Appropriate Assessment Screening Report

---

for the proposed

Kilshane Power Generation Station Project – Phase Two

at

Kilshane, Co. Dublin

in accordance with the requirements of Article 6(3) of the EU Habitats Directive

Kilshane Energy Ltd.

OCTOBER 2024

Table of Contents

1. Introduction

1.1. Background

EIS has been appointed by Kilshane Energy to examine planning and ecological considerations the proposed Power Generation Station at Kilshane, County Dublin (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 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:

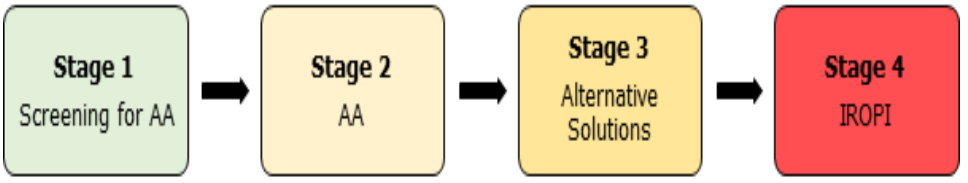
> *'A coherent European ecological network of special areas of conservation shall be set up under the title Natura 2000. This network, composed of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, shall enable the natural habitat types and the species' 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 adversely 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 15km[1] of the subject land s;
- Identification of European sites pathways for effects from the site (if relevant[2]) greater than 15km from the subject land s;
- Review of the NPWS site synopses and conservation objectives for European sites within 15km and for which potential pathways from the proposed site have been identified; and
- Examination of available information on protected species.

Source-Pathway Receptor Model

[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

Ecological impact assessment of potential effects on European sites is conducted following a stand ard 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 receptor[3].

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;*
- *Commission Notice: Managing Natura 2000 sites - The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC", European Commission 2018;*
- *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, 2002;*
- *Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC", European Commission, 2000; and*
- *Practice Note PN01: Appropriate Assessment Screening for Development Management, Office of the Planning Regulator, 2021.*

[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 site is located in an area that is composed of a majority of intensively managed crop systems, framed by hedgerows and treelines, in north-west Dublin County. The site is located directly adjacent to a permitted Gas Turbine Power Generation Station with an output of up to 293 MW (FW22A/0204 and ABP-317480-23) and a substation and grid connection (ABP-314894-22). The proposed site is partly bordered by the N2 dual carriageway on the eastern boundary, by the Huntstown Quarry on the southern boundary, and various industrial estates to the west. In a wider landscape context, the site is located just west of Dublin airport, at approximately 1.6km from the proposed site, it is surrounded by other areas of intensively managed agricultural grassland to the north and areas of commercial and industrial developments to the west and east (Figure 2.1).

The proposed site contains intensively managed crop systems. There are areas of hedgerows, treelines and scrub which can provide refuge to local flora and fauna in the intensively managed agricultural landscape and sub-urban expanse of the immediate and surrounding areas.

An EIAR has been conducted for the proposed development and accompanies this application. Details of the results from field surveys (a multidisciplinary ecological survey was conducted on 3rd of February, and a follow up ecological walkover with evening-night bat emergence survey was conducted on the 5th of May 2022) of the receiving environment conducted for the proposed development are described below.

2.1.1. Habitats & flora

No Annex I habitats were found on site. The habitats present on the proposed site are of relatively low local importance in terms of support for local biodiversity and resource availability. But the habitats at the proposed site such as hedgerows can provide ecological connectivity for species in the surrounding area. There are multiple commercial and industrial developments in the surrounding area - which are of low to negligible ecological significance.

The habitats found on site, and their relative ratios, are typical of areas in which the proposed site is located; with the vast majority of habitats in the area consisting of arable crop systems (BC1), and agricultural grassland which has overgrown ((GA1). The remaining habitats in the area consist of hedgerows (WL1), treelines (WL2), spoiled and bare ground (ED2) and pockets of buildings and artificial surfaces (BL3). See Chapter 6 of the accompanying EIAR for full details of the Ecological Assessment of the proposed development and site.

As mentioned above, the habitats in the proposed site are mainly composed of agricultural crop systems. Most of this is maintained and used for crop sowing and harvesting, and left as bare over turned soil in the winter months and is not suitable foraging habitat for SCI wintering species. The other agricultural grasslands in the area have been left overgrown and are dominated by perennial ryegrass monoculture swards. The mature treeline composed of cypress to the northwest of the proposed site, along with an area of scrub dominated by brambles, may offer a small amount of ecological value. The majority of hedgerows which border the agricultural grasslands are thin and patchy and more are immature individuals, therefore these fragments do not offer and significant value for the surrounding area in terms of ecological connectivity. They can however offer value for

breeding birds in terms of foraging and roosting habitat, and nesting habitat in places. Similarly, the crop systems in the proposed site can offer value in terms of foraging habitat for breeding birds. The majority of hedgerows and treelines are being retained as part of the landscape plan for the proposed development. The habitats towards the south of the proposed site are currently impacted by disturbance from the quarry to the south of the proposed site in terms of significant levels of dust and noise disturbance – with noticeable layers of residue occurring on the foliage of treelines and hedgerows along the quarry, bordering the southern end of the proposed site.

2.1.2. Invasive species

There are 6 of the invasive species that are subject to restrictions recorded for the National Biodiversity Data Centre's 10x10 km hectad, within which the site is located. However, no invasive species were recorded during the multidisciplinary ecological survey in February or additional site visit in May 5th 2022.

2.1.3. Fauna

Non-volant Mammals

No evidence of badger setts was found on site. There were also not any feeding or other signs of badger found along corridors and potential avenues for commuting within the site (i.e., hedgerows, treelines, and ditches). This indicates low use of the site by badger, especially given the optimum season for signs during which the survey was conducted. This finding is in keeping with the low ecological value of the site given the lack of suitable habitat and significant anthropogenic disturbance in the surrounding area from various forms of industry and development. It is likely that badger do not use the site as there are more favourable habitats in the surrounding area with more defined and mature treelines in less disturbed areas. No evidence of any other non-volant mammals was found on the site.

Bats

Bat activity transects were conducted after along hedgerows of the site on May 5th 2022. The site was found to have very low levels of bat activity in terms of feeding and commuting. This is in keeping with the low ecological value of the site and the fragmented and thin nature of the hedgerows and treelines within the site, combined with high levels of disturbance and night time lighting from the N2 dual carriageway on the eastern boundary and the Huntstown Quarry on the southern boundary of the proposed site – and wider context of multiple industrial estates surrounding the southern landscape of the proposed site.

All trees within the site boundary were inspected for potential bat roost features and only two features with potential to have bat roosting habitat were identified on site. Buildings on the site which will be subject to demolition as a result of the proposed development were also inspected for potential bat roost features and signs of previous or current use by bats as a roosting site, and found to have no bat roost potential or evidence of use.

A bat emergence survey was carried out at the potential roost features identified in May 5th 2022, and no bat activity was recorded at either potential bat roost feature that would indicate use as a roost. As there very low levels of activity in general recorded at the site during bat activity surveys, and the lack of evidence of previous use of these features as a roost, it is highly unlikely that these potential roosts could be utilised at other parts of the year as roosts by local populations. However, the results of the roost emergence surveys could be seasonal, as bat populations can utilise bat roosts over different seasons. Therefore, as a precautionary measure, mitigation is proposed for these potential bat roost features in Chapter 6 of the EIAR accompanying this application.

Birds

A bird point count focused on passerines was conducted on site, for a duration of 15 minutes – in addition to any treeline walks and opportunistic records of species during surveying. The bird species seen and heard were recorded and the results are provided in Table 2.1 below. 10 Species in total were recorded. 8 Of these species are on the green list, 2 on the amber list and none on the red list of the Birds of Conservation Concern in Ireland[4].

The scrub and hedgerow habitats to the north east of the site provides high local value for several breeding bird species recorded during surveys. In addition to these areas in the north of the site, there are agricultural crop systems and remnant/overgrown agricultural grassland with scrub which may hold some ecological value also as foraging habitat local birds.

Table 2.1 Bird Survey Results

Scientific name	Common name	Red List status[4]
Pica pica	Magpie	Green
Turdus merula	Blackbird	Green
Erithacus rubecula	Robin	Green
Columba palumbus	Woodpigeon	Green
Corvus monedula	Jackdaw	Green
Corvus frugilegus	Rook	Green
Passer domesticus	House Sparrow	Amber
Fringilla coelebs	Chaffinch	Green
Parus major	Great Tit	Green
Larus canus	Common Gull	Amber

Appraisal of site suitability for wintering birds

A wintering bird survey set was deemed unnecessary for this site after the multidisciplinary ecological site, visit for multiple reasons, as outlined below:

1. Lack of habitat suitability for SCI species due to a combination of significant continual disturbance from multiple intensive anthropogenic sources close to the proposed site – i.e., the active Huntstown Quarry directly south of the proposed site, the N2 duel carriageway directly to the east of the proposed site, and the low flying aircraft above the proposed site which are continually (approximately every 10-15 minutes) passing at low altitudes after taking off from Dublin airport which lies nearby, approximately 1.6km to the east.
2. The site is composed mainly of agricultural land that is intensively managed for the production of crop system monocultures, which are left as rotated open soil over the winter period – which is not suitable grazing habitat for SCI species in the growth, harvest or winter period. There are an additional two patches of remanet agricultural grassland within the proposed site, however these are minor in relative size to the site overall, and are overgrown dense grass/scrub mosaics, which are also unsuitable for ex-situ foraging SCI species. The only other habitat types within the proposed site are dry, disused agricultural ditches, and hedgerows / treelines – the majority of which are preserved in the proposed development's landscape plan and Green Infrastructure Plan.
3. Finally, in addition to the combination of significant noise and visual disturbance, and the lack of appropriate foraging habitat; there is also an abundance of suitable foraging habitat

[4] Gilbert, G., et al. 2021. Birds of Conservation Concern in Ireland 4: 2020–2026. Irish Birds, 43, pp.1-22.

for ex-situ SCI species in the surrounding grassland dominated agricultural landscape to the north west and north east of the proposed site.

Therefore, as a result of ground truthing from a multidisciplinary ecological survey carried out on site in February 3rd, and an additional site visit carried out on May 5th 2022, the proposed site was deemed unsuitable for supporting ex-situ foraging habitat for wintering bird populations or Special Conservation Interest species to any degree that would require wintering bird surveys to be carried out for – or to have the potential to provide foraging habitat that would support SCI species populations to any degree that would be significant in terms of contributing to the conservation objectives for Special Conservation Interest species for the SPAs in Dublin Bay and the surrounding estuaries.

In summary, the site is of negligible value as an ex-situ foraging resource for wintering bird populations or SCI species due to: 1. multiple neighbouring significant anthropogenic disturbances, 2. combined with the lack of suitable foraging habitat for these groups present on site, and 3. the abundant availability of suitable ex-situ foraging habitat for SCI species in the wider landscape to the north of the site and east of Dublin airport. This assessment is also reflected in and detailed in the AA screening accompanying this application.

Amphibians

No amphibians were observed on site. No suitable habitat of any permanent significance for amphibians was recorded within the proposed site during the multidisciplinary survey of February 3rd, or noted during the additional site visit on May 5th 2022. This is deemed significant survey effort as this survey was conducted during the winter period of high rainfall and flooding and thus I the optimum period for identify semi-permanent freshwater habitat on site, and during the spring / breeding period for amphibinas. Therefore a dedicated amphibian survey was deemed unnecessary.

