites. If this assessment process shows there are no residual significant effects, then the process may end at this stage, stage two, of the AA process which are formalised in Natura Impact Statements (NIS) reports which support the overall AA process. However, if the likelihood of significant impacts remains, then the process must proceed to Stage Three.

Stage Three: Assessment of Alternative Solutions

The process that examines alternative ways of achieving the objectives of the project or plan that avoids adverse impacts on the integrity of the European site.

Stage Four: Assessment where no alternative solutions exist and 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.

1.5. Approach

This AA screening is based on best scientific knowledge and has utilised ecological expertise. In addition, a detailed online review of published scientific literature and 'grey' literature was conducted. This included a detailed review of the National Parks and Wildlife Website including mapping and available reports for relevant sites and in particular sensitive qualifying interests/special conservation interests described and their conservation objectives. The EPA Envision map viewer (www.epa.ie) and available reports were also reviewed, as was the NPWS (2019) publication "The Status of Protected EU Habitats and Species in Ireland".

The ecological desktop study that has been completed for the AA screening of the proposed development, comprised the following elements:

- Identification of European sites within 15km¹ of the subject lands;
- Identification of European sites pathways for effects from the site have been identified (if relevant²) greater than 15km from the subject lands;
- Review of the NPWS site synopses and conservation objectives for European sites within 15km and for which potential pathways from the proposed development area have been identified; and

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¹ While the actual zone of influence is likely to be much smaller, the default 15km zone extent has been applied on a precautionary basis further detail on this is identified in section 3.2

² This is particularly relevant for all sites with hydrological connectivity or other significant ecological pathways

• Examination of available information on protected species.

Source-Pathway Receptor Model

Ecological impact assessment of potential effects on European sites is conducted following a standard source-pathway-receptor model, where, in order for an effect to be established, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism is sufficient to conclude that a potential effect is not of any relevance or significance.

- Source(s) e.g., pollutant run-off from proposed development;
- Pathway(s) e.g., groundwater connecting to nearby qualifying wetland habitats; and,
- Receptor(s) qualifying aquatic habitats and species of European sites.

In the context of this report, a receptor is an ecological feature that is known to be utilised by the qualifying interests or special conservation interests of a European site. A source is any identifiable element of the Proposed development that is known to interact with ecological processes. A pathway is any connection or link between the source and the receptor³.

This report provides information on whether direct, indirect and cumulative potential significant effects could arise from the proposed development.

Guidance

The AA screening has been prepared taking into account legislation including the aforementioned legislation and guidance including the following:

- Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities,
 Department of the Environment, Heritage and Local Government, 2009 (updated 2010);
- Managing Natura 2000 sites The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC", European Commission 2018;
- Assessment of plans and projects in relation to Natura 2000 sites Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission, 2021;
- Practice Note PN01: Appropriate Assessment Screening for Development Management, Office of the Planning Regulator, 2021.

by CAAS for Fingal County Council

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³ qualifying interest or special conservation interests of the European site in question and the known sensitivities of these key ecological receptors

2. Description of Proposed Development

2.1. Receiving Environment Overview

The proposed development is located in Bremore, Balbriggan, north Dublin County. The proposed site is approximately 0.61 ha in area and is composed mostly of artificial, hard standing surfaces, and a small area of amenity grassland. The site has been in use as a car park for over 10 years for the Bremore Castle Food and Craft Market. The proposed site is immediately bordered areas of amenity grassland to the northeast and residential developments to the southwest, with the R132 road to the west and the Dublin-Bettystown railway to the east (Figure 2.1).

In the wider context of the proposed development area, there are several large suburban residential developments to the west and south, agricultural lands to the north, and the Irish Sea approximately 360 m to the east (Figure 2.1). The Bremore River, which flows easterly into the Irish Sea, is located approximately 76 m south of the proposed site (Figure 2.2). However, the proposed site has no direct surface hydrological connection with the Bremore River. There is indirect connectivity via urban underground surface water drainage, that is ubiquitous in urban/suburban landscapes.

2.2. The Proposed Development

The proposed works for the upgrade of the existing car park at Bremore Castle include:

- A car park consisting of 125 spaces, including
- 9 universally accessible parking bays;
- 23 EV ready parking bays including 5 universally accessible EV bays;
- Bicycle parking for 64 bicycles to include sheltered spaces and infrastructure for shared bike schemes, cargo bikes and adapted bikes.
 - All parking bays will be constructed in permeable paving such as grasscrete or similar and approved. Vehicular circulation routes will be constructed in permeable asphalt.
- Public lighting, consisting of LED public lighting throughout the car park to an approved lighting design.
- Landscaping works incl. tree planting in constructed tree pits, pollinator friendly plant species suitable for raingarden planting, and soil regrading.
- All other ancillary site works including electricity connections.

The proposed development works are within the boundaries of the current temporary car park at Bremore Castle, Drogheda Street, Balbriggan. The site area is approximately 0.61 ha.



Figure 2.1. Site location map⁴

⁴ Source: Bing maps (site boundary includes construction compound and is approximate)

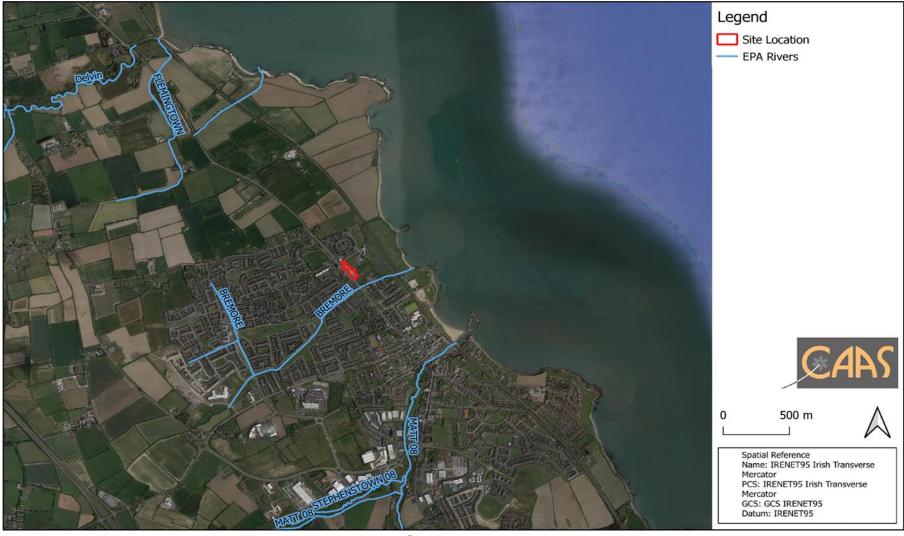


Figure 2.2. Location of EPA rivers relative to the proposed development⁵

⁵ Source: EPA dataset accessed at: https://gis.epa.ie/EPAMaps/

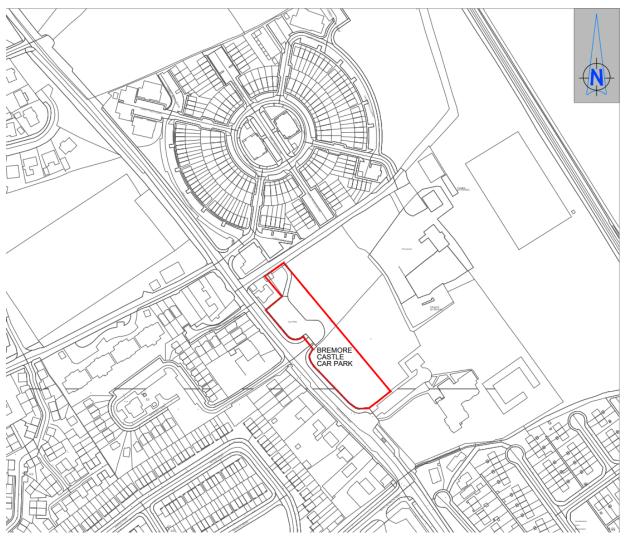


Figure 2.3. Site layout plan

Source: FCC (site boundary includes construction compound and is approximate)

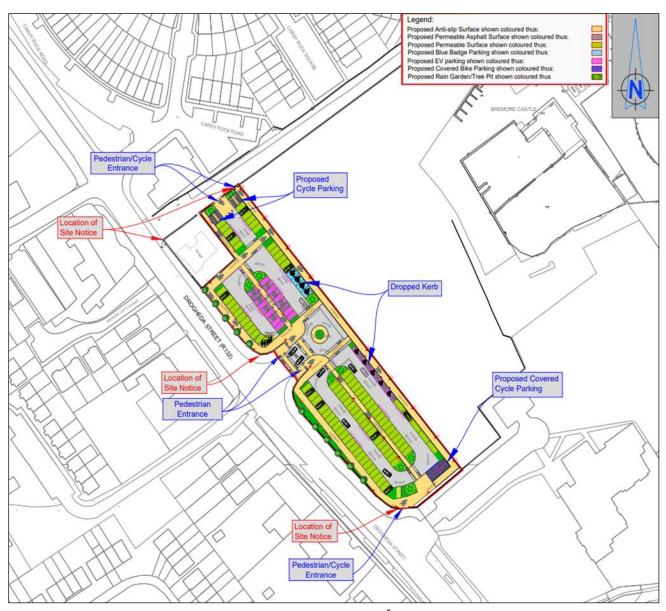


Figure 2.4. Bremore carpark showing proposed upgrade works⁶

 $^{^{\}rm 6}$ Source: FCC (See accompanying drawing set for full scaled versions of all drawings

3. Screening for Appropriate Assessment

3.1. Introduction

This stage of the process identifies any likely significant effects on European sites from the project, either alone or in combination with other projects or plans. A series of questions are asked in order to determine:

- Whether a plan or project can be excluded from AA requirements because it is directly connected with or necessary to the management of a European site.
- Whether the project will have a potentially significant effect on a European site, either alone or in combination with other projects or plans, in view of the site's conservation objectives or if residual uncertainty exists regarding potential impacts.

An important element of the AA process is the identification of the "Conservation Objectives", "Qualifying Interests" (QIs) and/ or "Special Conservation Interests" (SCIs) of European sites requiring assessment. QIs are the habitat features and species listed in Annexes I and II of the Habitats Directive for which each European site has been designated and afforded protection. SCIs are wetland habitats and bird species listed within Annexes I and II of the Birds Directive. It is also vital that the threats to the ecological / environmental conditions that are required to support QIs and SCIs are considered as part of the assessment.

Site-Specific Conservation Objectives (SSCOs) have been designed to define favourable conservation status for a particular habitat or species at that site. According to the European Commission interpretation document 'Managing Natura 2000 sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC', paragraph 4.6(3):

"The integrity of a site involves its ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the site's conservation objectives."

Favourable conservation status of a habitat is achieved when:

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

The favourable conservation status of a species is achieved when:

- Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats;
- The natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and
- There is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

3.2. Identification of relevant European sites

This section of the screening process describes the European sites which exist within the Zone of Influence (ZOI) of the site. An assessment of the sources of effects (see Section 3.3 below) identified that effects from the proposed development are likely to be localised – in the absence of

hydrological pathways. The Environment, Heritage and Local Government (2009) Guidance on AA recommends a 15km zone to be considered.