Invertebrates

There were no habitats or food plants of potential significance to support invertebrate species assemblages of any local ecological significance, or to support any protected species. Therefore, a dedicated invertebrate survey was deemed unnecessary.

2.2. The proposed development

The proposed development comprises a 600MW peaking plant power generation station. It will comprise 2 no. open cycle gas turbines (OCGT), each with an output of up to 300MW, along with backup fuel storage, ancillary structures, and services (Figure 2.2).

The aspects of the proposed development relevant to this assessment are discussed here. Further project description details are contained in the accompanying EIAR, Chapter 4 "*Project Description*" and the associated planning documentation.

Regarding changes to the receiving environment habitats as a result of the proposed development: the construction phase will result in the change from the current habitat of mostly crop land, with patches of overgrown agricultural monoculture grassland and scrub to bare soil and earth for the construction phase.

The operational phase of the proposed development will result in a change from the current site use

as intensively managed monoculture crop systems, to a combination of hard surface/industrial complex, and understory woodland canopy landscaping of native species – which will be interspersed with native pollinator friendly planting of wildflowers, and areas of amenity grassland (Figure 2.3). There will also be an access route, resulting in the removal of small segments of hedgerow to facilitate the access point. Most of the hedgerow currently on site will be retained throughout the construction and operational phases.

A minor agricultural drainage ditch, which is now dry, that runs along the eastern boundary of the site and leads to the Huntstown Stream, connects to the Ward River downstream which leads eventually leads to the Malahide Estuary SAC and SPA (9.48 km from the proposed development boundary at the closest point – Figure 3.1). Even though this drain is mostly dry through the year (indicated by the vegetation which has colonised the drain banks and base), it must be considered as a potential hydrological link nonetheless in light of the receiving environment change from draining soil surface area to hard surface area as a result of the proposed development, and the effects this change will have also in times of high rainfall. There is no direct, active, surface hydrological connection between the proposed site and European sites.

The proposed development also introduces potential changes to the emissions to the air through the operational phase due to the nature of the proposed development - in additional to construction phase elements resulting in emissions from dust and noise, however these construction phase elements are short-term in duration. Changes in emissions to the receiving environment as a result of the proposed development's operation phase relative in European sites are addressed in s. 3.4.1 below.

The main change to the receiving environment will be the change in use of the crop system and patches of agricultural monoculture patches and scrub; to the proposed industrial development with an accompanying landscaping plan (Figure 2.3), which contains much higher diversity of planting of native species and habitat mosaics, relative to the current intensively managed majority of crop systems and patches of overgrown agricultural monoculture grassland within the receiving environment on site.

The design lifespan of the plant is approximately 25 years. At the end of its lifetime, given the industrial zoning of the area, the site is likely to be repurposed. All above ground equipment is likely to be decommissioned and removed from site. All decommissioning will be subject to EPA licence compliance. A Decommissioning Plan including a Decommissioning Environmental Management Plan will have to be agreed with the EPA prior to surrender of the sites IED licence. Demolition of the plant will also be subject to planning consent requirements including EIA and AA as applicable.

Because the demolition and decommissioning details will be developed and assessed prior to the end of the life of the facility, in compliance with all of the above requirements, including AA requirements, they are outside the scope of the subject consent and AA processes.

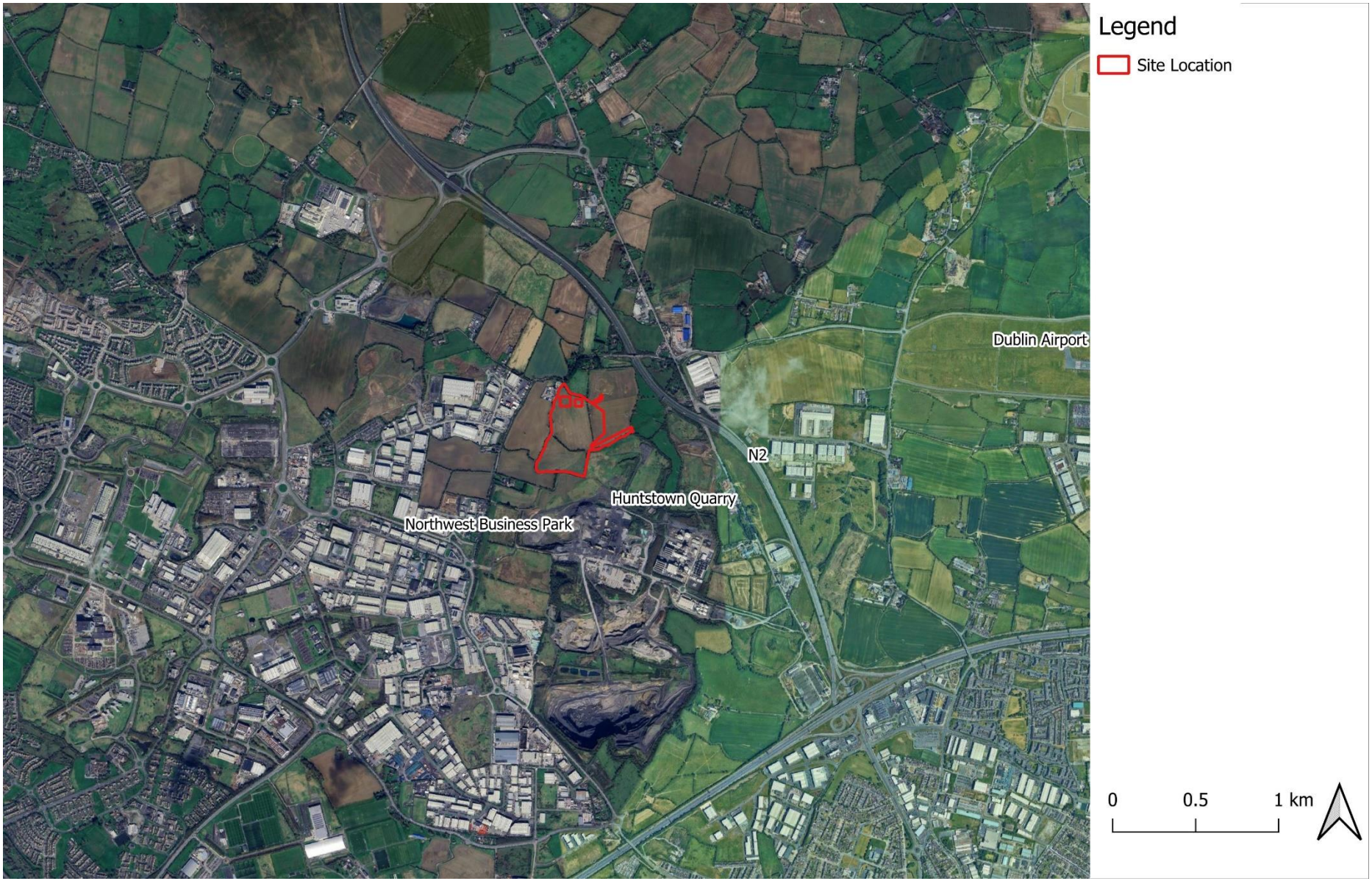


Figure 2.1 Proposed development location

Figure 2.2 Overall proposed development site plan[5]

(See drawing set for full resolution version)

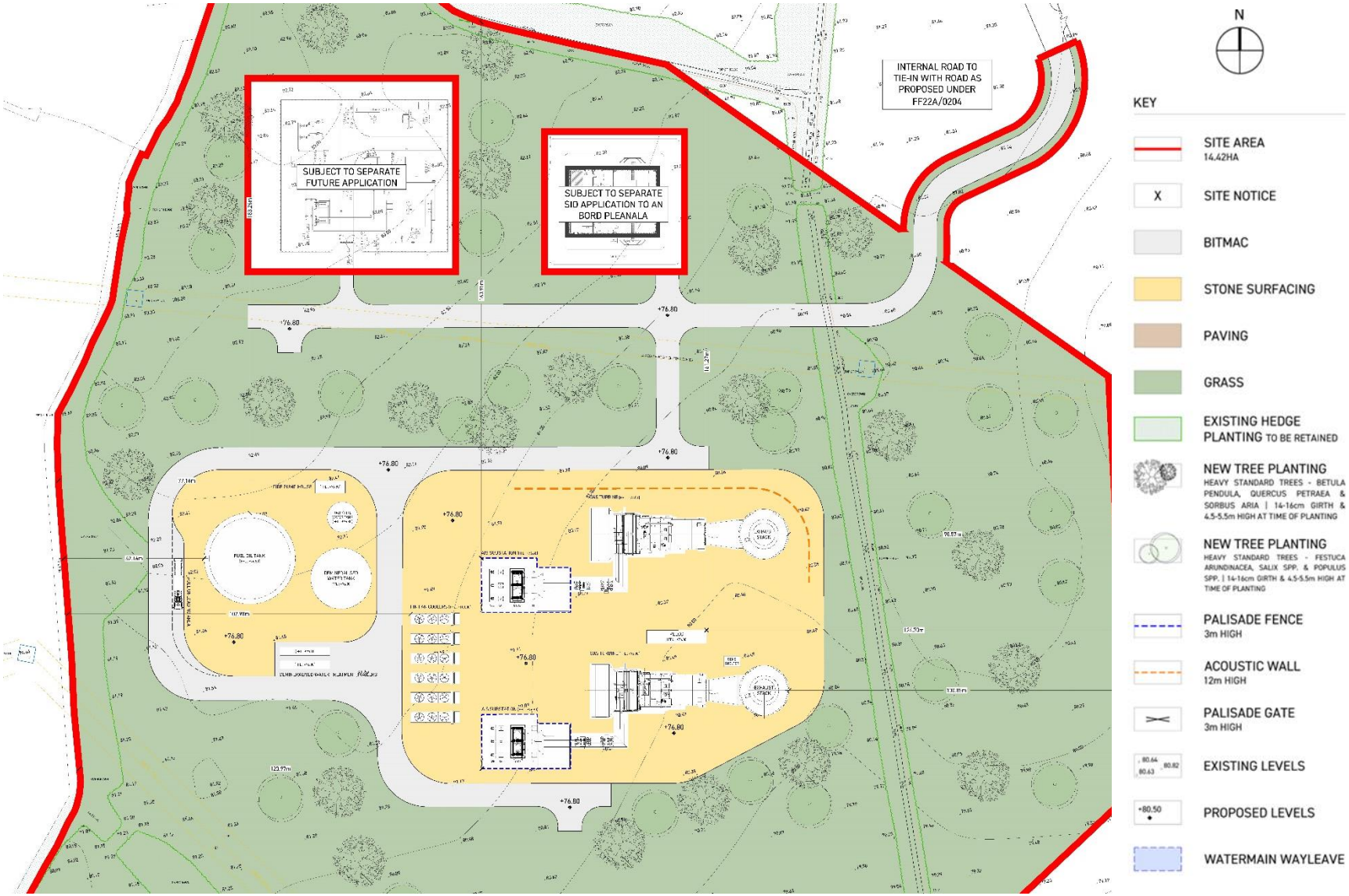


Figure 2.3 Proposed site plan [6]

(See drawing set for full resolution version)

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 land scape 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 Table 3.1 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 to site integrity 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 Synopses[7]; and
- NATURA 2000 Standard Data Forms[7].

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.

[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 16th February 2022

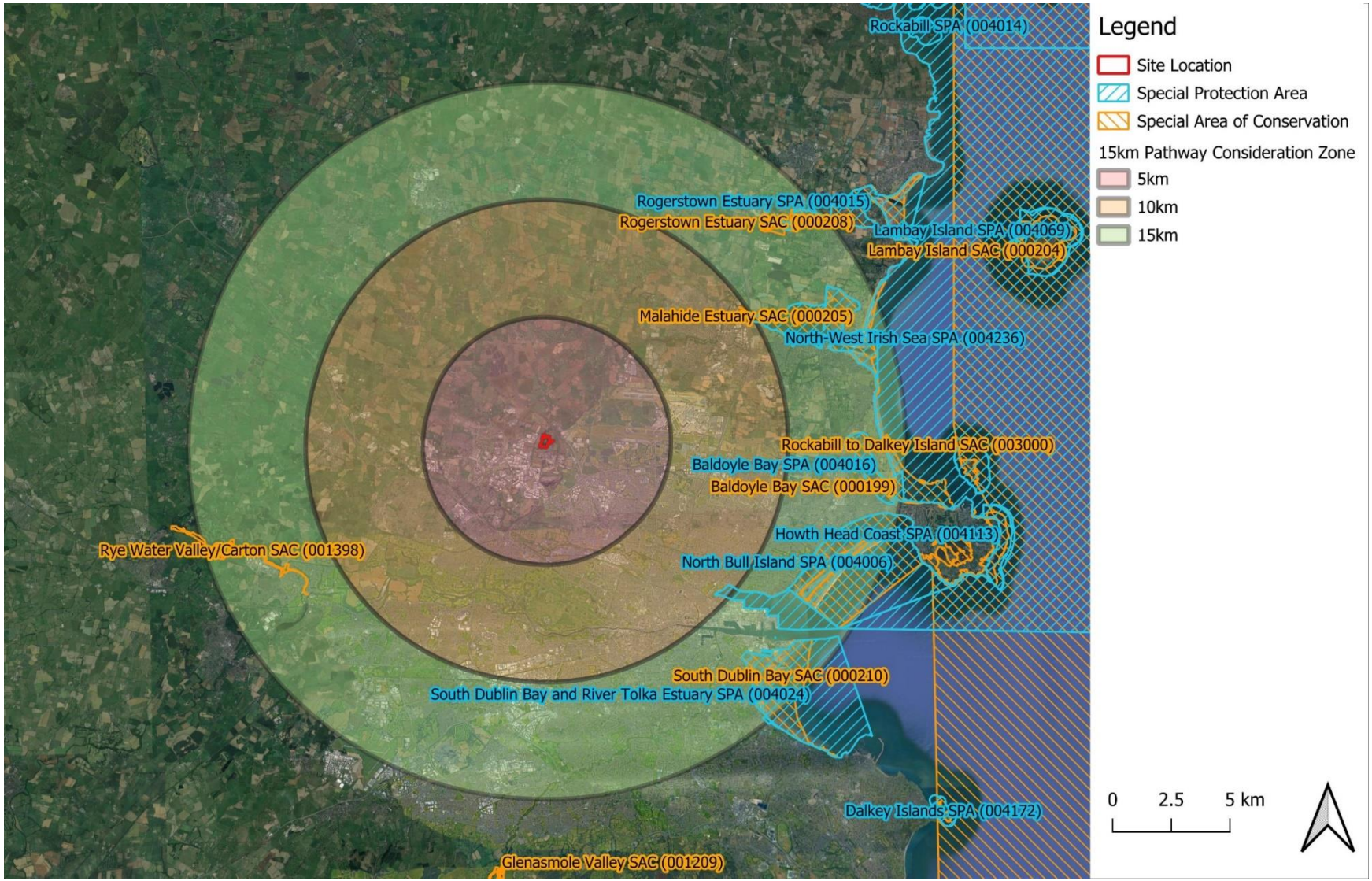


Figure 3.1 European sites within 15km of the proposed development boundary[8]

[8] Source: NPWS (datasets accessed February 2022)

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 600 Megawatts power station and all associated site works, on lands at Kilshane, Co. Dublin. 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 have both construction or operational phase effects in the local scale context.

The construction phase will be large scale and short term (with a build duration of 1-3 years). The operational phase of the proposed development will have both increased noise and light pollution along with carbon emissions and air pollution from the proposed development.

The construction and operational phase elements of the project introduce potential sources for effects to ecological processes such as:

- Disturbance effects through noise;
- Removal of hedgerows;
- Earthworks (removal of vegetation etc.); and,
- Dust
- Hydrology
- Air
- Climate

The construction and operation phase potential effects identified are considered in the context of European sites identified above, 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. Firstly, the sensitivity and reported threats to European sites. Secondly, 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 3.1.

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 guidance[9] 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

[9] 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

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 integrity and function 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 3.1, but are also discussed in further detail below.

Loss/reduction of habitat area

There are no European sites within the proposed development boundary, and the closest European site is 9.48 km in distance. Similarly, there were no Annex I habitats or supporting habitat for Annex II species identified on site. Therefore, there will be no effects posed to European sites in this respect.

Habitat or species fragmentation

There were no Annex I habitats, or supporting habitat for Annex II species, identified on site. The site is mainly comprised of arable crop systems, along with areas of overgrown agricultural grassland, hedgerows, treelines and scrub and is currently intensively utilised and managed as an agricultural area. The proposed development will result in the removal of arable crop land and some small segments of hedgerows/treelines to accommodate the proposed development. The placement of lighting features within the proposed development have potential to fragment the habitat connectivity of the site during both the construction and operational phase. However, a lighting plan has been designed for consideration of local bat populations and the retention of commuting/foraging corridors.

There is a drainage ditch running along the eastern boundary of the site, that has been dry for a long time (due to colonisation of ivy and lady terns along the bank and drain base). This drain connects to the Huntstown Stream to the south of the site, which eventually joins the Ward River and then reaches the Malahide Estuary (9.48 km from the proposed development). During times of heavy rainfall, it is possible for surface water to drain into this ditch and outflow into the Huntstown Stream. However, given the nature of the proposed development, the status of the drainage ditch, the infrequency of wetting of the drainage ditch, and distance of European sites in terms of a dilution factor of 9.48km; the proposed development is not identified to introduce habitat or species fragmentation issues with respect to European sites in terms of hydrological connections. The proposed development will also be connected to the existing drainage and waste water network, both of which have capacity for the increases due to hard surface area increase and staff on site. In addition, best practice SUDS measures will be in place as standard for the construction and operational phases of the proposed development.

Considering the proposed development characters, the proposed site at a local and landscape scale with respect to connectivity and ecological corridors between European sites; there are no functional pathways to European sites that will be interrupted by the proposed development resulting in the fragmentation of species or habitats.

Therefore, as there are no factors resulting from the construction or operational phases of the proposed development that could result in habitat or species fragmentation (such as potential significant effects to European sites through hydrological interactions, or emissions to the air resulting in potential significant changes to air quality at European sites); there will be no effects posed to European sites with regard to habitat or species fragmentation overall as a result of the proposed development.

Disturbance to key species

None of the species and /or habitats identified in Table 3.1 with regard to the Habitats Directive were recorded on site. The nearest European site is 9.48 km away from the proposed site and therefore disturbance effects due to noise or lighting etc. are not predicted to occur for European sites or their Qualifying Interests or Special Conservation Interests as a result of the proposed development. The habitats present within the site, are comprised of intensively managed arable crop systems, overgrown monoculture grassland, and scrub patches and thus are not identified to support ex-situ foraging for the SCI species of the SPAs identified (see section 2.1.3 for further details); therefore, no effects are identified in this regard. Given the operational phase will be in keeping of that of the current value of the site for SPA or SAC species or habitats (i.e., negligible value), there are no significant effects related to ex-situ foraging identified.

Reduction in species density

Hydrological interactions can result in reduction in species densities if they are pathways for sources for potential significant effects. Regarding hydrological connections with the proposed site, is a drainage ditch running down the eastern boundary of the site, that is dry for most of the year. This drain connects to the Huntstown Stream to the south of the site, which eventually joins the Ward River and then reaches the Malahide Estuary (9.48 km from the proposed site). During times of heavy rainfall, it is possible for surface water to drain into this ditch and outflow into the Huntstown Stream. However, given the nature of the proposed development, the status of the drainage ditch, the infrequency of wetting of the drainage ditch, and distance of European sites in terms of a dilution factor of 9.48km; the proposed development is not identified to introduce and potential for reduction in species density with respect to European sites in terms of hydrological connections. Significant changes in air quality from emissions to the air can also result in the reduction of species' densities for European sites.

Therefore, as there is no supporting habitat and /or connectivity between the proposed development and any European site, and there are no factors resulting from the operational phase of the proposed development that will result in the reduction of species density (such as emissions to the air resulting in potential significant changes to air quality at European sites); there will be no reduction in species density of any of the QI or SCI species overall as a result of the proposed development.

Changes of indicators of conservation value

The site is 9.48 km from the closest European site, the proposed development is large in scale, localised and the construction phase is short term in duration (1-3 years). Regarding hydrological connectivity with European sites. a drainage ditch runs along the eastern boundary of the site, that is dry for most of the year. This drain connects to the Huntstown Stream to the south of the site, which

eventually joins the Ward River and then reaches the Malahide Estuary (9.48 km from the proposed development). During times of heavy rainfall, it is possible for surface water to drain into this ditch and outflow into the Huntstown Stream. However, given the nature of the proposed development, the status of the drainage ditch, the infrequency of wetting of the drainage ditch, and distance of European sites in terms of a dilution factor of 9.48km; the proposed development is not identified to introduce and potential for reduction in species density with respect to European sites in terms of this indirect hydrological connection. The proposed development will also be connected to the existing drainage and waste water network, both of which have capacity for the increases due to hard surface area increase and staff on site. In addition, best practice SUDS measures will be in place as standard for the construction and operational phases of the proposed development.

There is one European site within 15km of the proposed development which has Qualifying Interests which are sensitive to groundwater interactions, the Rye Water Valley/Carton SAC. However, there is no likelihood for a pathway for potential significant effects as a result of the proposed development connection as this European site is in a different WFD catchment[10] to that of the proposed development – in addition there is over 11.5 km separating the proposed development and this European site. Chapter 8 of the accompanying EIAR, "Water & *Hydrology"*, provides further detail on the hydrological assessment of the proposed development.

Therefore, there are no sources for effects with pathways that will affect any conservation indicators related to European sites as a result of the proposed development.

Climate change

The construction phase of the proposed development will have increased temporary emissions which will be localised. However, given the short term, temporary nature of the construction phase, these are determined to be negligible. The operational phase of the proposed development will have an increase in emissions to the air. In terms of the potential effect of this increase to European sites; a modelling assessment of the emissions predicted from the proposed development in its planned operation capacity, in the context of current Irish and EU emissions targets has been undertaken was carried out by a qualified expert. Full details of this assessment can be found in Chapter 9 "Air Quality & Climate" of the EIAR accompanying this application but the model and results are summarised here:

.

It is thus considered here that this is sufficient to ensure that the operational phase of the proposed development will not result to emissions to the degree that would significantly affect the QIs or SCIs of any of the European sites considered in terms of climate change.