There are two key considerations when identifying ecological pathways - the first is the distance from which potential sources for effects can radiate known as the zone of influence (ZoI) and the second is the potential for sensitive receptors (QIs/SCIs) to interact with the ZoI which is a further pathway consideration zone (PCZ). It is understood that sites designated for vagile species are known to utilise isolated resources across the landscape could intersect with the localised zone of influence; however, beyond 15km potential effects to such species at this scale are not identified to be significant due to the broad home range available to these species and the availability of alternate resources. Therefore, a radius of 2km has been adopted as the ZoI and a 15km radius was adopted as the PCZ for this AA - however, further considerations were given to hydrological pathways from the proposed development which extended beyond the 15km limit.

European sites identified to have ecological connectivity pathways for potential effects from the Proposed development are listed in

and illustrated in Figure 3.1 below. Details on the specific QIs and SCIs of each European site are also identified in the Appendix, as well as site-specific threats and vulnerabilities of each of the sites.

In order to determine the potential effects of the proposal, information on the qualifying features, known vulnerabilities and threats pertaining to any potentially affected European sites has been reviewed. Background information on threats to individual sites and vulnerability of habitats and species that was used during this assessment included the following:

- Ireland's Article 17 Report to the European Commission "Status of EU Protected Habitats and Species in Ireland" (NPWS, 2019);
- Ireland's Article 12 Report to the European Commission "Bird species' status and trends reporting format for the period 2008-2012-" (NPWS, 2012)
- Site Synopses⁷; and
- NATURA 2000 Standard Data Forms⁷.

The assessment considers the SSCOs of each of the sites within the ZOI. Since the conservation objectives for the European sites focus on maintaining the favourable conservation condition of the QIs/SCIs of each site, the screening process has concentrated on assessing the potential effects of the Proposed development against the QIs/SCIs of each site. The conservation objectives for each site have been taken into account throughout the assessment process.

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⁷ NPWS (2019); NPWS Database of protected site data and associated documents for each European site; available at https://www.npws.ie/protected-sites: last accessed 26th October 2022

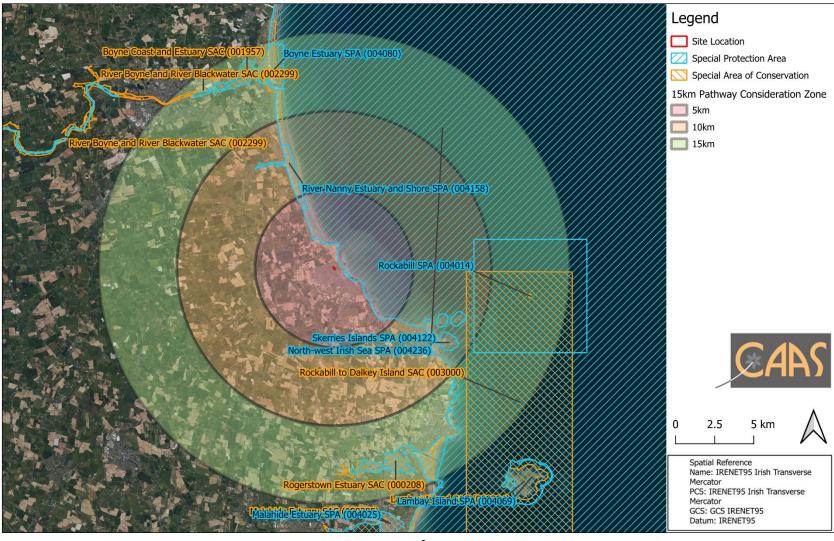


Figure 3.1. European sites within 15km of the proposed development boundary⁸

⁸ Source: NPWS (datasets downloaded 1st December 2023)

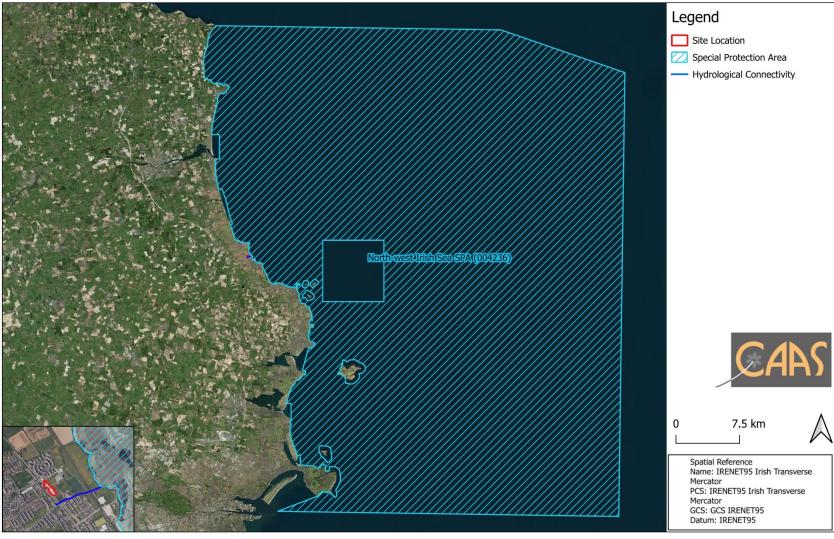


Figure 3.2. Indirect hydrological connectivity of the proposed development to European sites ⁹

⁹ Source: NPWS Protected Sites and EPA River Scheme areas (datasets downloaded 1st December 2023)

3.3. Assessment criteria

3.3.1. Is the development necessary to the management of European sites?

Under the Habitats Directive, projects that are directly connected with or necessary to the management of a European site do not require AA. For this exception to apply, management is required to be interpreted narrowly as nature conservation management in the sense of Article 6(1) of the Habitats Directive. This refers to specific measures to address the ecological requirements of annexed habitats and species (and their habitats) present on a site(s). The relationship should be shown to be direct and not a by-product of the project, even if this might result in positive or beneficial effects for a site(s).

The primary purpose of the proposed development is not the nature conservation management of the sites, but to construct a car park at the already existing car park at Bremore Castle, Drogheda Street, Balbriggan, County Dublin and all associated site works. Therefore, the proposed development would not be considered by the Habitats Directive to be directly connected with or necessary to the management of European designated sites.

3.3.2. Elements of the proposed development with potential to give rise to effects

This screening assessment process identifies whether the changes brought about by the proposal are likely to cause any direct, indirect or secondary effects (either alone or in combination with other plans or projects) on the European sites. During this assessment a number of factors have been taken into account including the sites' conservation objectives and known threats. The overall aim of the assessment is to predict the consequences that can be reasonably foreseen by implementation of the proposed development.

For the purposes of this assessment, the proposed development is identified to have construction and operational phase effects at a local scale.

Construction Phase

There is potential for disturbance effects through construction related noise, increased dust, surface water run-off and earthworks removals.

Operational Phase

As the proposed development aims to provide for a car park at an existing car park, there will be no permanent loss of habitat due to the existing nature of the proposed site, as the current hard surfaced area is to be replaced with artificial permeable surfaces. A small area of amenity grassland is planned to be removed as part of the proposed development, however, the loss of this area of amenity grassland is temporary and will be reseeded. Therefore, any effects from the loss of amenity grassland will be negligible considering the small-scale and temporary timeline of the removal.

As the current site is already frequented by visitors, there is not expected to be a significant increase in foot traffic to the area. However, any effects from an increase in visitor numbers and foot traffic will be negligible at a local scale considering the surrounding developed area of the proposed site. No drainage system infrastructure alterations will occur as a result of the proposed development, as there are existing surface water drainage systems for the proposed site. The current hard surfaced area within the proposed site is to be replaced with permeable surfaces as part of project design and

best practice. Therefore, there will be no increase to surface water run-off as a result of the proposed development. Thus, surface water drainage will not present any potential for significant effects via hydrological connectivity as a result of the proposed development.

The construction and operational phase elements of the proposed development with potential to introduce sources for effects to ecological processes are identified below:

Construction

- Disturbance effects through noise;
- Dust;
- Run-off; and,
- Earthworks (removal of soil etc.,).

Operational

Temporary loss of habitat (amenity grassland).

The construction phase will be localised, small-scale and temporary with the operational phase effects will be localised, small-scale and permanent. The construction and operational phase potential effects identified are considered in the context of European sites identified in below, their sensitivities and conservation objectives.

3.3.3. Identification of potential effects and screening of sites

This section documents the final stage of the screening process. It has used the information collected on the sensitivity of each European site and describes any potential effects on European sites resulting from the proposed development. This assumes the absence of any controls, conditions, or mitigation measures. In determining the potential for effects, a number of factors have been taken into account. First the sensitivity and reported threats to European sites. Second, the individual elements of the proposed development and the potential effects they may cause on the sites were considered. The elements of the proposed development with potential to affect European sites are presented in Table 2.1.

Sites are screened out based on one or a combination of the following criteria:

- where it can be shown that there are no significant pathways such as hydrological links between activities of the proposed development and a site;
- where a site is located at such a distance from proposed development area that effects are not foreseen; and
- where known threats or vulnerabilities of a site cannot be linked to potential impacts that may arise from the proposed development.

3.4. Characterising potential significant effects

This section of the report explains the metrics used when assessing if the potential effects (previously identified) will have significant implications for European sites. The following parameters are described when characterising impacts (following guidance from the Chartered Institute of Ecology and Environmental Management, Environmental Protection Agency and National Roads Authority):

- **Direct and Indirect Impacts** An impact can be caused either as a direct or as an indirect consequence of a Plan/Project.
- Magnitude Magnitude measures the size of an impact, which is described as high, medium, low, very low or negligible.
- **Extent** The area over that the impact occurs this should be predicted in a quantified manner.
- **Duration** The time that the effect is expected to last prior to recovery or replacement of the resource or feature.
 - Temporary: Up to 1 Year;
 - Short Term: The effects would take 1-7 years to be mitigated;
 - Medium Term: The effects would take 7-15 years to be mitigated;
 - Long Term: The effects would take 15-60 years to be mitigated; and
 - Permanent: The effects would take 60OR years to be mitigated.
- **Likelihood** The probability of the effect occurring taking into account all available information.
 - Certain/Near Certain: >95% chance of occurring as predicted;
 - Probable: 50-95% chance as occurring as predicted;
 - Unlikely: 5-50% chance as occurring as predicted; and
 - Extremely Unlikely: <5% chance as occurring as predicted.

The Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines for ecological impact assessment (2016) define: an ecologically significant impact as an impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographic area; and the integrity of a site as the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.

The Habitats Directive requires the focus of the assessment at this stage to be on the integrity of the site as indicated by its Conservation Objectives. It is an aim of NPWS to draw up conservation management plans for all areas designated for nature conservation. These plans will, among other things, set clear objectives for the conservation of the features of interest within a site.

SSCOs have been prepared for a number of European sites. These detailed SSCOs aim to define favourable conservation condition for the qualifying habitats and species at that site by setting targets for appropriate attributes which define the character habitat. The maintenance of the favourable condition for these habitats and species at the site level will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a **species** can be described as being achieved when: 'population data on the species concerned indicate that it is maintaining itself, and the natural range of the species is neither being reduced or likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.'

Favourable conservation status of a **habitat** can be described as being achieved when: 'its natural range, and area it covers within that range, is stable or increasing, and the ecological

factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and the conservation status of its typical species is favourable'.

A Generic Conservation Objective for a SAC is provided below:

• 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.