[10] EPA database – consulted December 2022 – accessed at: https://gis.epa.ie/EPAMaps/)

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

Site code	Site name	Distance (km)	Qualifying feature	Analysis for potential effects	Likelihood of significant effects	Likelihood of significant in-combination effects
004024	South Dublin Bay and River Tolka Estuary SPA	9.47	Common tern (Sterna hirundo) [A193], Roseate Tern (Sterna dougallii) [A192], Light-bellied Brent Goose (Branta bernicla hrota) [A046], Black-headed Gull (Chroicocephalus ridibundus) [A179], Wetland and Waterbirds [A999], Ringed Plover (Charadrius hiaticula) [A137], Grey Plover (Pluvialis squatarola) [A141], Redshank (Tringa totanus) [A162], Bar-tailed Godwit (Limosa lapponica) [A157], Knot (Calidris canutus) [A143], Sanderling (Calidris alba) [A144], Dunlin (Calidris alpina) [A149], Arctic tern (Sterna paradisaea) [A194], Oystercatcher (Haematopus ostralegus) [A130]	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SPA is sensitive to hydrological interactions and direct land use management and forms of pollution. This SPA exists 9.47 km outside of the area of works for the proposed development, therefore there are no sources for effect to direct land use management of the SPA. In addition, there is no direct hydrological connection between the proposed site and this European site. SCI species are sensitive to disturbance effects; in general distances beyond 2 km are seen to be sufficient to preclude such effects11,12. These distances can vary due to factors such as species and /or time of year13,14. Given the distance between the Draft Strategy area and the SPA there are no pathways for disturbance effects identified. These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed Strategy; however, at this scale land scape characteristics and the availability of alternate resources ensure the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA. Considering the SCIs of this SPA, and given the nature of the proposed development and the distances involved; there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources with pathways for significant effects foreseen and no further assessment is required.	No	No
000205	Malahide Estuary SAC	9.69	Fixed coastal dunes with herbaceous vegetation - grey dunes [2130], Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SAC is sensitive to hydrological interactions and direct land use management and forms of pollution. This SAC exists 9.69 km outside of the area of works for the	No	No

[11] 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.

[12] 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.

[13] 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.

[14] 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.845-862.

			[1330], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Salicornia and other annuals colonising mud and sand [1310], Mudflats and sandflats not covered by seawater at low tide [1140], Mediterranean salt meadows (Juncetalia maritimi) [1410]	proposed development, therefore there are no sources for effect to direct land use management of the SAC. There is an indirect hydrological pathway between the proposed site and this European site, however it is in the form of a drainage ditch that is dry most of the year, and may only be wetted during heavy rainfall events resulting from surface water runoff. In considering that nature of the proposed development, the infrequent wetting of the drainage ditch, and the distance involved between the proposed site and this European site, with a considerable dilution distance of 9.48 km, it is foreseen here that there are no sources for significant effect to this European site in terms of hydrological sensitivities. Considering the QIs of this SAC, and given the nature of the proposed development and the distances involved; there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources for significant effects foreseen and no further assessment is required.		
004025	Malahide Estuary SPA	9.77	Wetland and Waterbirds [A999], Black-tailed Godwit (Limosa limosa) [A156], Dunlin (Calidris alpina) [A149], Knot (Calidris canutus) [A143], Redshank (Tringa totanus) [A162], Goldeneye (Bucephala clangula) [A067], Shelduck (Tadorna tadorna) [A048], Pintail (Anas acuta) [A054], Oystercatcher (Haematopus ostralegus) [A130], Bar-tailed Godwit (Limosa lapponica) [A157], Great Crested Grebe (Podiceps cristatus) [A005], Red-breasted Merganser (Mergus serrator) [A069], Light-bellied Brent Goose (Branta bernicla hrota) [A046], Golden	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SPA is sensitive to hydrological interactions and direct land use management and forms of pollution. This SPA exists 9.77 km outside of the area of works for the proposed development, therefore there are no sources for effect to direct land use management of the SPA. There is an indirect hydrological pathway between the proposed site and this European site, however it is in the form of a drainage ditch that is dry most of the year, and may only be wetted during heavy rainfall events resulting from surface water runoff. In considering that nature of the proposed development, the infrequent wetting of the drainage ditch, and the distance involved between the proposed site and this European site, with a considerable dilution distance of 9.48 km, it is foreseen here that there are no sources for significant effect to this European site in terms of hydrological sensitivities. SCI species are sensitive to disturbance effects; in general distances beyond 2 km are seen to be sufficient to preclude such effects15,16. These distances can vary due to factors such as species and /or time of year17,18. Given the distance between the Draft Strategy area and the SPA there are no pathways for disturbance effects	No	No

[15] 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.

[16] 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.

[17] 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.

[18] 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.845-862.

			Plover (Pluvialis apricaria) [A140], Grey Plover (Pluvialis squatarola) [A141]	identified. These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed Strategy; however, at this scale land scape characteristics and the availability of alternate resources ensure the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA. Considering the SCIs of this SPA, and given the nature of the proposed development and the distances involved; there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources with pathways for significant effects foreseen and no further assessment is required.		
001398	Rye Water Valley/Carton SAC	11.44	Desmoulin`s whorl snail (Vertigo moulinsiana) [1016], Petrifying springs with tufa formation (Cratoneurion) [7220], Narrow-mouthed whorl snail (Vertigo angustior) [1014]	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SAC is sensitive to hydrological interactions and direct land use management and groundwater interactions. This SAC exists 11.44 km outside of the area of works for the proposed development, therefore there are no sources for effect to direct land use management of the SAC. Regarding groundwater interactions, there is no likelihood for a pathway for potential significant effects as a result of the proposed development connection as this European site is in a different WFD catchment19 to that of the proposed development – in addition there is over 11.44 km separating the proposed development and this European site. There is also no direct hydrological connection between the proposed site and this European site. Considering the QIs of this SAC, and given the nature of the proposed development; there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources for significant effects foreseen and no further assessment is required.	No	No
000206	North Dublin Bay SAC	11.80	Embryonic shifting dunes [2110], Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330], Humid dune slacks [2190], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130], Mediterranean salt meadows (Juncetalia maritimi) [1410],	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SAC is sensitive to hydrological interactions and direct land use management and forms of pollution. This SAC exists 11.80 km outside of the area of works for the proposed development, therefore there are no sources for effect to direct land use management of the SAC. In addition, there is no direct hydrological connection between the proposed site and this European site. Considering the QIs of this SAC, and given the nature of the proposed development;	No	No

[19] EPA database – consulted December 2022 – accessed at: https://gis.epa.ie/EPAMaps/)

			Annual vegetation of drift lines [1210], Mudflats and sandflats not covered by seawater at low tide [1140], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Salicornia and other annuals colonising mud and sand [1310], Petalwort (Petalophyllum ralfsii) [1395]	there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources for significant effects foreseen and no further assessment is required.		
004006	North Bull Island SPA	11.80	Redshank (Tringa totanus) [A162], Dunlin (Calidris alpina) [A149], Golden Plover (Pluvialis apricaria) [A140], Shelduck (Tadorna tadorna) [A048], Wetland and Waterbirds [A999], Teal (Anas crecca) [A052], Sanderling (Calidris alba) [A144], Black-tailed Godwit (Limosa limosa) [A156], Bar-tailed Godwit (Limosa lapponica) [A157], Black-headed Gull (Chroicocephalus ridibundus) [A179], Curlew (Numenius arquata) [A160], Turnstone (Arenaria interpres) [A169], Shoveler (Anas clypeata) [A056], Grey Plover (Pluvialis squatarola) [A141], Knot (Calidris canutus) [A143], Light-bellied Brent Goose (Branta bernicla hrota) [A046], Oystercatcher (Haematopus ostralegus) [A130], Pintail (Anas acuta) [A054]	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SPA is sensitive to hydrological interactions and direct land use management and forms of pollution. This SPA exists 11.80 km outside of the area of works for the proposed development, therefore there are no sources for effect to direct land use management of the SPA. In addition, there is no direct hydrological connection between the proposed site and this European site. SCI species are sensitive to disturbance effects; in general distances beyond 2 km are seen to be sufficient to preclude such effects[20,21]. These distances can vary due to factors such as species and /or time of year[22,23]. Given the distance between the Draft Strategy area and the SPA there are no pathways for disturbance effects identified. These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed Strategy; however, at this scale land scape characteristics and the availability of alternate resources ensure the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA. Considering the SCIs of this SPA, and given the nature of the proposed development and the distances involved; there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources with pathways for significant effects foreseen and no further assessment is required.	No	No

[20] 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.

[21] 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.

[22] 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.

[23] 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.845-862.

000210	South Dublin Bay SAC	12.14	Annual vegetation of drift lines [1210], Mudflats and sandflats not covered by seawater at low tide [1140], Salicornia and other annuals colonising mud and sand [1310], Embryonic shifting dunes [2110]	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SAC is sensitive to hydrological interactions and direct land use management and forms of pollution. This SAC exists 12.14 km outside of the area of works for the proposed development, therefore there are no sources for effect to direct land use management of the SAC. In addition, there is no direct hydrological connection between the proposed site and this European site. Considering the QIs of this SAC, and given the nature of the proposed development; there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources for significant effects foreseen and no further assessment is required.	No	No
000199	Baldoyle Bay SAC	12.46	Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330], Mudflats and sandflats not covered by seawater at low tide [1140], Salicornia and other annuals colonising mud and sand [1310], Mediterranean salt meadows (Juncetalia maritimi) [1410]	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SAC is sensitive to hydrological interactions and direct land use management and forms of pollution. This SAC exists 12.46 km outside of the area of works for the proposed development, therefore there are no sources for effect to direct land use management of the SAC. In addition, there is no direct hydrological connection between the proposed site and this European site. Considering the QIs of this SAC, and given the nature of the proposed development; there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources for significant effects foreseen and no further assessment is required.	No	No
004016	Baldoyle Bay SPA	12.46	Bar-tailed Godwit (Limosa lapponica) [A157], Golden Plover (Pluvialis apricaria) [A140], Wetland and Waterbirds [A999], Ringed Plover (Charadrius hiaticula) [A137], Light-bellied Brent Goose (Branta bernicla hrota) [A046], Shelduck (Tadorna tadorna) [A048], Grey Plover (Pluvialis squatarola) [A141]	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SPA is sensitive to hydrological interactions and direct land use management and forms of pollution. This SPA exists 12.46 km outside of the area of works for the proposed development, therefore there are no sources for effect to direct land use management of the SPA. In addition, there is no direct hydrological connection between the proposed site and this European site. SCI species are sensitive to disturbance effects; in general distances beyond 2 km are seen to be sufficient to preclude such effects[24],[25]. These distances can vary due to	No	No

[24] 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.

[25] 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.

				factors such as species and /or time of year[26,27]. Given the distance between the Draft Strategy area and the SPA there are no pathways for disturbance effects identified. These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed Strategy; however, at this scale land scape characteristics and the availability of alternate resources ensure the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA. Considering the SCIs of this SPA, and given the nature of the proposed development and the distances involved; there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources with pathways for significant effects foreseen and no further assessment is required.		
000208	Rogerstown Estuary SAC	12.58	Estuaries [1130], Salicornia and other annuals colonising mud and sand [1310], Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330], Mudflats and sandflats not covered by seawater at low tide [1140], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130], Mediterranean salt meadows (Juncetalia maritimi) [1410], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120]	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SAC is sensitive to hydrological interactions and direct land use management and forms of pollution. This SAC exists 12.58 km outside of the area of works for the proposed development, therefore there are no sources for effect to direct land use management of the SAC. In addition, there is no direct hydrological connection between the proposed site and this European site. Considering the QIs of this SAC, and given the nature of the proposed development; there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources for significant effects foreseen and no further assessment is required.	No	No
004015	Rogerstown Estuary SPA	13.24	Grey Plover (Pluvialis squatarola) [A141], Oystercatcher (Haematopus ostralegus) [A130], Shoveler (Anas clypeata) [A056], Ringed Plover (Charadrius hiaticula) [A137], Wetland and	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SPA is sensitive to hydrological interactions and direct land use management and forms of pollution. This SPA exists 13.24 km outside of the area of works for the proposed development, therefore there are no sources for effect to direct land use management of the SPA. In addition, there is no direct hydrological connection	No	No

[26] 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.

[27] 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.845-862.

			Waterbirds [A999], Knot (Calidris canutus) [A143], Light-bellied Brent Goose (Branta bernicla hrota) [A046], Dunlin (Calidris alpina) [A149], Redshank (Tringa totanus) [A162], Black-tailed Godwit (Limosa limosa) [A156], Greylag Goose (Anser anser) [A043], Shelduck (Tadorna tadorna) [A048]	between the proposed site and this European site. SCI species are sensitive to disturbance effects; in general distances beyond 2 km are seen to be sufficient to preclude such effects28,29. These distances can vary due to factors such as species and /or time of year30,31. Given the distance between the Draft Strategy area and the SPA there are no pathways for disturbance effects identified. These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed Strategy; however, at this scale land scape characteristics and the availability of alternate resources ensure the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA. Considering the SCIs of this SPA, and given the nature of the proposed development and the distances involved; there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources with pathways for significant effects foreseen and no further assessment is required.		
004236	North-west Irish Sea SPA	13.76	Cormorant (Phalacrocorax carbo) [A017], Guillemot (Uria aalge) [A199], Little Tern (Sterna albifrons) [A195], Shag (Phalacrocorax aristotelis) [A018], Fulmar (Fulmarus glacialis) [A009], Red-throated Diver (Gavia stellata) [A001], Arctic Tern (Sterna paradisaea) [A194], Common Tern (Sterna hirundo) [A193], Herring Gull (Larus argentatus) [A184], Great Northern Diver (Gavia immer) [A003], Black-headed Gull (Chroicocephalus ridibundus) [A179], Puffin (Fratercula arctica) [A204], Manx Shearwater (Puffinus	There are no Annex I habitats or supporting habitats for Annex II species within the proposed development area. This SPA is sensitive to hydrological interactions and direct land use management and forms of pollution. This SPA exists 13.76 km outside of the area of works for the proposed development, therefore there are no sources for effect to direct land use management of the SPA. There is an indirect hydrological pathway between the proposed site and this European site, however it is in the form of a drainage ditch that is dry most of the year, and may only be wetted during heavy rainfall events resulting from surface water runoff. In considering that nature of the proposed development, the infrequent wetting of the drainage ditch, and the distance involved between the proposed site and this European site, with a considerable dilution distance of 9.48 km, it is foreseen here that there are no sources for significant effect to this European site in terms of hydrological sensitivities. SCI species are sensitive to disturbance effects; in general distances beyond 2 km are	No	No

[28] 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.

[29] 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.

[30] 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.

[31] 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.845-862.

			puffinus) [A013], Common Scoter (Melanitta nigra) [A065], Little Gull (Larus minutus) [A177], Roseate Tern (Sterna dougallii) [A192], Common Gull (Larus canus) [A182], Razorbill (Alca torda) [A200], Kittiwake (Rissa tridactyla) [A188], Great Black-backed Gull (Larus marinus) [A187], Lesser Black-backed Gull (Larus fuscus) [A183]	seen to be sufficient to preclude such effects32,33. These distances can vary due to factors such as species and /or time of year34,35. Given the distance between the Draft Strategy area and the SPA there are no pathways for disturbance effects identified. These SCI species are highly vagile and therefore may utilise ex-situ ecological resources which may have interactions with the proposed Strategy; however, at this scale land scape characteristics and the availability of alternate resources ensure the local scale interactions with ex-situ resources are not likely to have significant effects on the SPA. Considering the SCIs of this SPA, and given the nature of the proposed development and the distances involved; there are no potential sources for disturbance or hydrological effects identified. Thus, there are no sources with pathways for significant effects foreseen and no further assessment is required.		

[32] 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.

[33] 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.

[34] 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.

[35] 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.845-862.

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 the potential to significantly affect 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 land scape;
- 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 500m 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.

A Key plan of relevance to the proposed development is the Fingal Development Plan 2017-2023. Considering that the proposed development has a large-scale and temporary construction phase and the operational phase is consistent with the zoned land s for the area; as HI (Heavy Industry), in the Fingal Development Plan, there are no sources for in-combination effect with this plan in this regard.

Projects considered for possible in-combination effects from the proposed development[36]

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 used[37]. A review of all planning applications within the identified zone was conducted focusing on all application within the past 5 years[38], and the results are displayed in Table 3.2 below. As the proposed site is located in west Dublin County, in an industrialised and developed sub-urban area, there are other proposed developments in the vicinity including works which are at planning stage or underway on various sites. The database search found that the majority of projects within the area are small to medium in scale relating to the construction of warehouses and industrial units with many small-scale projects relating to extensions and alterations to existing structures.

[36] The Planners report accompanying this application contains further details regarding planning applications associated with the proposed development and the local area.

[37] Accessed at: https://data-housinggovie.opendata.arcgis.com/datasets/planning-application-sites-2010-onwards; 16th February 2022

[38] 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 context

Table 3.2 Local planning applications within the receiving environment of the proposed development

Project Code	Status	Overview	Project Area (sq m)	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
FW20A/0126	Grant Permission	The development will comprise the provision of 4 No. warehouses with marshalling offices, ancillary office space, staff facilities and associated development. The buildings will have a maximum principal height of 17.070 No. metres to the top of the parapet above ground floor level and will comprise the following areas: Unit 1 will have a gross floor area of 21,578 sq.m. including a warehouse (20,252 sq.m.), marshalling office (66 sq.m.), ancillary office space (1,216 sq.m.) and plant (44 sq.m.); Unit 2 will have a gross floor area of 9,206 sq.m. including a warehouse (8,347 sq.m.), marshalling office (66 sq.m.), ancillary office space (757 sq.m.) and pant (36 sq.m.); Unit 3 will have a gross floor area of 16,525 sq.m. including a warehouse (15,478 sq.m.), ancillary office space (944 sq.m.) and plant (37 sq.m.); and Unit 4 will have a gross floor area of 7,342 sq.m. including a warehouse (6,648 sq.m.), marshalling office (66 sq.m.), ancillary office space (589 sq.m.) and plant (39 sq.m.). A gate house with a gross floor area of 14 sq.m. will be positioned to the south-west corner of the site. The development will also include the repositioning of the access from the L3125 Road to the north of the site to provide a new entrance and a second vehicular access will be provided from the R135/Elm Road to the south-west. Road upgrade works are proposed along the L3125 to the north of the site which include the partial upgrade of Kilshane Cross signalised junction to incorporate a left turning lane and upgraded signals on the L3125 Local Road eastern approach arm and the provision of cycle paths and pedestrian footpaths. There will also be internal roadways; pedestrian access; 502 No. ancillary car parking spaces; bicycle parking; HGV parking and yards; level access goods doors; hard and soft landscaping; boundary treatments; ESB substations; signage; PV panels; lighting and associated site development works above and below ground. The total gross floor area of the development is 5,763 sq.m. (including warehouse structures, gate house and ESB substations).	401,103	This is a large-scale project with a short-term construction phase and the operational phase will have localised effects. This project will also be subject to EIA and AA assessments as required. Considering the above, and the lack of any significant effects resulting from the proposed development, it is not considered that there will be any potential in-combination significant effects to the ecological integrity of any European sites.	No	No
F18A/0146	Grant Permission	A storage and distribution centre for new imported vehicles with a total capacity for 5,951 no. vehicles and comprises vehicle storage, internal circulation roadways, vehicle loading and unloading area and transporter parking spaces. the surface treatment of the vehicle storage areas comprises	376,229	This is a large-scale project with a short-term construction phase and the operational phase will have localised effects. This project will	No	No

Project Code	Status	Overview	Project Area (sq m)	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
		recycled plastic modular porous paving. Associated facilities include: a vehicle wash area, fuelling area and valet enclosure (approx. 120 sq.m.). The development also includes a vehicle inspection and fit out building (approx. 2656 sq.m. and 9.14m high) incorporating operation control room, offices, meeting room, canteen, toilets, plant area and building signage. Other site development works include: 1 no. security hut (11 sq.m); staff car parking (28 no. spaces) and staff bicycle parking spaces (14 no. spaces); boundary treatments including landscape berm and boundary fence over wall (approx. 3.33m high) new primary gated vehicular entrance onto the R135; emergency gated vehicular entrance onto Kilshane Road (L3125); lighting and CCTV poles (approx. 12m high); on-site substation (24.6 sq.m); external plant area (76 sq.m.); underground drainage and electricity infrastructure; the removal of existing vegetation and new landscaping works. The development also includes road improvement works to the Kilshane Road (L3125) comprising the reconfiguration of the existing roadway (including extending existing culvert); provision of a left turn lane at the junction with the R135; and dedicated cycle and pedestrian facilities. All development to take place on a site of approx. 13.1 hectares.		also be subject to EIA and AA assessments as required. Considering the above, and the lack of any significant effects resulting from the proposed development, it is not considered that there will be any potential in-combination significant effects to the ecological integrity of any European sites.		
FW17A/0012	Grant Permission	The development will comprise an increase in the permitted intake rate of construction and demolition (C&D) waste at the facility from a maximum of 24,950 tonnes per annum at present to 95,000 tonnes per annum in future years. The application provides for continuation and intensification of waste recovery activity at the established C&D waste recovery facility (Planning Ref. F02A/0602) on a 1.9 hectare site within the Central Quarry, in the immediate near-term (up to 2-3 years). It also provides for relocation of C&D waste recovery activities to a new waste recovery facility on a 5.2 hectare site in north-eastern corner of the Huntstown Quarry Complex and construction of a hardstanding area, waste processing shed, surface water processing shed, surface water management infrastructure and internal access roads at the new recovery facility. The proposed development requires a review of the existing waste licence (Ref.W0277-01) by the Environmental Protection Agency. An Environmental Impact Statement (EIS) will be submitted to the planning authority in connection with the application.	239,859	This is a medium-scale project with a no construction phase and the operational phase will have localised effects that have negligible interactions with the surrounding environment. This project will also be subject to EIA and AA assessments as required. Considering the above, and the lack of any significant effects resulting from the proposed development, it is not considered that there will be any potential in-combination significant effects to the ecological integrity of any European sites.	No	No