A Generic Conservation Objective for a SPA is provided below:

• To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

3.4.1. Types of potential Effects

EC guidance¹⁰ outlines the types of effects that may affect European sites. These include effects from the following activities:

- Land take
- Resource requirements (drinking water abstraction etc.)
- Emissions (disposal to land, water or air)
- Excavation requirements (removal of soil and vegetation)
- Transportation requirements
- Duration of construction, operation, decommissioning

The 2001 European Commission AA guidance outlines the following potential changes that may occur at a designated site, which may result in effects on the Conservation Objectives of that site:

- Reduction of habitat area
- Disturbance to key species
- Habitat or species fragmentation
- Reduction in species density
- Changes in key indicators of conservation value (water quality etc.)
- Climate change

The elements detailed above were considered with specific reference to each of the European sites identified in Table 2.1 but are also considered in a broader sense below.

Loss/reduction of habitat area

There are no European sites present within the proposed development boundary and the closest European, River Nanny Estuary and Shore SPA (004158) the site is 4.04km from the proposed development area. There are also no sources for potential for significant effects via surface water drainage / hydrological connectivity as a result of the proposed development. There were no Annex I habitats or supporting habitat for Annex II species identified within the proposed development boundary¹¹. Therefore, there will be no effects posed regarding loss of reduction of habitat area of

¹⁰ Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission Environment DG, 2001

¹¹ Consulting current data sets for the proposed development location supplied by the NPWS (https://www.npws.ie/maps-and-data) and the NBDC (https://maps.biodiversityireland.ie/)

any European sites as a result of the proposed development.

Habitat or species fragmentation

None of the species and/or habitats identified in Table 3.1 occur within the proposed development site. The proposed development area itself is currently a hard surfaced car park and offers little to no habitat for SCI species, this existing hard surfaced area will be replaced with permeable paving. There will be a temporary loss of a small area of amenity grassland to accommodate the proposed development, which is to be reseeded. The temporary loss of this area of amenity grassland is deemed to not have any significant negative effects to foraging SCI species due to the small-scale nature of the temporary loss and the developed nature of the surrounding area. In addition, the receiving environment of the proposed development site has an overall low local ecological value for foraging SCI species due to high disturbance levels

Disturbance to key species

As mentioned above; none of the species and/or habitats identified in Table 3.1 occur within the proposed development site.

There will be an increase in noise and dust levels during the construction phase, but these will be minor due to the small scale and temporary duration of the construction phase. The operational phase of the proposed development will be very similar to the current noise and disturbance levels of the existing car park. The site is over 4km from the nearest SPA which is a sufficient distance to ensure no disturbance effects through noise in the construction phase and is unlikely to provide a source for likely potential significant effects to SCI species. There will be an increase in operational phase lighting, along with a potential increase in noise, as a result of the proposed development, however, due to the low ecological value of the proposed development for foraging SCI species and the developed nature of its surrounding area, any effects from an increase in lighting or noise in the operational phase will be negligible to SCI species.

There are no sources for indirect disturbance for SCI species from surrounding SPAs in terms of exsitu foraging. The temporary loss of a small area of amenity grassland is unlikely to provide a source for potential significant effects to SCI species due to the small-scale nature and temporary timeline of the removal. The proposed development area is also of low ecological value and is within an urban area with high levels of disturbance. Therefore, pathways for direct disturbance effects to European sites due to noise, lighting or vibrations as a result of the proposed development are not present.

Reduction in species density

There will be no permanent loss of habitat as result of the proposed development and no loss of any vegetative habitat due to the existing nature of the proposed development area. There will however, be a temporary loss of a small area of amenity grassland in order to accommodate the proposed development. The loss of this habitat is small in scale and temporary in timeline, and thus is unlikely to provide a source for potential significant effects to SCI species. The receiving environment of the proposed development site has an overall low ecological value for foraging SCI species due to high disturbance levels as a result of the current nature of the site as a car park.

Although the River Bremore is approximately 85m to the south east of the proposed development,

which flows into the Irish Sea approximately 400m downstream from the proposed development, there is no direct surface hydrological connection with the proposed development and the River Bremore. There is indirect connectivity via urban surface water drainage. There will be a change from hard surface area to permeable surfaces as a result of the proposed development, therefore any changes introduced via these permeable surfaces to surface water run-off will be negligible. The construction phase effects will also be small scale and temporary.

The hard surfaced area within the existing site, will be replaced with permeable surfaces, which will percolate surface and storm water and may reduce surface water run-off on site. Therefore, there will be no reduction in species density as a result of the proposed development.

Changes of indicators of conservation value

Water quality is an important indicator for the Conservation Objectives of many European sites. Although the River Bremore is nearby to the south of the proposed development, there is no direct hydrological connection with the river. There is indirect connectivity via surface water drainage, however, surface water run-off within the proposed site may reduce due to a change in hard surfaced area to permeable surfaces as a result of the proposed development. The construction phase effects will also be small and temporary. In addition, a CEMP accompanies this application and has outlined the best practice measures and appropriate management for all aspects of the construction phase. Therefore, there are no sources for effects with pathways that will affect any conservation indicators related to European sites.

Climate change

The proposed development will result in a slight increase in greenhouse gas emissions during the construction phase, which will be localised and temporary. There is potential for an increase in emissions from the operational phase due to a potential increase in visitor numbers, however this potential increase is deemed negligible due to the location and surrounding area of the proposed development being within a relatively urban area. Given the small scale of the proposed development, timescales involved, and the distance to the nearest European sites, the emissions from the construction phase are determined to be of such a minor scale that they will not affect changes projected to arise from climate change to the degree that it would affect the QIs or SCIs of the European sites considered.

Table 3.1 Screening assessment of the potential effects arising from the proposed development

Site Code	Site Name	Distance (km) ¹²	Qualifying Feature ¹³	Analysis of Potential Effects	Likelihood of Potential Significant Effects	Likelihood of Potential In- Combination Effects
004236	North-west Irish Sea SPA	0.37	Arctic Tern (Sterna paradisaea) [A194], Common Tern (Sterna hirundo) [A193], Puffin (Fratercula arctica) [A204], Common Scoter (Melanitta nigra) [A065], Great Northern Diver (Gavia immer) [A003], Roseate Tern (Sterna dougallii) [A192], Kittiwake (Rissa tridactyla) [A188], Razorbill (Alca torda) [A200], Red-throated Diver (Gavia stellata) [A001], Shag (Phalacrocorax aristotelis) [A018], Lesser Black-backed Gull (Larus fuscus) [A183], Black-headed Gull (Chroicocephalus ridibundus) [A179], Guillemot (Uria aalge) [A199], Little Tern (Sterna albifrons) [A195], Herring Gull (Larus argentatus) [A184], Great Black-backed Gull (Larus marinus) [A187], Manx Shearwater (Puffinus puffinus) [A013], Cormorant (Phalacrocorax carbo) [A017], Fulmar (Fulmarus glacialis) [A009], Common Gull (Larus canus) [A182],	Considering the Special Conservation Interests and known sensitivities of this European site in the context of the potential effects identified in S3.3.2, this SPA is sensitive to hydrological interactions, direct land use management and disturbance effects. The site is 0.37km from the proposed development There are no sources for effect for direct land use management or habitat disturbance effects to the SPA as this site is outside the proposed development boundary. There are no direct surface hydrological pathways between the proposed development and the SPA. There is a potential source for hydrological interactions via underground urban surface water drainage, however there will be a change from hard surface area to permeable paving, which will not increase and may reduce surface water run-off. There will also be no change to drainage infrastructure as a result of the proposed development. Therefore, there is no potential for likely significant effect in this regard. SCI species are sensitive to noise disturbance effects; in general distances beyond 2km are seen to be sufficient to preclude such effects ^{14,15} . These distances can vary due to factors such as species and/or time of year ^{16,17} . The proposed development is 370m from this SPA. However, given the small scale and temporary (i.e., less than one year) construction phase, and the operational phase in keeping with the current site use and disturbance levels, the proposed development does not introduce any sources for likely significant effects via disturbance relative to the existing levels on site.	No	No

¹² All distances, including hydrological connectivity, are given as direct A-B distances (i.e., as the crow flies)

¹³ Term used here to encompass both Qualifying Interests of SACs and Special Conservation Interests of SPAs

¹⁴ Ruddock, M. and Whitfield, D.P., 2007. A review of disturbance distances in selected bird species. A report from Natural Research (Projects) Ltd to Scottish Natural Heritage, 181.

¹⁵ Bright, J.A., Langston, R. and Anthony, S., 2009. Mapped and written guidance in relation to birds and onshore wind energy development in England. Sandy: RSPB.

^{**} Bötsch, Y., Tablado, Z. and Jenni, L., 2017. Experimental evidence of human recreational disturbance effects on bird-territory establishment. Proceedings of the Royal Society B: Biological Sciences, 284(1858), p.20170846.

Goss-Custard, J.D., Hoppe, C.H., Hood, M.J. and Stillman, R.A., 2020. Disturbance does not have a significant impact on waders in an estuary close to conurbations: importance of overlap between birds and people in time and space. Ibis, 162(3), pp.845

Site Code	Site Name	Distance (km) 12	Qualifying Feature ¹³	Analysis of Potential Effects	Likelihood of Potential Significant Effects	Likelihood of Potential In- Combination Effects
			Little Gull (Larus minutus) [A177]	These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed development. However, considering the current nature of the proposed development site as a hard surfaced car park, and the small scale and temporary (i.e. less than one year) construction phase, the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA in the regard. Considering the SCIs of this SPA, and given the nature of the proposed development and the distances involved; there are no potential sources for likely significant effects, and no further assessment is required.		
004158	River Nanny Estuary and Shore SPA	4.04	Ringed Plover (Charadrius hiaticula) [A137], Sanderling (Calidris alba) [A144], Golden Plover (Pluvialis apricaria) [A140], Oystercatcher (Haematopus ostralegus) [A130], Knot (Calidris canutus) [A143], Wetland and Waterbirds [A999], Herring Gull (Larus argentatus) [A184]	Considering the Special Conservation Interests and known sensitivities of this European site in the context of the potential effects identified in S3.3.2, this SPA is sensitive to hydrological interactions, direct land use management and disturbance effects. The site is 4.04km from the proposed development There are no sources for effect for direct land use management or habitat disturbance effects to the SPA as this site is outside the proposed development boundary. There are no direct surface hydrological pathways between the proposed development and the SPA. There is a potential source for hydrological interactions via underground urban surface water drainage, however there will be a change from hard surface area to permeable paving, which will not increase and may reduce surface water run-off. There will also be no change to drainage infrastructure as a result of the proposed development. Therefore, there is no potential for likely significant effect in this regard.	No	No
				SCI species are sensitive to noise disturbance effects; in general distances beyond 2km are seen to be sufficient to preclude such effects ^{18,19} . These distances can vary due to factors such as species		

¹⁸ Ruddock, M. and Whitfield, D.P., 2007. A review of disturbance distances in selected bird species. A report from Natural Research (Projects) Ltd to Scottish Natural Heritage, 181.

¹⁹ Bright, J.A., Langston, R. and Anthony, S., 2009. Mapped and written guidance in relation to birds and onshore wind energy development in England. Sandy: RSPB.

Site Code	Site Name	Distance (km) ¹²	Qualifying Feature ¹³	Analysis of Potential Effects	Likelihood of Potential Significant Effects	Likelihood of Potential In- Combination Effects
				and/or time of year ^{20,21} . Given the distance between the proposed development area and the SPA there are no pathways for disturbance effects identified in this regard.		
				These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed development. However, considering the current nature of the proposed development site as a hard surfaced car park, the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA in the regard.		
				Considering the SCIs of this SPA, and given the nature of the proposed development and the distances involved; there are no potential sources for likely significant effects, and no further assessment is required.		
004122	Skerries Islands SPA	7.25	Cormorant (Phalacrocorax carbo) [A017], Herring Gull (Larus argentatus) [A184], Shag (Phalacrocorax aristotelis) [A018], Turnstone (Arenaria interpres) [A169], Light-bellied Brent Goose (Branta bernicla hrota) [A674], Purple Sandpiper (Calidris maritima) [A148]	Considering the Special Conservation Interests and known sensitivities of this European site in the context of the potential effects identified in S3.3.2, this SPA is sensitive to hydrological interactions, direct land use management and disturbance effects. The site is 7.25km from the proposed development There are no sources for effect for direct land use management or habitat disturbance effects to the SPA as this site is outside the proposed development boundary. There are no direct surface hydrological pathways between the proposed development and the SPA. There is a potential source for hydrological interactions via underground urban surface water drainage, however there will be a change from hard surface area to permeable paving, which will not increase and may reduce surface water run-off. There will also be no change to drainage infrastructure as a result of the proposed development. Therefore, there is no potential for likely significant effect in this regard.	No	No
				SCI species are sensitive to noise disturbance effects; in general distances beyond 2km are seen to be sufficient to preclude such		

²⁰ Bötsch, Y., Tablado, Z. and Jenni, L., 2017. Experimental evidence of human recreational disturbance effects on bird-territory establishment. Proceedings of the Royal Society B: Biological Sciences, 284(1858), p.20170846.

¹² Goss-Custard, J.D., Hoppe, C.H., Hood, M.J. and Stillman, R.A., 2020. Disturbance does not have a significant impact on waders in an estuary close to conurbations: importance of overlap between birds and people in time and space. Ibis, 162(3), pp.845

Site Code	Site Name	Distance (km) 12	Qualifying Feature ¹³	Analysis of Potential Effects	Likelihood of Potential Significant Effects	Likelihood of Potential In- Combination Effects
				effects ^{22,23} . These distances can vary due to factors such as species and/or time of year ^{24,25} . Given the distance between the proposed development area and the SPA there are no pathways for disturbance effects identified in this regard.		
				These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed development. However, considering the current nature of the proposed development site as a hard surfaced car park, the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA in the regard.		
				Considering the SCIs of this SPA, and given the nature of the proposed development and the distances involved; there are no potential sources for likely significant effects, and no further assessment is required.		
003000	Rockabill to Dalkey Island SAC	8.39	Reefs [1170], Harbour porpoise (Phocoena phocoena) [1351]	Considering the Qualifying Interests, their Conservation Objectives, and the known sensitivities of this European site in the context of the potential effects identified in S3.3.2, this SAC is sensitive to hydrological interactions and direct land use management.	No	No
				The site is 8.39km from the proposed development. There are no sources for effect for direct land use management or habitat disturbance effects to the SAC as this site is outside of the proposed development boundary.		
				There are no direct surface hydrological pathways between the proposed development and the SAC. There is a potential source for hydrological interactions via underground urban surface water drainage, however there will be a change from hard surface area to permeable paving, which will not increase and may reduce surface water run-off. There will also be no change to drainage infrastructure as a result of the proposed development. Therefore, there is no potential for likely		

²² Ruddock, M. and Whitfield, D.P., 2007. A review of disturbance distances in selected bird species. A report from Natural Research (Projects) Ltd to Scottish Natural Heritage, 181.

²³ Bright, J.A., Langston, R. and Anthony, S., 2009. Mapped and written guidance in relation to birds and onshore wind energy development in England. Sandy: RSPB.

^{**} Bötsch, Y., Tablado, Z. and Jenni, L., 2017. Experimental evidence of human recreational disturbance effects on bird-territory establishment. Proceedings of the Royal Society B: Biological Sciences, 284(1858), p.20170846.

⁴ Goss-Custard, J.D., Hoppe, C.H., Hood, M.J. and Stillman, R.A., 2020. Disturbance does not have a significant impact on waders in an estuary close to conurbations: importance of overlap between birds and people in time and space. Ibis, 162(3), pp.845

Site Code	Site Name	Distance (km) ¹²	Qualifying Feature ¹³	Analysis of Potential Effects	Likelihood of Potential Significant Effects	Likelihood of Potential In- Combination Effects
				significant effect in this regard.		
				Considering the QIs of this SAC, and given the nature of the proposed development and the distances involved; there are no potential sources for likely significant effects, and no further assessment is required.		
004014	Rockabill SPA	8.88	Common tern (Sterna hirundo) [A193], Roseate Tern (Sterna dougallii) [A192], Purple Sandpiper (Calidris maritima) [A148], Arctic	Considering the Special Conservation Interests and known sensitivities of this European site in the context of the potential effects identified in S3.3.2, this SPA is sensitive to hydrological interactions, direct land use management and disturbance effects.	No	No
			tern (Sterna paradisaea) [A194]	The site is 8.88km from the proposed development There are no sources for effect for direct land use management or habitat disturbance effects to the SPA as this site is outside the proposed development boundary.		
				There are no direct surface hydrological pathways between the proposed development and the SPA. There is a potential source for hydrological interactions via underground urban surface water drainage, however there will be a change from hard surface area to permeable paving, which will not increase and may reduce surface water run-off. There will also be no change to drainage infrastructure as a result of the proposed development. Therefore, there is no potential for likely significant effect in this regard.		
				SCI species are sensitive to noise disturbance effects; in general distances beyond 2km are seen to be sufficient to preclude such effects ^{26,27} . These distances can vary due to factors such as species and/or time of year ^{28,29} . Given the distance between the proposed development area and the SPA there are no pathways for disturbance effects identified in this regard.		
				These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed		

²⁶ Ruddock, M. and Whitfield, D.P., 2007. A review of disturbance distances in selected bird species. A report from Natural Research (Projects) Ltd to Scottish Natural Heritage, 181.

²⁷ Bright, J.A., Langston, R. and Anthony, S., 2009. Mapped and written guidance in relation to birds and onshore wind energy development in England. Sandy: RSPB.

²⁸ Bötsch, Y., Tablado, Z. and Jenni, L., 2017. Experimental evidence of human recreational disturbance effects on bird-territory establishment. Proceedings of the Royal Society B: Biological Sciences, 284(1858), p.20170846.

²⁹ Goss-Custard, J.D., Hoppe, C.H., Hood, M.J. and Stillman, R.A., 2020. Disturbance does not have a significant impact on waders in an estuary close to conurbations: importance of overlap between birds and people in time and space. Ibis, 162(3), pp.845

Site Code	Site Name	Distance (km) 12	Qualifying Feature ¹³	Analysis of Potential Effects	Likelihood of Potential Significant Effects	Likelihood of Potential In- Combination Effects
				development. However, considering the current nature of the proposed development site as a hard surfaced car park, the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA in the regard. Considering the SCIs of this SPA, and given the nature of the proposed		
				development and the distances involved; there are no potential sources for likely significant effects, and no further assessment is required.		
001957	Boyne Coast and Estuary SAC	9.87	Estuaries [1130], Embryonic shifting dunes [2110], Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330], Mudflats and sandflats not covered by seawater at low tide [1140], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Annual vegetation of drift lines [1210], Salicornia and other annuals colonising mud and sand [1310], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130]	Considering the Qualifying Interests, their Conservation Objectives, and the known sensitivities of this European site in the context of the potential effects identified in S3.3.2, this SAC is sensitive to hydrological interactions and direct land use management. The site is 9.87km from the proposed development. There are no sources for effect for direct land use management or habitat disturbance effects to the SAC as this site is outside of the proposed development boundary. There are no direct surface hydrological pathways between the proposed development and the SAC. There is a potential source for hydrological interactions via underground urban surface water drainage, however there will be a change from hard surface area to permeable paving, which will not increase and may reduce surface water run-off. There will also be no change to drainage infrastructure as a result of the proposed development. Therefore, there is no potential for likely significant effect in this regard. Considering the QIs of this SAC, and given the nature of the proposed development and the distances involved; there are no potential sources for likely significant effects, and no further assessment is required.	No	No
004080	Boyne Estuary SPA	11.81	Black-tailed Godwit (Limosa limosa) [A156], Golden Plover (Pluvialis apricaria) [A140], Sanderling (Calidris alba) [A144], Shelduck (Tadorna tadorna) [A048], Knot (Calidris canutus)	Considering the Special Conservation Interests and known sensitivities of this European site in the context of the potential effects identified in S3.3.2, this SPA is sensitive to hydrological interactions, disturbance effects and direct land use management. The site is 11.81km from the proposed development. There are no	No	No

Site Code	Site Name	Distance (km) ¹²	Qualifying Feature ¹³	Analysis of Potential Effects	Likelihood of Potential Significant Effects	Likelihood of Potential In- Combination Effects
			[A143], Little Tern (Sterna albifrons) [A195], Redshank (Tringa totanus) [A162], Oystercatcher (Haematopus ostralegus) [A130], Lapwing (Vanellus vanellus) [A142], Grey Plover (Pluvialis squatarola) [A141], Wetland and Waterbirds [A999], Turnstone (Arenaria interpres) [A169]	sources for effect for direct land use management or habitat disturbance effects to the SPA as this site is outside of the proposed development boundary. There are no direct surface hydrological pathways between the proposed development and the SPA. There is a potential source for hydrological interactions via underground urban surface water drainage, however there will be a change from hard surface area to permeable paving, which will not increase and may reduce surface water run-off. There will also be no change to drainage infrastructure as a result of the proposed development. Therefore, there is no potential for likely significant effect in this regard. SCI species are sensitive to noise disturbance effects; in general distances beyond 2km are seen to be sufficient to preclude such effects ^{30,31} . These distances can vary due to factors such as species and/or time of year ^{32,33} . Given the distance between the proposed development area and the SPA there are no pathways for disturbance effects identified in this regard. These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed development. However, considering the current nature of the proposed development site as a hard surfaced car park, the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA in the regard. Considering the QIs of this SPA, and given the nature of the proposed development and the distances involved; there are no potential sources for likely significant effects, and no further assessment is required.		
000208	Rogerstown	12.12	Salicornia and other annuals colonising mud and sand [1310],	Considering the Qualifying Interests, their Conservation Objectives, and the known sensitivities of this European site in the context of the	No	No

³⁰ Ruddock, M. and Whitfield, D.P., 2007. A review of disturbance distances in selected bird species. A report from Natural Research (Projects) Ltd to Scottish Natural Heritage, 181.

³¹ Bright, J.A., Langston, R. and Anthony, S., 2009. Mapped and written guidance in relation to birds and onshore wind energy development in England. Sandy: RSPB.

³² Bötsch, Y., Tablado, Z. and Jenni, L., 2017. Experimental evidence of human recreational disturbance effects on bird-territory establishment. Proceedings of the Royal Society B: Biological Sciences, 284(1858), p.20170846.