Project Code	Status	Overview	Project Area (sq m)	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
FW20A/0211	Grant Permission	The development will consist of 3 no. buildings for industrial/warehouse/logistics use (Units 3,4 and 5) with gross floor area of 24,356sq.m. Each building will measure 18.1m high (at parapet level) and have 2 storey ancillary offices. Elevational signage will be provided. The units will form Phase 2 of the Vantage Business Park, with Phase 1 to the south (units 1 and 2) under construction. The proposed development includes 39 HGV parking spaces, 224 car parking spaces, 134 cycle parking spaces, 29 dock levellers and 7 grade loading bays. All associated site works including diversion of existing foul rising main, boundary treatments, landscaping, service yards, internal road and footpaths, swales, lighting, 3 no. free standing signs, signage at entrance, refuse storage, substation, foul pumping station, extension of foul infrastructure from Phase 1, modified vehicular entrance off the R135 (including new entrance gate and pillars) and dedicated new footpath and cycleway along the east side of the R135.	187,792	This is a medium-scale project with a short-term construction phase and the operational phase will have localised effects. This project will also be subject to EIA and AA assessments as required. Considering the above, and the lack of any significant effects resulting from the proposed development, it is not considered that there will be any potential in-combination significant effects to the ecological integrity of any European sites.	No	No
FW21A/0146	Grant Permission	The proposed development consists of the following: •Construction of 1 no. warehouse / logistics unit, including 16,840 sq.m of warehouse/ logistics floorspace and 1,441 sq.m of ancillary office floorspace (over two levels), resulting in a total GFA of 18,281 sq.m, and with a maximum building height of 17.09 metres. The proposal includes a signage zone for the proposed unit; • The provision of 181 no. car parking spaces, 60 no. cycle parking spaces, HGV loading bays and service yard area; • The access to the unit will be provided by extending the existing Kilshane Avenue access road serving Northwest Logistics Park (including alterations to the existing road layout) to a proposed new roundabout within the subject site, which will provide access to the current development proposal, and provide access arrangements for future potential development on adjoining lands; •The development also includes an ESB substation, a smoking shelter, a sprinkler tank with a pumphouse and valvehouse, landscaping, boundary treatments, entrance gates, site lighting, and all associated site development works, underground foul and storm water drainage services (including a connection to an existing pumphouse to the southwest of the proposed warehouse / logistics unit) and attenuation areas.	153,704	This is a medium-scale project with a short-term construction phase and the operational phase will have localised effects. This project will also be subject to EIA and AA assessments as required. Considering the above, and the lack of any significant effects resulting from the proposed development, it is not considered that there will be any potential in-combination significant effects to the ecological integrity of any European sites.	No	No

Project Code	Status	Overview	Project Area (sq m)	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
		An Environmental Impact Assessment Report (EIAR) will be submitted to the Planning Authority with the planning application and the EIAR will be available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy at the offices of the Planning Authority.				
FW22A/0066	Grant Permission	The proposed development consists of the following: Construction of a high technology manufacturing unit (for the manufacturing of high technology electrical components), with a total gross floor area (GFA) of 23,6000 sq.m (including ancillary office space of 2,318 sq.m. at ground and first floor levels), and with a main parapet height of c. 12 metres and maximum height of 14.5 metres. The proposed unit will be known as Unit 901; Provision of a link corridor between the proposed high technology manufacturing unit and Unit 900 to the south (logistics/warehouse unit permitted under Reg. Ref. FW21A/0146); The provision of 562 no. car parking spaces, dedicated bus drop off and 275 no. bicycle parking spaces along with HGV loading bays and a service yard to the west of the proposed unit. The vehicular access to the unit will be provided via two entrances from the roundabout proposed under Reg. Ref. FW21A/0146, which provides access to Kilshane Avenue to the east. The development also includes rooftop plant for the proposed unit, an ESB substation with switchroom, 2 no. emergency generators, 2 no. sprinkler/water tanks and 2 no. pumphouses, 2 no. smoking shelters, bicycle shelters, landscaping, boundary treatments, entrance gates, site lighting, all associated site development works, underground foul and storm water drainage services and attenuation areas including connections to existing/permitted services infrastructure and all ancillary works. An Environmental Impact Assessment Report (EIAR) will be submitted to the Planning Authority with the planning application and the EIAR will be available for inspection or purchase at a fee not exceeding the reasonable cost of making a copy at the offices of the Planning Authority. The application site (with an area of c. 5.9 hectares) is located to the north of the warehouse/logistics development (Unit 900) permitted under Reg. Ref. FW21A/0146, to the northeast of Kilshane Avenue, to the south of Bay Lane	58,977	This is a medium-scale project with a short-term construction phase and the operational phase will have localised effects. This project will also be subject to EIA and AA assessments as required. Considering the above, and the lack of any significant effects resulting from the proposed development, it is not considered that there will be any potential in-combination significant effects to the ecological integrity of any European sites.	No	No

Project Code	Status	Overview	Project Area (sq m)	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
		and is bound by greenfield lands to the west.				
FW17A/0238	Grant Permission	Single storey extension (85 sq. m.) to rear of existing industrial building to house loading bay for new dock levellers. Minor exterior alterations to existing site layout (including 2 new security huts, a bicycle shelter and a smoking shelter and relocation of fencing, kerbing and car parking).	18,018	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects. This project will also be subject to EIA and AA assessments as required. Considering the above, and the lack of any significant effects resulting from the proposed development, it is not considered that there will be any potential in-combination significant effects to the ecological integrity of any European sites.	No	No
FW18A/0165	Grant Permission	Permission for alterations to an existing building granted under planning Reg no. F07A/1297 consisting of an increase in internal floor space by the addition of a training room (100sq.m) and storage Room (66sq.m) at first floor level and construction of an internal access stairwell at Unit 622 Phase 3 Northwest Business Park, Kilshane Avenue, Ballycoolin, Dublin 15, D15VN36	17,277	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects. This project will also be subject to EIA and AA assessments as required. Considering the above, and the lack of any significant effects resulting from the proposed development, it is not considered that there will be any potential in-combination significant effects to the ecological integrity of any European sites.	No	No
FW21A/0233	Grant Permission	Alterations to an existing building granted under planning reg. no. F07A/1297consisting of an external extension of 190 sq.m at ground and first floor level consisting of a training room, stairwell and offices.	15,083	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects. This project will also be subject to EIA and AA	No	No

Project Code	Status	Overview	Project Area (sq m)	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
				assessments as required. Considering the above, and the lack of any significant effects resulting from the proposed development, it is not considered that there will be any potential in-combination significant effects to the ecological integrity of any European sites.		
FW20A/0219	Grant Permission	Permission for an amendment to the original planning permission, at this site, for a gas peaking facility with 10 no. containerised gas fired generating units, with an export capacity of 20 megawatts (MV) under planning reference FW19A/0090. Amendments are proposed to the gas peaking will consist of the installation of 6 no. battery storage units with an export electricity capacity of 10-15 MV and 4 no. containerised gas fired generating units with an export electricity capacity of 10 MV, in replacement for the 10 no. containerised gas fired generating units, granted under planning reference FW19A/0090. 3 no. inverter transformers will also be added to the site, being the battery storage units. Other elements of the development will remain the same as FW19A/0090 and include an underground cabling route c 1.45km along the R135 road. 1 no. single storey electrical substation building, 1 no. customer switch entrance, security gates gear, electrical inverter/transformer station modules, concrete support structures, heating, ventilation and air conditioning units (HC/AV units), underground gas pipework and connection points, access tracks and new site entrance, security gates, perimeter security fencing, CCTV security monitoring system, landscaping works, and all associated ancillary infrastructure.	12,220	This is a small-scale project with a temporary construction phase and the operational phase will have localised effects. This project will also be subject to EIA and AA assessments as required. Considering the above, and the lack of any significant effects resulting from the proposed development, it is not considered that there will be any potential in-combination significant effects to the ecological integrity of any European sites.	No	No

4. Conclusion

This stage one screening for AA of the proposed Power Generation Station at Kilshane, County Dublin 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 scheme 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 sites[39]

Site code	Site name	Qualifying feature	Pressure codes	Known threats and pressures
000199	Baldoyle Bay SAC	Salicornia and other annuals colonising mud and sand [1310], Mediterranean salt meadows *(Juncetalia maritimi)* [1410], Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)* [1330], Mudflats and sandflats not covered by seawater at low tide [1140]	K03.06, G02.01, D01.02, G01.01.02, J02.01.02, X, I01, G01.02, F03.01, E03, F02.03.01, E01, K02.03	Antagonism with domestic animals, golf course, roads, motorways, non-motorized nautical sports, reclamation of land from sea, estuary or marsh, no threats or pressures, invasive non-native species, walking, horse-riding and non-motorised vehicles, hunting, discharges, bait digging or collection, urbanised areas, human habitation, eutrophication (natural)
000205	Malahide Estuary SAC	Salicornia and other annuals colonising mud and sand [1310], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Mudflats and sandflats not covered by seawater at low tide [1140], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130], Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)* [1330], Mediterranean salt meadows *(Juncetalia maritimi)* [1410]	G01.03, E01, G02.01, I01, X, D01.05, G01.02, J02.01.02, A08, D01.02, F03.01, G01.01	Motorised vehicles, urbanised areas, human habitation, golf course, invasive non-native species, no threats or pressures, bridge, viaduct, walking, horse-riding and non-motorised vehicles, reclamation of land from sea, estuary or marsh, fertilisation, roads, motorways, hunting, nautical sports
000206	North Dublin Bay SAC	Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)* [1330], Humid dune slacks [2190], Petalwort *(Petalophyllum ralfsii)* [1395], Embryonic shifting dunes [2110], Annual vegetation of drift lines [1210], Mudflats and sandflats not covered by seawater at low tide [1140], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Salicornia and other annuals colonising mud and sand [1310], Mediterranean salt meadows *(Juncetalia maritimi)* [1410], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130]	I01, G01.02, G02.01, A04, E03, E01, J01.01, F02.03, H01.03, G05.05, K03.06, F02.03.01, E02, G01.01, H01.09	Invasive non-native species, walking, horse-riding and non-motorised vehicles, golf course, grazing, discharges, urbanised areas, human habitation, burning down, leisure fishing, other point source pollution to surface water, intensive maintenance of public parcs or cleaning of beaches, antagonism with domestic animals, bait digging or collection, industrial or commercial areas, nautical sports, diffuse pollution to surface waters due to other sources not listed
000208	Rogerstown Estuary SAC	Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)* [1330], Mudflats and sandflats not covered by seawater at low tide [1140], Salicornia and other annuals colonising mud and sand [1310], Mediterranean salt meadows *(Juncetalia maritimi)* [1410], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Estuaries [1130], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130]	X, A07, G01.02, J02.12.01, A04, E03, I01, J02.01.02, A08, F02.03.01, K01.01, G02.01, G01.01, D01.02, E01.03	No threats or pressures, use of biocides, hormones and chemicals, walking, horse-riding and non-motorised vehicles, sea defence or coast protection works, tidal barrages, grazing, discharges, invasive non-native species, reclamation of land from sea, estuary or marsh, fertilisation, bait digging or collection, erosion, golf course, nautical sports, roads, motorways, dispersed habitation

[39] With functional connectivity (ecological pathways) to the proposed development area including their Qualifying Interests/Special Conservation Interests, and known threats and pressures