²² Goss-Custard, J.D., Hoppe, C.H., Hood, M.J. and Stillman, R.A., 2020. Disturbance does not have a significant impact on waders in an estuary close to conurbations: importance of overlap between birds and people in time and space. Ibis, 162(3), pp.845

Site Code	Site Name	Distance (km) ¹²	Qualifying Feature ¹³	Analysis of Potential Effects	Likelihood of Potential Significant Effects	Likelihood of Potential In- Combination Effects
	Estuary SAC		Fixed coastal dunes with herbaceous vegetation - grey dunes [2130], Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330], Mudflats and sandflats not covered by seawater at low tide [1140], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Mediterranean salt meadows (Juncetalia maritimi) [1410], Estuaries [1130]	potential effects identified in S3.3.2, this SAC is sensitive to hydrological interactions and direct land use management. The site is 12.12km from the proposed development. There are no sources for effect for direct land use management or habitat disturbance effects to the SPA as this site is outside of the proposed development boundary. There are no direct surface hydrological pathways between the proposed development and the SAC. There is a potential source for hydrological interactions via underground urban surface water drainage, however there will be a change from hard surface area to permeable paving, which will not increase and may reduce surface water run-off. There will also be no change to drainage infrastructure as a result of the proposed development. Therefore, there is no potential for likely significant effect in this regard. Considering the QIs of this SAC, and given the nature of the proposed development and the distances involved; there are no potential sources for likely significant effects, and no further assessment is required.		
004015	Rogerstown Estuary SPA	12.12	Light-bellied Brent Goose (Branta bernicla hrota) [A674], Oystercatcher (Haematopus ostralegus) [A130], Redshank (Tringa totanus) [A162], Ringed Plover (Charadrius hiaticula) [A137], Shelduck (Tadorna tadorna) [A048], Shoveler (Anas clypeata) [A056], Black-tailed Godwit (Limosa limosa) [A156], Dunlin (Calidris alpina) [A149], Wetland and Waterbirds [A999], Knot (Calidris canutus) [A143], Grey Plover (Pluvialis squatarola) [A141], Greylag Goose (Anser anser) [A043]	Considering the Special Conservation Interests, their Conservation Objectives, and the known sensitivities of this European site in the context of the potential effects identified in S3.3.2, this SPA is sensitive to hydrological interactions, disturbance effects and direct land use management. The site is 12.12km from the proposed development. There are no sources for effect for direct land use management or habitat disturbance effects to the SPA as this site is outside of the proposed development boundary. There are no direct surface hydrological pathways between the proposed development and the SPA. There is a potential source for hydrological interactions via underground urban surface water drainage, however there will be a change from hard surface area to permeable paving, which will not increase and may reduce surface water run-off. There will also be no change to drainage infrastructure as a result of the	No	No

Site Code	Site Name	Distance (km) ¹²	Qualifying Feature ¹³	Analysis of Potential Effects	Likelihood of Potential Significant Effects	Likelihood of Potential In- Combination Effects
				proposed development. Therefore, there is no potential for likely significant effect in this regard.		
				SCI species are sensitive to noise disturbance effects; in general distances beyond 2km are seen to be sufficient to preclude such effects ^{34,35} . These distances can vary due to factors such as species and/or time of year ^{36,37} . Given the distance between the proposed development area and the SPA there are no pathways for disturbance effects identified in this regard.		
				These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed development. However, considering the current nature of the proposed development site as a hard surfaced car park, the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA in the regard.		
				Considering the QIs of this SPA and given the nature of the proposed development and the distances involved; there are no potential sources for likely significant effects, and no further assessment is required.		
002299	River Boyne and River Blackwater SAC	13.72	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0], Alkaline fens [7230], River lamprey (Lampetra fluviatilis) [1099], Atlantic salmon (Salmo salar) [1106], Otter (Lutra lutra) [1355]	Considering the Qualifying Interests, their Conservation Objectives, and the known sensitivities of this European site in the context of the potential effects identified in S3.3.2, this SAC is sensitive to hydrological interactions and direct land use management.	No	No
				The site is 13.72km from the proposed development. There are no sources for effect for direct land use management or habitat disturbance effects to the SAC as this site is outside of the proposed development boundary.		
				There are no direct surface hydrological pathways between the proposed development and the SAC. There is a potential source for		

³⁴ Ruddock, M. and Whitfield, D.P., 2007. A review of disturbance distances in selected bird species. A report from Natural Research (Projects) Ltd to Scottish Natural Heritage, 181.

³⁵ Bright, J.A., Langston, R. and Anthony, S., 2009. Mapped and written guidance in relation to birds and onshore wind energy development in England. Sandy: RSPB.

^{**} Bötsch, Y., Tablado, Z. and Jenni, L., 2017. Experimental evidence of human recreational disturbance effects on bird-territory establishment. Proceedings of the Royal Society B: Biological Sciences, 284(1858), p.20170846.

³⁷ Goss-Custard, J.D., Hoppe, C.H., Hood, M.J. and Stillman, R.A., 2020. Disturbance does not have a significant impact on waders in an estuary close to conurbations: importance of overlap between birds and people in time and space. Ibis, 162(3), pp.845

Site Code	Site Name	Distance (km) ¹²	Qualifying Feature ¹³	Analysis of Potential Effects	Likelihood of Potential Significant Effects	Likelihood of Potential In- Combination Effects
				hydrological interactions via underground urban surface water drainage, however there will be a change from hard surface area to permeable paving, which will not increase and may reduce surface water run-off. There will also be no change to drainage infrastructure as a result of the proposed development. Therefore, there is no potential for likely significant effect in this regard.		
				Considering the QIs of this SAC, and given the nature of the proposed development and the distances involved; there are no potential sources for likely significant effects, and no further assessment is required.		

3.5. Other plans and projects

Article 6(3) of the Habitats Directive requires an assessment of a plan or project to consider other plans or projects that might, in combination with the plan or project, have potential for significant effects European sites.

Section 3.2 - receiving environment overview - identifies the overall characteristics of the area with respect to existing condition and general land use. For considerations of in combination with respect to emerging or recent developments a search of the Dept of Housing, Local Government and Heritage planning database was undertaken to identify relevant plans and programmes which relate to the Proposed development. All developments from the receiving area were considered; the area considered is defined by the authoring ecologist using criteria which depend on the characteristics of the Proposed development and the associated sources (identified above); these criteria include:

- Having direct or indirect connectivity to a European site;
- Being in close proximity to a European site;
- Being of a substantial scale relative to the conditions and/or current works taking place in the surrounding landscape;
- Having disperse emissions or far-reaching sources for effects;
- Having sources for effects to ecological connectivity.

These factors are considered in the context of characteristics of the proposed development and on this basis a search radius of 200m was selected to be used to search for projects within the receiving environment. The sources for effects from the Proposed development are considered in combination with the potential sources for effects from the receiving environment for potential additive or interactive effects to the receiving environment.

Plans of relevance within the receiving environment or in-combination with effects arising from the proposed development:

Fingal Development Plan 2023-2027

Considering that the proposed development has a small-scale temporary construction phase and the operational phase is consistent with the current site use, and the land use zoning of the above plan, and that the above Plan has undergone the AA process also, it is not foreseen that proposed development will have any significant in-combination effects with the above plan.

Projects considered for possible in-combination effects from the proposed development:

Further to section 3.2 – which details the existing land uses and general characteristics of the area – a focus was placed on current and future development applications. To identify projects for consideration for the in-combination effects section, the Dept of Housing, Local Government and Heritage planning database was used³⁸. A review of all planning applications within the identified zone was conducted focusing on all application within the past 5 years³⁹.

There are a number of other proposed developments in the vicinity of the proposed development,

³⁸ https://data-housinggovie.opendata.arcgis.com/datasets/planning-application-sites-2010-onwards; 1st December 2023

³⁹ Planning applications have a standard lifespan of 5 years as per Section 40 (3)(b) of the Planning & Development Act 2000, as amended; therefore, these are viewed to be the 'live' applications, all other projects are considered as part of the site other than refused and withdrawn applications, as these would not have any in-combination effects

including works which are at planning stage or are underway on various sites. The database search found that the vast majority of projects within the area are relating to the construction and alteration of residential structures. Table 3.2 provides a list of the proposed developments within 200m of the proposed development.

Due to the scale and nature of the proposed development, there is no potential for significant effects identified as a result of the implementation of the proposed development. On this basis, the assessment guidance given in CIEEM, 2018 indicates that there is no need to consider cumulative effects. However, in taking a precautionary approach, relevant plans and projects have nonetheless been reviewed and assessed in-combination with the proposed development.

The proposed development is localised, with a small scale, temporary construction phase, and an operational phase that is consistent with current site use and pressures. The projects listed in Table 3.2 below in the local area are small in scale with Appropriate Assessment and/or EIA screening carried out for each where required. Therefore, given the nature and scale of the proposed development, and the lack of any potential for significant effects, there are no in combination effects with the below projects or above plans that have been identified to have likely potential significant effects on any European site considered in this assessment. Table 3.2 Local planning applications⁴⁰ relevant to the proposed development⁴¹

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⁴⁰ The majority of surrounding developments within Dublin city are minor projects with no risk of in-combination effects. Therefore, a summary list of provided here of the five largest proposed developments within the below stated parameters

⁴¹ Parameters used: planning application from within the last 5 years, within a radius of 200m around the proposed development boundary

Table 3.2 Local planning applications⁴² relevant to the proposed development⁴³

Project Code	Decision	Description	Grant Date	Project Area (sq m)	Area of Site (where provided)	Status	Characteristics of the potential interactions between the projects; sources and pathways	Is there a risk of in- combination effects	Are significant in- combination effects likely
F18A/0185	Grant Permission	1. Provide new temporary accommodation consisting of 2 no. temporary classrooms including toilets & 1 no. SET room in accordance with the lodged information. 2. Foul water drainage connections to existing on site foul water drainage system, with new on-site surface water soak pit. 3. All site works and ancillary works.	2018- 07-10	19141.36	19,000.0	Permission	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that will be in keeping with the context and character of the surrounding environment. Considering the above, in combination with the lack of any potential for effects to European sites arising from the proposed development, it is not considered that there is any potential for significant in-combination effects to any European sites. The consent process for this project was subject to applicable EIA and AA requirements.	No	No
F18A/0186	Grant Permission For Retention	Retention permission for the following: 1) Single storey 12 classroom temporary accommodation prefabricated building 2) All site works and ancillary works.	2018- 07-10	19139.35	19,000.0	Retention	This is a small-scale project with a temporary construction phase and the operational phase will have	No	No

⁴² The majority of surrounding developments within Dublin city are minor projects with no risk of in-combination effects. Therefore, a summary list of provided here of the five largest proposed developments within the below stated parameters

⁴³ Parameters used: planning application from within the last 5 years, within a radius of 200m around the proposed development boundary

Project Code	Decision	Description	Grant Date	Project Area (sq m)	Area of Site (where provided)	Status	Characteristics of the potential interactions between the projects; sources and pathways	Is there a risk of in- combination effects	Are significant in- combination effects likely
							localised effects that will be in keeping with the context and character of the surrounding environment. Considering the above, in combination with the lack of any potential for effects to European sites arising from the proposed development, it is not considered that there is any potential for significant in-combination effects to any European sites. The consent process for this project was subject to applicable EIA and AA requirements.		
F21A/0668	Grant Permission	The removal of all existing temporary school buildings, demolition of existing school building & associated site works, construction of a new two storey school building comprising of 19 classrooms, 10 resource rooms, 1 staff room, 2 staff offices,1 General Purpose Hall and associated storage rooms/servery, 1 multipurpose room, staff and student toilets, 1 library/ resource room, 2 base classrooms for special needs unit, 1 central activities space and ancillary accommodation/ plant rooms, all associated external works including provision of new vehicular and pedestrian entrances, Internal bus set-	2022-10-18	19042.79	19,000.0	Permission	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that will be in keeping with the context and character of the surrounding environment. Considering the above, in combination with the lack of any potential for effects to European sites arising from the proposed development, it is not considered that there is	No	No

Project Code	Decision	Description	Grant Date	Project Area (sq m)	Area of Site (where provided)	Status	Characteristics of the potential interactions between the projects; sources and pathways	Is there a risk of in- combination effects	Are significant in- combination effects likely
		down, staff car parking, cycle parking, Sensory Garden, 1 no. ball court, 1 Hard play area, 1 soft play area, proprietary wastewater system, storm drainage system, landscaping, and boundary treatments. Al received 2/8/2022 Al deemed significant ** Revised public notices received 18/8/2022					any potential for significant in-combination effects to any European sites. The consent process for this project was subject to applicable EIA and AA requirements.		
F21A/0309	Grant Permission	The development will consist of family flat extension to rear of existing bungalow dwelling. Conversion of existing single dwelling to dormer dwelling with first floor living space over entire proposed structure and all associated site works. Al received 23/09/21	2021-11-23	908.40	850.0	Permission	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that will be in keeping with the context and character of the surrounding environment. Considering the above, in combination with the lack of any potential for effects to European sites arising from the proposed development, it is not considered that there is any potential for significant in-combination effects to any European sites. The consent process for this project was subject to applicable EIA and AA requirements.	No	No

Project Code	Decision	Description	Grant Date	Project Area (sq m)	Area of Site (where provided)	Status	Characteristics of the potential interactions between the projects; sources and pathways	Is there a risk of in- combination effects	Are significant in- combination effects likely
F17A/0201	Grant Permission	Development consisting of the construction of a two storey, four-bedroom, contemporary dwelling with new vehicular access, 2 no. on-curtilage car parking spaces, private amenity space, single storey garden store building, drainage infrastructure, landscaping and all associated site development works necessary to facilitate the development.	2018-03-12	540.36	510.0	Permission	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that will be in keeping with the context and character of the surrounding environment. Considering the above, in combination with the lack of any potential for effects to European sites arising from the proposed development, it is not considered that there is any potential for significant in-combination effects to any European sites. The consent process for this project was subject to applicable EIA and AA requirements.	No	No
F22A/0170	Grant Permission For Retention	Retention permission for attic conversion to non-habitable storage space (17.9 sqm), attic dormer window to rear elevation. 'Velux' type roof window to side elevation, single storey shed to rear garden (30.75sqm) and all associated site work.	2022- 06-28	328.76	311.0	Retention	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that will be in keeping with the context and character of the surrounding environment. Considering the above, in combination with the lack of	No	No

Project Code	Decision	Description	Grant Date	Project Area (sq m)	Area of Site (where provided)	Status	Characteristics of the potential interactions between the projects; sources and pathways	Is there a risk of in- combination effects	Are significant in- combination effects likely
							any potential for effects to European sites arising from the proposed development, it is not considered that there is any potential for significant in-combination effects to any European sites. The consent process for this project was subject to applicable EIA and AA requirements.		
F19A/0063	Grant Permission & Refuse Retention	Retention Permission sought for 2m. high front security timber garden fencing and vehicular driveway gates. Together with Planning Permission sought for attic conversion to study / storage, together with new dormer window to rear.	2019-05-09	254.54	256.0	Permission and Retention	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that will be in keeping with the context and character of the surrounding environment. Considering the above, in combination with the lack of any potential for effects to European sites arising from the proposed development, it is not considered that there is any potential for significant in-combination effects to any European sites. The consent process for this project was subject to applicable EIA and AA requirements.	No	No

Project Code	Decision	Description	Grant Date	Project Area (sq m)	Area of Site (where provided)	Status	Characteristics of the potential interactions between the projects; sources and pathways	Is there a risk of in- combination effects	Are significant in- combination effects likely
F18B/0223	Grant Permission	Permission for a single storey extension to rear and side of existing dwelling with associated site works.	2018-11-13	0.12	2,500.0	Permission	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects that will be in keeping with the context and character of the surrounding environment. Considering the above, in combination with the lack of any potential for effects to European sites arising from the proposed development, it is not considered that there is any potential for significant in-combination effects to any European sites. The consent process for this project was subject to applicable EIA and AA requirements.	No	No

4. Conclusion

This stage one screening for AA of the proposed Car Park Upgrade at Bremore Castle, Balbriggan demonstrates that the proposed development is not likely to have potential for significant effects to any European sites.

The AA screening process has considered potential effects which may arise during the construction and operational phases as a result of the implementation of the proposed development. Through an assessment of the potential sources and pathways for significant effects, and an evaluation of the project characteristics, and the site context and character; taking account of the processes involved and the distance of separation from European sites; it has been evaluated that potential significant effects to the Conservation Objectives of Qualifying Interests and Special Conservation Interests of any designated European site are not likely to occur as a result of the implementation of the proposed development.

Given the nature of the proposed development, the site context and characteristics, and distance from European site, it is predicted that the proposed scheme will not lead to any potential significant in-combination effects when considered with potential effects arising from any other plans or projects.

The proposed development is not foreseen to have any likelihood of significant effects on any European sites, alone or in combination with other plans or projects — and therefore any potential for significant effect to any European site as a result of the proposed scheme can be ruled out. This evaluation is made in view of the conservation objectives of the habitats or species for which these sites have been designated. Consequently, a Stage Two AA (NIS) is not required.

Appendix I Background information on European sites⁴⁴

Site Code	Site Name	Qualifying Feature	Pressure Codes	Known Threats and Pressures	
000208	Rogerstown Estuary SAC	Estuaries [1130], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130], Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330], Mudflats and sandflats not covered by seawater at low tide [1140], Mediterranean salt meadows (Juncetalia maritimi) [1410], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Salicornia and other annuals colonising mud and sand [1310]	F02.03.01, K01.01, G01.01, A08, E01.03, A04, X, E03, A07, G02.01, I01, G01.02, J02.01.02, J02.12.01, D01.02	Bait digging or collection, erosion, nautical sports, fertilisation, dispersed habitation, grazing, no threats or pressures, discharges, us of biocides, hormones and chemicals, golf course, invasive non-nativ species, walking, horse-riding and non-motorised vehicles, reclamation of land from sea, estuary or marsh, sea defence or coast protection works, tidal barrages, roads, motorways	
001957	Boyne Coast and Estuary SAC	Annual vegetation of drift lines [1210], Salicornia and other annuals colonising mud and sand [1310], Estuaries [1130], Embryonic shifting dunes [2110], Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330], Mudflats and sandflats not covered by seawater at low tide [1140], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130]	G01.02, D01.05, E03.03, J02.02, G05.04, G03, J02.12, E01, I01, K02, G05, G01.03.02, J02.12.01, H01, J02.01.03, D01.01, J03.03, J02, L07, E05, E03.01	Walking, horse-riding and non-motorised vehicles, bridge, viaduct, disposal of inert materials, removal of sediments (mud), vandalism, interpretative centres, dykes, embankments, artificial beaches, general, urbanised areas, human habitation, invasive non-native species, biocenotic evolution, succession, other human intrusions and disturbances, off-road motorized driving, sea defence or coast protection works, tidal barrages, pollution to surface waters (limnic & terrestrial, marine & brackish), infilling of ditches, dykes, ponds, pools, marshes or pits, paths, tracks, cycling tracks, reduction, lack or prevention of erosion, human induced changes in hydraulic conditions, storm, cyclone, storage of materials, disposal of household or recreational facility waste	
002299	River Boyne and River Blackwater SAC	Alkaline fens [7230], River lamprey (Lampetra fluviatilis) [1099], Atlantic salmon (Salmo salar) [1106], Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0], Otter (Lutra lutra) [1355]	A01, A03, B01.02, C01.01, J02.10, D01.02, E01.04, A05.02, A07, G05, A10.01, G05.06, A08, E03.02, E03.04, E05, J02, J02.11, G02.10, D01.05, J02.15, G01, I01, J02.05.02, H01, E02	Cultivation, mowing or cutting of grassland, artificial planting on open ground (non-native trees), sand and gravel extraction , management of aquatic and bank vegetation for drainage purposes, roads, motorways, other patterns of habitation, stock feeding, use of biocides, hormones and chemicals, other human intrusions and disturbances , removal of hedges and copses or scrub, tree surgery, felling for public safety, removal of roadside trees, fertilisation, disposal of industrial waste, other discharges, storage of materials, human induced changes in hydraulic conditions, siltation rate changes, dumping, depositing of dredged deposits, other sport or leisure complexes, bridge, viaduct, other human induced changes in	

⁴⁴ That have functional connectivity (ecological pathways) to the proposed development area including their Qualifying Interests, known threats and pressures

Site Code	Site Name	Qualifying Feature	Pressure Codes	Known Threats and Pressures
				hydraulic conditions, outdoor sports and leisure activities, recreational activities, invasive non-native species, modifying structures of inland water courses, pollution to surface waters (limnic & terrestrial, marine & brackish), industrial or commercial areas
003000	Rockabill to Dalkey Island SAC	Reefs [1170], Harbour porpoise (Phocoena phocoena) [1351]	H06.01, D03.02, E03, J02.11, J02.02, D02, X, F02.02	Noise nuisance, noise pollution, shipping lanes, discharges, siltation rate changes, dumping, depositing of dredged deposits, removal of sediments (mud), utility and service lines, no threats or pressures, professional active fishing
004014	Rockabill SPA	Arctic tern (Sterna paradisaea) [A194], Purple Sandpiper (Calidris maritima) [A148], Common tern (Sterna hirundo) [A193], Roseate Tern (Sterna dougallii) [A192]	D06, G01.01	Other forms of transportation and communication, nautical sports
004015	Rogerstown Estuary SPA	Dunlin (Calidris alpina) [A149], Wetland and Waterbirds [A999], Knot (Calidris canutus) [A143], Greylag Goose (Anser anser) [A043], Redshank (Tringa totanus) [A162], Light-bellied Brent Goose (Branta bernicla hrota) [A674], Grey Plover (Pluvialis squatarola) [A141], Black-tailed Godwit (Limosa limosa) [A156], Ringed Plover (Charadrius hiaticula) [A137], Shelduck (Tadorna tadorna) [A048], Oystercatcher (Haematopus ostralegus) [A130], Shoveler (Anas clypeata) [A056]	A08, A04, E03.01, J02.01, G02.01, F02.03.01, E01.03, G01.01, F03.01, E03.02, I01	Fertilisation, grazing, disposal of household or recreational facility waste, landfill, land reclamation and drying out, general, golf course, bait digging or collection, dispersed habitation, nautical sports, hunting, disposal of industrial waste, invasive non-native species
004080	Boyne Estuary SPA	Wetland and Waterbirds [A999], Little Tern (Sterna albifrons) [A195], Redshank (Tringa totanus) [A162], Oystercatcher (Haematopus ostralegus) [A130], Knot (Calidris canutus) [A143], Grey Plover (Pluvialis squatarola) [A141], Golden Plover (Pluvialis apricaria) [A140], Turnstone (Arenaria interpres) [A169], Lapwing (Vanellus vanellus) [A142], Blacktailed Godwit (Limosa limosa) [A156], Sanderling (Calidris alba) [A144], Shelduck (Tadorna tadorna) [A048]	F01, J02.05, F02.03, G01.02, I01, E01, J02.01.02, G02.01, J02.11	Marine and freshwater aquaculture, modification of hydrographic functioning, general, leisure fishing, walking, horse-riding and non-motorised vehicles, invasive non-native species, urbanised areas, human habitation, reclamation of land from sea, estuary or marsh, golf course, siltation rate changes, dumping, depositing of dredged deposits
004122	Skerries Islands SPA	Cormorant (Phalacrocorax carbo) [A017], Herring Gull (Larus argentatus) [A184], Shag (Phalacrocorax aristotelis) [A018], Turnstone (Arenaria interpres) [A169], Light-bellied Brent Goose (Branta bernicla hrota) [A674], Purple Sandpiper	G01.02	Walking, horse-riding and non-motorised vehicles