Site code	Site name	Qualifying feature	Pressure codes	Known threats and pressures
000210	South Dublin Bay SAC	Embryonic shifting dunes [2110], Salicornia and other annuals colonising mud and sand [1310], Annual vegetation of drift lines [1210], Mudflats and sandflats not covered by seawater at low tide [1140]	D01.02, G01.02, G01.01, F02.03.01, E03, K02, G01.01.02, E02, E01, D01.01, K02.02, J02.01.02, H03, M01	Roads, motorways, walking, horse-riding and non-motorised vehicles, nautical sports, bait digging or collection, discharges, biocenotic evolution, succession, non-motorized nautical sports, industrial or commercial areas, urbanised areas, human habitation, paths, tracks, cycling tracks, accumulation of organic material, reclamation of land from sea, estuary or marsh, marine water pollution, changes in abiotic conditions
001398	Rye Water Valley/Carton SAC	Desmoulin`s whorl snail *(Vertigo moulinsiana)* [1016], Petrifying springs with tufa formation *(Cratoneurion)* [7220], Narrow-mouthed whorl snail *(Vertigo angustior)* [1014]	A10.01, A04, J02.05.02, E01.01, E01.03, B, D01.02, A08	Removal of hedges and copses or scrub, grazing, modifying structures of inland water courses, continuous urbanisation, dispersed habitation, sylviculture, forestry, roads, motorways, fertilisation
004006	North Bull Island SPA	Oystercatcher *(Haematopus ostralegus)* [A130], Curlew *(Numenius arquata)* [A160], Turnstone *(Arenaria interpres)* [A169], Pintail *(Anas acuta)* [A054], Knot *(Calidris canutus)* [A143], Light-bellied Brent Goose *(Branta bernicla hrota)* [A046], Golden Plover *(Pluvialis apricaria)* [A140], Shelduck *(Tadorna tadorna)* [A048], Wetland and Waterbirds [A999], Teal *(Anas crecca)* [A052], Sanderling *(Calidris alba)* [A144], Black-tailed Godwit *(Limosa limosa)* [A156], Bar-tailed Godwit *(Limosa lapponica)* [A157], Black-headed Gull *(Chroicocephalus ridibundus)* [A179], Dunlin *(Calidris alpina)* [A149], Shoveler *(Anas clypeata)* [A056], Grey Plover *(Pluvialis squatarola)* [A141], Redshank *(Tringa totanus)* [A162]	G01.02, E01.01, G03, G01.01, D01.02, D01.05, G02.01, E01.04, F02.03.01, E02, E03, D03.02	Walking, horse-riding and non-motorised vehicles, continuous urbanisation, interpretative centres, nautical sports, roads, motorways, bridge, viaduct, golf course, other patterns of habitation, bait digging or collection, industrial or commercial areas, discharges, shipping lanes
004015	Rogerstown Estuary SPA	Knot *(Calidris canutus)* [A143], Light-bellied Brent Goose *(Branta bernicla hrota)* [A046], Dunlin *(Calidris alpina)* [A149], Redshank *(Tringa totanus)* [A162], Black-tailed Godwit *(Limosa limosa)* [A156], Greylag Goose *(Anser anser)* [A043], Shelduck *(Tadorna tadorna)* [A048], Ringed Plover *(Charadrius hiaticula)* [A137], Grey Plover *(Pluvialis squatarola)* [A141], Oystercatcher *(Haematopus ostralegus)* [A130], Shoveler *(Anas clypeata)* [A056], Wetland and Waterbirds [A999]	A04, A08, G01.01, E01.03, F02.03.01, J02.01, E03.01, F03.01, G02.01, I01, E03.02	Grazing, fertilisation, nautical sports, dispersed habitation, bait digging or collection, landfill, land reclamation and drying out, general, disposal of household or recreational facility waste, hunting, golf course, invasive non-native species, disposal of industrial waste
004016	Baldoyle Bay SPA	Bar-tailed Godwit *(Limosa lapponica)* [A157], Wetland and Waterbirds [A999], Light-bellied Brent Goose *(Branta bernicla hrota)* [A046], Shelduck *(Tadorna tadorna)* [A048], Ringed Plover *(Charadrius hiaticula)* [A137], Grey Plover *(Pluvialis squatarola)* [A141], Golden Plover *(Pluvialis apricaria)* [A140]	E01, G01.02, I01, F03.01, D01.02, G02.01, F02.03.01, A08,	Urbanised areas, human habitation, walking, horse-riding and non-motorised vehicles, invasive non-native species, hunting, roads, motorways, golf course, bait digging or collection, fertilisation, eutrophication (natural),

Site code	Site name	Qualifying feature	Pressure codes	Known threats and pressures
			K02.03, J02.01.02	reclamation of land from sea, estuary or marsh
004024	South Dublin Bay and Tolka Estuary SPA	Common tern *(Sterna hirundo)* [A193], Ringed Plover *(Charadrius hiaticula)* [A137], Grey Plover *(Pluvialis squatarola)* [A141], Redshank *(Tringa totanus)* [A162], Bar-tailed Godwit *(Limosa lapponica)* [A157], Knot *(Calidris canutus)* [A143], Sanderling *(Calidris alba)* [A144], Dunlin *(Calidris alpina)* [A149], Arctic tern *(Sterna paradisaea)* [A194], Oystercatcher *(Haematopus ostralegus)* [A130], Roseate Tern *(Sterna dougallii)* [A192], Light-bellied Brent Goose *(Branta bernicla hrota)* [A046], Black-headed Gull *(Chroicocephalus ridibundus)* [A179], Wetland and Waterbirds [A999]	E01, D01.02, F02.03, G01.01, J02.01.02, E03, E02, F02.03.01, K02.03, G01.02	Urbanised areas, human habitation, roads, motorways, leisure fishing, nautical sports, reclamation of land from sea, estuary or marsh, discharges, industrial or commercial areas, bait digging or collection, eutrophication (natural), walking, horse-riding and non-motorised vehicles
004025	Broadmeadow/Swords Estuary SPA	Red-breasted Merganser *(Mergus serrator)* [A069], Golden Plover *(Pluvialis apricaria)* [A140], Great Crested Grebe *(Podiceps cristatus)* [A005], Light-bellied Brent Goose *(Branta bernicla hrota)* [A046], Black-tailed Godwit *(Limosa limosa)* [A156], Wetland and Waterbirds [A999], Knot *(Calidris canutus)* [A143], Shelduck *(Tadorna tadorna)* [A048], Pintail *(Anas acuta)* [A054], Bar-tailed Godwit *(Limosa lapponica)* [A157], Redshank *(Tringa totanus)* [A162], Grey Plover *(Pluvialis squatarola)* [A141], Oystercatcher *(Haematopus ostralegus)* [A130], Goldeneye *(Bucephala clangula)* [A067], Dunlin *(Calidris alpina)* [A149]	D01.04, E02, G01.02, D01.05, A08, D01.01, E01, J02.01.02, I01, G01.01	Railway lines, tgv, industrial or commercial areas, walking, horse-riding and non-motorised vehicles, bridge, viaduct, fertilisation, paths, tracks, cycling tracks, urbanised areas, human habitation, reclamation of land from sea, estuary or marsh, invasive non-native species, nautical sports
004236	North-West Irish Sea SPA	Great Northern Diver *(Gavia immer)* [A003], Black-headed Gull *(Chroicocephalus ridibundus)* [A179], Puffin *(Fratercula arctica)* [A204], Herring Gull *(Larus argentatus)* [A184], Razorbill *(Alca torda)* [A200], Kittiwake *(Rissa tridactyla)* [A188], Great Black-backed Gull *(Larus marinus)* [A187], Lesser Black-backed Gull *(Larus fuscus)* [A183], Common Tern *(Sterna hirundo)* [A193], Common Scoter *(Melanitta nigra)* [A065], Little Gull *(Larus minutus)* [A177], Roseate Tern *(Sterna dougallii)* [A192], Manx Shearwater *(Puffinus puffinus)* [A013], Shag *(Phalacrocorax aristotelis)* [A018], Fulmar *(Fulmarus glacialis)* [A009], Red-throated Diver *(Gavia stellata)* [A001], Common Gull *(Larus canus)* [A182], Little Tern *(Sterna albifrons)* [A195], Cormorant *(Phalacrocorax carbo)* [A017], Arctic Tern *(Sterna paradisaea)* [A194], Guillemot *(Uria aalge)* [A199]	N/A	N/A

Site code	Site name	Qualifying feature	Pressure codes	Known threats and pressures
000199	Baldoyle Bay SAC	Salicornia and other annuals colonising mud and sand [1310], Mediterranean salt meadows (Juncetalia maritimi) [1410], Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330], Mudflats and	K03.06, G02.01, D01.02, G01.01.02, J02.01.02, X, I01, G01.02, F03.01, E03,	Antagonism with domestic animals, golf course, roads, motorways, non-motorized nautical sports, reclamation of land from sea, estuary or marsh, no threats or

Site code	Site name	Qualifying feature	Pressure codes	Known threats and pressures
		sandflats not covered by seawater at low tide [1140]	F02.03.01, E01, K02.03	pressures, invasive non-native species, walking, horse-riding and non-motorised vehicles, hunting, discharges, bait digging or collection, urbanised areas, human habitation, eutrophication (natural)
000205	Malahide Estuary SAC	Salicornia and other annuals colonising mud and sand [1310], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Mudflats and sandflats not covered by seawater at low tide [1140], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130], Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330], Mediterranean salt meadows (Juncetalia maritimi) [1410]	G01.03, E01, G02.01, I01, X, D01.05, G01.02, J02.01.02, A08, D01.02, F03.01, G01.01	Motorised vehicles, urbanised areas, human habitation, golf course, invasive non-native species, no threats or pressures, bridge, viaduct, walking, horse-riding and non-motorised vehicles, reclamation of land from sea, estuary or marsh, fertilisation, roads, motorways, hunting, nautical sports
000206	North Dublin Bay SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330], Humid dune slacks [2190], Petalwort (Petalophyllum ralfsii) [1395], Embryonic shifting dunes [2110], Annual vegetation of drift lines [1210], Mudflats and sandflats not covered by seawater at low tide [1140], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Salicornia and other annuals colonising mud and sand [1310], Mediterranean salt meadows (Juncetalia maritimi) [1410], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130]	I01, G01.02, G02.01, A04, E03, E01, J01.01, F02.03, H01.03, G05.05, K03.06, F02.03.01, E02, G01.01, H01.09	Invasive non-native species, walking, horse-riding and non-motorised vehicles, golf course, grazing, discharges, urbanised areas, human habitation, burning down, leisure fishing, other point source pollution to surface water, intensive maintenance of public parcs or cleaning of beaches, antagonism with domestic animals, bait digging or collection, industrial or commercial areas, nautical sports, diffuse pollution to surface waters due to other sources not listed
000208	Rogerstown Estuary SAC	Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330], Mudflats and sandflats not covered by seawater at low tide [1140], Salicornia and other annuals colonising mud and sand [1310], Mediterranean salt meadows (Juncetalia maritimi) [1410], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Estuaries [1130], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130]	X, A07, G01.02, J02.12.01, A04, E03, I01, J02.01.02, A08, F02.03.01, K01.01, G02.01, G01.01, D01.02, E01.03	No threats or pressures, use of biocides, hormones and chemicals, walking, horse-riding and non-motorised vehicles, sea defence or coast protection works, tidal barrages, grazing, discharges, invasive non-native species, reclamation of land from sea, estuary or marsh, fertilisation, bait digging or collection, erosion, golf course, nautical sports, roads, motorways, dispersed habitation
000210	South Dublin Bay SAC	Embryonic shifting dunes [2110], Salicornia and other annuals colonising mud and sand [1310], Annual vegetation of drift lines [1210], Mudflats and sandflats not covered by seawater at low tide [1140]	D01.02, G01.02, G01.01, F02.03.01, E03, K02, G01.01.02, E02, E01, D01.01, K02.02, J02.01.02, H03, M01	Roads, motorways, walking, horse-riding and non-motorised vehicles, nautical sports, bait digging or collection, discharges, biocenotic evolution, succession, non-motorized nautical sports, industrial or commercial areas, urbanised areas, human habitation, paths, tracks, cycling tracks, accumulation of organic material, reclamation of land from sea, estuary or marsh, marine