Site Code	Site Name	Qualifying Feature	Pressure Codes	Known Threats and Pressures
		(Calidris maritima) [A148]		
004158	River Nanny Estuary and Shore SPA	Herring Gull (Larus argentatus) [A184], Ringed Plover (Charadrius hiaticula) [A137], Sanderling (Calidris alba) [A144], Golden Plover (Pluvialis apricaria) [A140], Oystercatcher (Haematopus ostralegus) [A130], Knot (Calidris canutus) [A143], Wetland and Waterbirds [A999]	E01.01, G01.02	Continuous urbanisation, walking, horse-riding and non-motorised vehicles
004236	North-West Irish Sea SPA	Kittiwake (Rissa tridactyla) [A188], Razorbill (Alca torda) [A200], Arctic Tern (Sterna paradisaea) [A194], Common Tern (Sterna hirundo) [A193], Puffin (Fratercula arctica) [A204], Common Scoter (Melanitta nigra) [A065], Great Northern Diver (Gavia immer) [A003], Roseate Tern (Sterna dougallii) [A192], Common Gull (Larus canus) [A182], Little Gull (Larus minutus) [A177], Red-throated Diver (Gavia stellata) [A001], Shag (Phalacrocorax aristotelis) [A018], Lesser Black-backed Gull (Larus fuscus) [A183], Black-headed Gull (Chroicocephalus ridibundus) [A179], Guillemot (Uria aalge) [A199], Little Tern (Sterna albifrons) [A195], Herring Gull (Larus argentatus) [A184], Great Black-backed Gull (Larus marinus) [A187], Manx Shearwater (Puffinus puffinus) [A013], Cormorant (Phalacrocorax carbo) [A017], Fulmar (Fulmarus glacialis) [A009]	N/A	N/A

Appendix II Qualifying Interests of SACs that have undergone assessment⁴⁵

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[1099]	River Lamprey (Lampetra fluviatilis)	The main pressures on River Lampreys are associated with hydropower infrastructure and changes in rainfall due to climate change. The use of synthetic and natural fertilisers, drainage and also infrastructure related to shipping are also considered to be pressures on the species.	A19, A20, A31, D02, E03, N01, N02, N03	Application of natural fertilisers on agricultural land, application of synthetic (mineral) fertilisers on agricultural land, drainage for use as agricultural land, hydropower (dams, weirs, run-off-theriver), including infrastructure, shipping lanes, ferry lanes and anchorage infrastructure (e.g., canalisation, dredging), temperature changes (e.g., rise of temperature & extremes) due to climate change, increases or changes in precipitation due to climate change	Surface water dependent. Highly sensitive to hydrological change. Availability of suitable spawning ground is a considerable issue for the species.
[1106]	Salmon (Salmo salar)	Known pressures include exploitation at sea in commercial fisheries, interceptor fisheries in coastal waters, aquaculture and predation. In addition, the negative influence of climate change on prey structure as well as alterations in habitat and water quality are also pressures on the species.	A25, A26, B23, D02, F12, F28, G11, G19, G20, I02, J01, K05, L06, N01	Agricultural activities generating point source pollution to surface or ground waters, agricultural activities generating diffuse pollution to surface or ground waters, forestry activities generating pollution to surface or ground waters, hydropower (dams, weirs, run-off-theriver), including infrastructure, discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water, modification of flooding regimes, flood protection for residential or recreational development, illegal harvesting, collecting and taking, other impacts from marine aquaculture, including infrastructure, abstraction of water, flow diversion, dams and other modifications of hydrological conditions	Disease, parasites and barriers to movement.

⁴⁵ Including known treats and pressures and sensitivities of qualifying interests

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
				for freshwater aquaculture, other invasive alien species (other than species of union concern), mixed source pollution to surface and ground waters (limnic and terrestrial), physical alteration of water bodies, interspecific relations (competition, predation, parasitism, pathogens), temperature changes (e.g., rise of temperature & extremes) due to climate change	
[1130]	Estuaries	Most of the pressures on estuaries come from various sources of pollution, including domestic wastewater, agriculture and marine aquaculture. Alien invasive species such as the naturalised Pacific oyster (<i>Magalana gigas</i>) are also recognised as a significant pressure	A28, F20, G16, I02, XU	Agricultural activities generating marine pollution, residential or recreational activities and structures generating marine pollution (excl. marine macroand micro- particular pollution, marine aquaculture generating marine pollution, other invasive alien species (other than species of union concern), unknown pressure	Inappropriate development, changes in turbidity
[1140]	Mudflats and sandflats not covered by seawater at low tide	Pressures on mudflats and sandflats are partly caused by pollution from agricultural, forestry and wastewater sources, as well as impacts associated with marine aquaculture, particularly the Pacific oyster (Magallana gigas).	A28, F20, G16	Agricultural activities generating marine pollution, residential or recreational activities and structures generating marine pollution (excl. marine macroand micro- particular pollution, marine aquaculture generating marine pollution	Surface and marine water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to pollution. Changes to salinity and tidal regime. Coastal development.
[1170]	Reefs	The main pressures on reefs come from fishing methods that damage the seafloor.	G01, G03	Marine fishing and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species, marine fish and shellfish harvesting (professional, recreational) activities causing physical loss and disturbance of seafloor habitats	Sensitive to disturbance and pollution.
[1210]	Annual vegetation of	Most of the pressures on drift lines are	C01, F01, F06, F07,	Extraction of minerals (e.g., rock, metal	Overgrazing and erosion. Changes in

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
	drift lines	associated with activities such as recreation and coastal defences, which can interfere with sediment dynamics.	F08	ores, gravel, sand, shell), conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions), development and maintenance of beach areas for tourism and recreation incl. beach nourishment and beach cleaning, sports, tourism and leisure activities, modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure and areas (including sea defence or coast protection works and infrastructures)	management.
[1310]	Salicornia and other annuals colonising mud and sand	Pressures on Salicornia mud are caused by alien species and overgrazing by livestock	A09, I02	Intensive grazing or overgrazing by livestock, other invasive alien species (other than species of union concern)	Marine water dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Infilling, reclamation, invasive species.
[1330]	Atlantic salt meadows (Glauco- Puccinellietalia maritimae)	The main pressures on Atlantic salt meadows are from agriculture, including ecologically unstable grazing regimes and land reclamation, and the invasive nonnative species common cord-grass (Spartina anglica).	A09, A33, A36, F07, F08, I02	Intensive grazing or overgrazing by livestock, modification of hydrological flow or physical alternation of water bodies for agriculture (excluding development and operation of dams), agriculture activities not referred to above, sports, tourism and leisure activities, modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure and areas (including sea defence or coast protection works and infrastructures), other invasive alien species (other than	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests	
				species of union concern)		
[1351]	Harbour Porpoise (Phocoena phocoena) Pressures acting on this species in Irish waters mainly involve commercial vessel-based activities such as impacts arising from geophysical seismic exploration or from local/regional prey removal by fisheries.		C09, G01	Geotechnical surveying, marine fishing and shellfish harvesting (professional, recreational) causing reduction of species/prey populations and disturbance of species	Sensitive to disturbance, prey availability and pollution.	
[1355]	Otter (Lutra lutra)	There are no pressures facing this species	Xxp, Xxt	No pressures, no threats	Surface and marine water dependent. Moderately sensitive to hydrological change. Sensitivity to pollution.	
[1410]	Mediterranean salt meadows (Juncetalia maritimi)	sadows (Juncetalia salt meadows are associated with		Intensive grazing or overgrazing by livestock, extensive grazing or under grazing by livestock, modification of hydrological flow or physical alternation of water bodies for agriculture (excluding development and operation of dams), agriculture activities not referred to above	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Coastal development and reclamation.	
[2110]			C01, E03, F01, F06, F07, F08, L01, L02	Extraction of minerals (e.g., rock, metal ores, gravel, sand, shell), shipping lanes, ferry lanes and anchorage infrastructure (e.g., canalisation, dredging), conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions), development and maintenance of beach areas for tourism and recreation incl. beach nourishment and beach cleaning, sports, tourism and leisure activities, modification of coastline, estuary and coastal conditions for development, use and protection of	Overgrazing, and erosion. Changes in management.	

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
				residential, commercial, industrial and recreational infrastructure and areas (including sea defence or coast protection works and infrastructures), abiotic natural processes (e.g., erosion, silting up, drying out, submersion, salinization), natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices)	
[2120]	Shifting dunes along the shoreline with white dunes (Ammophila arenaria)	Most of the pressures on marram dunes are caused by the interference on sediment dynamics due to recreation and coastal defences.	E01, E03, F01, F06, F07, F08, I02, L01	Roads, paths, railroads and related infrastructure (e.g., bridges, viaducts, tunnels), shipping lanes, ferry lanes and anchorage infrastructure (e.g., canalisation, dredging), conversion from other land uses to housing, settlement or recreational areas (excluding drainage and modification of coastline, estuary and coastal conditions), development and maintenance of beach areas for tourism and recreation incl. beach nourishment and beach cleaning, sports, tourism and leisure activities, modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure and areas (including sea defence or coast protection works and infrastructures), other invasive alien species (other than species of union concern), abiotic natural processes (e.g., erosion, silting up, drying out, submersion, salinization)	Overgrazing, and erosion. Changes in management.
[2130]	Fixed coastal dunes	Pressures on fixed dunes are associated	A02, A09, A10, F07,	Conversion from one type of agricultural	Overgrazing, and erosion. Changes in

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
	with herbaceous vegetation (grey dunes)	with recreation and ecologically unsuitable grazing practices.	F08, I02, L02	land use to another (excluding drainage and burning), intensive grazing or overgrazing by livestock, extensive grazing or under grazing by livestock, sports, tourism and leisure activities, modification of coastline, estuary and coastal conditions for development, use and protection of residential, commercial, industrial and recreational infrastructure and areas (including sea defence or coast protection works and infrastructures), other invasive alien species (other than species of union concern), natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices)	management.
[7230]	Alkaline fens	The main pressures facing this habitat are land abandonment (and associated succession), overgrazing, drainage and pollution.	A06, A09, A26, J01, K01, K02, K04, L02, N02, N03	Abandonment of grassland management (e.g., cessation of grazing or of mowing), intensive grazing or overgrazing by livestock, agricultural activities generating diffuse pollution to surface or ground waters, mixed source pollution to surface and ground waters (limnic and terrestrial), abstraction from groundwater, surface water or mixed water, drainage, modification of hydrological flow, natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices), temperature changes (e.g., rise of temperature & extremes) due to climate change, increases or changes in precipitation due to climate change	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[91E0]	Alluvial forests with Alder and Ash (Alnus glutinosa, Fraxinus excelsior, Alno- Padion, Alnion incanae, Salicion albae)	Many of the pressures facing this habitat include invasive species, particularly sycamore (Acer pseudoplatanus), beech (Fagus sylvatica), Indian balsam (Impatiens glandulifera) and currant species (Ribes nigrum and R. rubrum) as well as some native species such as brambles (Rubus fruticoses agg.) and common nettle, along with over felling.	B09, I02, I04, I05	Clear-cutting, removal of all trees, other invasive alien species (other than species of union concern), problematic native species, plant and animal diseases, pathogens and pests	Surface and groundwater dependent. Highly sensitive to hydrological changes. Changes in management.

Appendix III Special Conservation Interests of SPAs that have undergone assessment⁴⁶

Species code	Common name	Scientific name	Threats and pressures codes	Known threats and pressures
A003	Common Loon	Gavia immer	C03, F02, G01, H03	Renewable abiotic energy use, fishing and harvesting aquatic resources, outdoor sports and leisure activities, recreational activities, marine water pollution
A009	Northern Fulmar	Fulmarus glacialis	C03, F02	Renewable abiotic energy use, fishing and harvesting aquatic resources
A013	Manx Shearwater	Puffinus puffinus	C03, H03, I01	Renewable abiotic energy use, marine water pollution, invasive non-native species
A017	Cormorant	Phalacrocorax carbo carbo	C03, F02, F03, G01, H03	Renewable abiotic energy use, fishing and harvesting aquatic resources, hunting and collection of wild animals (terrestrial), outdoor sports and leisure activities, recreational activities, marine water pollution
A018	Shag	Phalacrocorax aristotelis	C03, H03	Renewable abiotic energy use, marine water pollution
A043	Greylag Goose	Anser anser	A02, A11, C03, D02, F03, G01, H07	Modification of cultivation practices, agriculture activities not referred to above, renewable abiotic energy use, utility and service lines, hunting and collection of wild animals (terrestrial), outdoor sports and leisure activities, recreational activities, other forms of pollution
A048	Common Shelduck	Tadorna tadorna	F01, F02, G01, H03, M01	Marine and freshwater aquaculture, fishing and harvesting aquatic resources, outdoor sports and leisure activities, recreational activities, marine water pollution, changes in abiotic conditions
A056	Northern Shoveler	Anas clypeata	C03, F03, G01, H01, H03, H07	Renewable abiotic energy use, hunting and collection of wild animals (terrestrial), outdoor sports and leisure activities, recreational activities, pollution to surface waters (limnic & terrestrial, marine & brackish), marine water pollution, other forms of pollution
A130	Eurasian Oystercatcher	Haematopus ostralegus	C03, F01, F02, G01, H03, J02	Renewable abiotic energy use, marine and freshwater aquaculture, fishing and harvesting aquatic resources, outdoor sports and leisure activities, recreational activities, marine water pollution, human induced changes in hydraulic conditions
A137	Common Ringed	Charadrius	C03, F01, F02, G01,	Renewable abiotic energy use, marine and freshwater aquaculture, fishing and harvesting aquatic resources, outdoor sports and leisure activities, recreational activities, marine water pollution, human induced changes in

 $^{^{\}rm 46}$ Including known treats and pressures of SCIs

Species code	Common name	Scientific name	Threats and pressures codes	Known threats and pressures
	Plover	hiaticula	H03, J02, J03, M01	hydraulic conditions, other ecosystem modifications, changes in abiotic conditions
A140	European Golden Plover	Pluvialis apricaria	A02, A04, B01, C01, C03, F01, G01, H03, J01, K03, M02	Modification of cultivation practices, grazing, forest planting on open ground, mining and quarrying, renewable abiotic energy use, marine and freshwater aquaculture, outdoor sports and leisure activities, recreational activities, marine water pollution, fire and fire suppression, interspecific faunal relations, changes in biotic conditions
A141	Grey Plover	Pluvialis squatarola	C03, F01, F02, G01, H03, J02, J03, M01	Renewable abiotic energy use, marine and freshwater aquaculture, fishing and harvesting aquatic resources, outdoor sports and leisure activities, recreational activities, marine water pollution, human induced changes in hydraulic conditions, other ecosystem modifications, changes in abiotic conditions
A142	Northern Lapwing	Vanellus vanellus	A02, C03, F01, G01, H03	Modification of cultivation practices, renewable abiotic energy use, marine and freshwater aquaculture, outdoor sports and leisure activities, recreational activities, marine water pollution
A143	Red Knot	Calidris canutus	C03, F01, F02, G01, H03, J02, J03, M01	Renewable abiotic energy use, marine and freshwater aquaculture, fishing and harvesting aquatic resources, outdoor sports and leisure activities, recreational activities, marine water pollution, human induced changes in hydraulic conditions, other ecosystem modifications, changes in abiotic conditions
A144	Sanderling	Calidris alba	C03, F01, G01, H03, M01	Renewable abiotic energy use, marine and freshwater aquaculture, outdoor sports and leisure activities, recreational activities, marine water pollution, changes in abiotic conditions
A148	Purple Sandpiper	Calidris maritima maritima	C03, G01, H03, J03, M01	Renewable abiotic energy use, outdoor sports and leisure activities, recreational activities, marine water pollution, other ecosystem modifications, changes in abiotic conditions
A149	Dunlin	Calidris alpina	C03, F01, F02, G01, H03, J02, J03, M01	Renewable abiotic energy use, marine and freshwater aquaculture, fishing and harvesting aquatic resources, outdoor sports and leisure activities, recreational activities, marine water pollution, human induced changes in hydraulic conditions, other ecosystem modifications, changes in abiotic conditions
A162	Common Redhank	Tringa totanus	C03, F01, F02, G01, H03, J02, J03, M01	Renewable abiotic energy use, marine and freshwater aquaculture, fishing and harvesting aquatic resources, outdoor sports and leisure activities, recreational activities, marine water pollution, human induced changes in hydraulic conditions, other ecosystem modifications, changes in abiotic conditions
A169	Ruddy Turnstone	Arenaria interpres	C03, F01, G01, H03, J03, M01	Renewable abiotic energy use, marine and freshwater aquaculture, outdoor sports and leisure activities, recreational activities, marine water pollution, other ecosystem modifications, changes in abiotic conditions
A177	Little Gull	Larus minutus	Xxp/Xxt	No threats and pressures identified by the npws
A179	Black-Headed	Larus ridibundus	A04, C03, F02, H03,	Grazing, renewable abiotic energy use, fishing and harvesting aquatic resources, marine water pollution, other

Species code	Common name	Scientific name	Threats and pressures codes	Known threats and pressures
	Gull		J03, M01	ecosystem modifications, changes in abiotic conditions
A182	Common Gull	Larus canus	A04, C03, F02, H03, J03, M01	Grazing, renewable abiotic energy use, fishing and harvesting aquatic resources, marine water pollution, other ecosystem modifications, changes in abiotic conditions
A183	Lesser Black- Backed Gull	Larus fuscus	C03, F02, H03, J03	Renewable abiotic energy use, fishing and harvesting aquatic resources, marine water pollution, other ecosystem modifications
A184	European Herring Gull	Larus argentatus	C03, F02, H03, J03	Renewable abiotic energy use, fishing and harvesting aquatic resources, marine water pollution, other ecosystem modifications
A187	Great Black- Backed Gull	Larus marinus	Xxp/Xxt	No threats and pressures identified by the npws
A188	Black-Legged Kittiwake	Rissa tridactyla	C03, F02, H03	Renewable abiotic energy use, fishing and harvesting aquatic resources, marine water pollution
A192	Roseate Tern	Sterna dougallii dougallii	C03, D01, G01, I01	Renewable abiotic energy use, roads, paths and railroads, outdoor sports and leisure activities, recreational activities, invasive non-native species
A193	Common Tern	Sterna hirundo	C03, D01, D03, G01,	Renewable abiotic energy use, roads, paths and railroads, shipping lanes, ports, marine constructions, outdoor sports and leisure activities, recreational activities, invasive non-native species
A194	Arctic Tern	Sterna paradisaea	C03, D01, G01, I01, M01	Renewable abiotic energy use, roads, paths and railroads, outdoor sports and leisure activities, recreational activities, invasive non-native species, changes in abiotic conditions
A200	Razorbill	Alca torda	C03, H03	Renewable abiotic energy use, marine water pollution
A204	Atlantic Puffin	Fratercula arctica	C03, H03, I01	Renewable abiotic energy use, marine water pollution, invasive non-native species
A674	Light-Bellied Brent Goose	Branta bernicla hrota	A02, A11, C03, D02, F01, G01, G05, H03, H07, I01, J03	Modification of cultivation practices, agriculture activities not referred to above, renewable abiotic energy use, utility and service lines, marine and freshwater aquaculture, outdoor sports and leisure activities, recreational activities, other human intrusions and disturbances, marine water pollution, other forms of pollution, invasive nonnative species, other ecosystem modifications

Appendix IV Conservation Objectives⁴⁷

NPWS (2013) Conservation Objectives for Rogerstown Estuary SAC [IE0000208] Version 1.

NPWS (2012) Conservation Objectives for Boyne Coast and Estuary SAC [IE0001957] Version 1.

NPWS (2021) Conservation Objectives for River Boyne and River Blackwater SAC [IE0002299] Version 1.

NPWS (2013) Conservation Objectives for Rockabill to Dalkey Island SAC [IE0003000] Version 1.

NPWS (2013) Conservation Objectives for Rockabill SPA [IE0004014] Version 1.

NPWS (2013) Conservation Objectives for Rogerstown Estuary SPA [IE0004015] Version 1.

NPWS (2013) Conservation Objectives for Boyne Estuary SPA [IE0004080] Version 1.

NPWS (2022) First Order Site-specific Conservation Objectives for Skerries Islands SPA [IE0004122] Version 1.

NPWS (2012) Conservation Objectives for River Nanny Estuary and Shore SPA [IE0004158] Version 1.

NPWS (2023) Conservation Objectives for North-west Irish Sea SPA [IE0004236] Version 1.

⁴⁷ NPWS/Department of Culture, Heritage and the Gaeltacht

Appendix V Contributor Details

Author - Callum O'Regan is an ecologist who holds a B.Sc. degree in Zoology from University College Cork and obtained a Master's degree in Conservation Behaviour from Galway-Mayo Institute of Technology in 2021. Callum has skills in data management and analysis, report writing and mapping. Callum has also worked on the fieldwork for and preparation of a number of reports including Ecological Impact Assessments (EcIAs) and Appropriate Assessment Screenings for private and public projects of various sizes and complexities.

Supervisor - Karen Dylan Shevlin is an ecologist with over 9 years' experience working in multiple capacities in ecology in Irish and international research institutions and organisations, and holds a MSc degree in Biodiversity and Conservation from Trinity College Dublin (2013). Karen has significant skills in leading ecological surveys of bats, birds, insects, habitats and mammals and data analysis, mapping and compiling reports. Karen has worked on producing AA screenings, NISs, and EIARs for a range of public and private projects ranging from smaller facilities upgrades projects to major wind turbine sites. Karen is also a specialist in ecological theory and the impacts/effects that altering natural dynamics may have on the surrounding environment. This combination of skills and knowledge provides the backbone of the assessment process, and ensure that all of the baseline and detailed data gathered in the field is interpreted in a manner that is grounded in best scientific knowledge.

Reviewer - Paul Fingleton has an MSc in Rural and Regional Resources Planning (with specialisation in EIA) from the University of Aberdeen. Paul is a member of the International Association for Impact Assessment as well as the Institute of Environmental Management and Assessment. He has over twenty-five years' experience working in the area of Environmental Assessment. Over this period, he has been involved in a diverse range of projects including contributions to, and co-ordination of, numerous complex EIARs and EIA screening reports. He has also contributed to and supervised the preparation of numerous AAs and AA screenings.

Paul is the lead author of the current EPA Guidelines and accompanying Advice Notes on EIARs. He has been involved in all previous editions of these statutory guidelines. He also provides a range of other EIA related consultancy services to the EPA. Paul is regularly engaged by various planning authorities and other consent authorities to provide specialised EIA advice.