Site code	Site name	Qualifying feature	Pressure codes	Known threats and pressures
				water pollution, changes in abiotic conditions
001398	Rye Water Valley/Carton SAC	Desmoulin`s whorl snail (Vertigo moulinsiana) [1016], Petrifying springs with tufa formation (Cratoneurion) [7220], Narrow-mouthed whorl snail (Vertigo angustior) [1014]	A10.01, A04, J02.05.02, E01.01, E01.03, B, D01.02, A08	Removal of hedges and copses or scrub, grazing, modifying structures of inland water courses, continuous urbanisation, dispersed habitation, sylviculture, forestry, roads, motorways, fertilisation
004006	North Bull Island SPA	Oystercatcher (Haematopus ostralegus) [A130], Curlew (Numenius arquata) [A160], Turnstone (Arenaria interpres) [A169], Pintail (Anas acuta) [A054], Knot (Calidris canutus) [A143], Light-bellied Brent Goose (Branta bernicla hrota) [A046], Golden Plover (Pluvialis apricaria) [A140], Shelduck (Tadorna tadorna) [A048], Wetland and Waterbirds [A999], Teal (Anas crecca) [A052], Sanderling (Calidris alba) [A144], Black-tailed Godwit (Limosa limosa) [A156], Bar-tailed Godwit (Limosa lapponica) [A157], Black-headed Gull (Chroicocephalus ridibundus) [A179], Dunlin (Calidris alpina) [A149], Shoveler (Anas clypeata) [A056], Grey Plover (Pluvialis squatarola) [A141], Redshank (Tringa totanus) [A162]	G01.02, E01.01, G03, G01.01, D01.02, D01.05, G02.01, E01.04, F02.03.01, E02, E03, D03.02	Walking, horse-riding and non-motorised vehicles, continuous urbanisation, interpretative centres, nautical sports, roads, motorways, bridge, viaduct, golf course, other patterns of habitation, bait digging or collection, industrial or commercial areas, discharges, shipping lanes
004015	Rogerstown Estuary SPA	Knot (Calidris canutus) [A143], Light-bellied Brent Goose (Branta bernicla hrota) [A046], Dunlin (Calidris alpina) [A149], Redshank (Tringa totanus) [A162], Black-tailed Godwit (Limosa limosa) [A156], Greylag Goose (Anser anser) [A043], Shelduck (Tadorna tadorna) [A048], Ringed Plover (Charadrius hiaticula) [A137], Grey Plover (Pluvialis squatarola) [A141], Oystercatcher (Haematopus ostralegus) [A130], Shoveler (Anas clypeata) [A056], Wetland and Waterbirds [A999]	A04, A08, G01.01, E01.03, F02.03.01, J02.01, E03.01, F03.01, G02.01, I01, E03.02	Grazing, fertilisation, nautical sports, dispersed habitation, bait digging or collection, landfill, land reclamation and drying out, general, disposal of household or recreational facility waste, hunting, golf course, invasive non-native species, disposal of industrial waste
004016	Baldoyle Bay SPA	Bar-tailed Godwit (Limosa lapponica) [A157], Wetland and Waterbirds [A999], Light-bellied Brent Goose (Branta bernicla hrota) [A046], Shelduck (Tadorna tadorna) [A048], Ringed Plover (Charadrius hiaticula) [A137], Grey Plover (Pluvialis squatarola) [A141], Golden Plover (Pluvialis apricaria) [A140]	E01, G01.02, I01, F03.01, D01.02, G02.01, F02.03.01, A08, K02.03, J02.01.02	Urbanised areas, human habitation, walking, horse-riding and non-motorised vehicles, invasive non-native species, hunting, roads, motorways, golf course, bait digging or collection, fertilisation, eutrophication (natural), reclamation of land from sea, estuary or marsh
004024	South Dublin Bay and Tolka Estuary SPA	Common tern (Sterna hirundo) [A193], Ringed Plover (Charadrius hiaticula) [A137], Grey Plover (Pluvialis squatarola) [A141], Redshank (Tringa totanus) [A162], Bar-tailed Godwit (Limosa lapponica) [A157], Knot (Calidris canutus) [A143], Sanderling (Calidris alba) [A144], Dunlin (Calidris alpina) [A149], Arctic tern (Sterna paradisaea) [A194], Oystercatcher (Haematopus ostralegus) [A130], Roseate Tern (Sterna	E01, D01.02, F02.03, G01.01, J02.01.02, E03, E02, F02.03.01, K02.03, G01.02	Urbanised areas, human habitation, roads, motorways, leisure fishing, nautical sports, reclamation of land from sea, estuary or marsh, discharges, industrial or commercial areas, bait digging or collection, eutrophication (natural), walking, horse-riding and non-

Site code	Site name	Qualifying feature	Pressure codes	Known threats and pressures
		dougallii) [A192], Light-bellied Brent Goose (Branta bernicla hrota) [A046], Black-headed Gull (Chroicocephalus ridibundus) [A179], Wetland and Waterbirds [A999]		motorised vehicles
004025	Broadmeadow/Swords Estuary SPA	Red-breasted Merganser (Mergus serrator) [A069], Golden Plover (Pluvialis apricaria) [A140], Great Crested Grebe (Podiceps cristatus) [A005], Light-bellied Brent Goose (Branta bernicla hrota) [A046], Black-tailed Godwit (Limosa limosa) [A156], Wetland and Waterbirds [A999], Knot (Calidris canutus) [A143], Shelduck (Tadorna tadorna) [A048], Pintail (Anas acuta) [A054], Bar-tailed Godwit (Limosa lapponica) [A157], Redshank (Tringa totanus) [A162], Grey Plover (Pluvialis squatarola) [A141], Oystercatcher (Haematopus ostralegus) [A130], Goldeneye (Bucephala clangula) [A067], Dunlin (Calidris alpina) [A149]	D01.04, E02, G01.02, D01.05, A08, D01.01, E01, J02.01.02, I01, G01.01	Railway lines, tgv, industrial or commercial areas, walking, horse-riding and non-motorised vehicles, bridge, viaduct, fertilisation, paths, tracks, cycling tracks, urbanised areas, human habitation, reclamation of land from sea, estuary or marsh, invasive non-native species, nautical sports
004236	North-West Irish Sea SPA	Great Northern Diver (Gavia immer) [A003], Black-headed Gull (Chroicocephalus ridibundus) [A179], Puffin (Fratercula arctica) [A204], Herring Gull (Larus argentatus) [A184], Razorbill (Alca torda) [A200], Kittiwake (Rissa tridactyla) [A188], Great Black-backed Gull (Larus marinus) [A187], Lesser Black-backed Gull (Larus fuscus) [A183], Common Tern (Sterna hirundo) [A193], Common Scoter (Melanitta nigra) [A065], Little Gull (Larus minutus) [A177], Roseate Tern (Sterna dougallii) [A192], Manx Shearwater (Puffinus puffinus) [A013], Shag (Phalacrocorax aristotelis) [A018], Fulmar (Fulmarus glacialis) [A009], Red-throated Diver (Gavia stellata) [A001], Common Gull (Larus canus) [A182], Little Tern (Sterna albifrons) [A195], Cormorant (Phalacrocorax carbo) [A017], Arctic Tern (Sterna paradisaea) [A194], Guillemot (Uria aalge) [A199]	N/A	N/A

Appendix II Further information on the Qualifying Interests of SACs that have undergone assessment[40]

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[1014]	Narrow-mouthed Whorl Snail *(Vertigo angustior)*	Pressures facing this species are associated with land abandonment, under grazing and the creation of tourism and leisure infrastructure such as caravan sites and golf courses.	A06, A10, F05, F07	Abandonment of grassland management (e.g., cessation of grazing or of mowing), Extensive grazing or under grazing by livestock, Creation or development of sports, tourism and leisure infrastructure (outside the urban or recreational areas), Sports, tourism and leisure activities	Changes to ground vegetation condition, groundwater dependent and is highly sensitive to hydrological changes.
[1016]	Desmoulin's Whorl Snail *(Vertigo moulinsiana)*	The main pressures are associated with natural succession resulting in species composition change and drying out of the habitat.	A07, A10, L01, L02	Abandonment of management/use of other agricultural and agroforestry systems (all except grassland), Extensive grazing or under grazing by livestock, 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)	Changes to ground vegetation condition, groundwater dependent and is highly sensitive to hydrological changes.
[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 (*Magalana gigas*) 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 macro- and 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 sand flats not covered by seawater at low tide	Pressures on mudflats and sand flats are partly caused by pollution from agricultural, forestry and wastewater sources, as well as impacts associated with marine aquaculture,	A28, F20, G16	Agricultural activities generating marine pollution, Residential or recreational activities and structures generating marine pollution (excl. marine macro- and micro- particular pollution, Marine aquaculture generating marine pollution	Surface and marine water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to

[40] Including summaries of current threats and sensitivities

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
		particularly the Pacific oyster (*Magallana gigas*).			pollution. Changes to salinity and tidal regime. Coastal development.
[1210]	Annual vegetation of drift lines	Most of the pressures on drift lines are associated with activities such as recreation and coastal defences, which can interfere with sediment dynamics.	C01, F01, F06, F07, F08	Extraction of minerals (e.g. rock, metal 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)	Overgrazing and erosion. Changes in 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 non-native 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 species of Union concern)	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion.
[1395]	Petalwort (*Petalophyllum ralfsii*)	There are no pressures facing this species.	Xxp, Xxt	No pressures, No threats	None identified.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[1410]	Mediterranean salt meadows *(Juncetalia maritimi)*	Most of the pressures on Mediterranean salt meadows are associated with agriculture, including overgrazing, under grazing and land reclamation.	A09, A10, A33, A36	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]	Embryonic shifting dunes	The majority of pressures on this habitat are associated with recreation and coastal defences, which can interfere with sediment dynamics.	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 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)	Overgrazing, and erosion. Changes in management.
[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.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[2130]	Fixed coastal dunes with herbaceous vegetation *(*grey dunes*)*	Pressures on fixed dunes are associated with recreation and ecologically unsuitable grazing practices.	A02, A09, A10, F07, F08, I02, L02	Conversion from one type of agricultural 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)	Overgrazing, and erosion. Changes in management.
[2190]	Humid dune slacks	Pressures on the habitat come from a number of sources. Including agricultural fertilisers, sports and leisure activities (e.g. walking, off-road driving and golf courses) and drainage. Succession to scrub is also a problem, particularly where it is linked to desiccation of the slack.	A19, A31, F07, I02, L02	Application of natural fertilisers on agricultural land, Drainage for use as agricultural land, Sports, tourism and leisure activities, 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)	Overgrazing, and erosion. Changes in management. Sensitive to hydrological change.
[7220]	Petrifying springs with tufa formation *(Cratoneurion)*	Pressures related to this habitat are associated with drainage, pollution to ground and surface waters, recreational activities, infrastructure, overgrazing and abandonment of grassland management.	A06, A10, E01, F07, H08, J01, K02, K04, L02	Abandonment of grassland management (e.g. cessation of grazing or of mowing), Extensive grazing or under grazing by livestock, Roads, paths, railroads and related infrastructure (e.g. bridges, viaducts, tunnels), Sports, tourism and leisure activities, Other human intrusions and disturbance not mentioned above (Dumping, accidental and deliberate disturbance of bat roosts (e.g. caving)), Mixed source pollution to surface and ground waters (limnic and terrestrial), Drainage, Modification of hydrological flow, Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices)	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.

Appendix III Special Conservation Interests of SPAs that have undergone assessment[41]

Species Code	Common Name	Scientific Name	Threats and Pressures Codes	Known Threats and Pressures
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
A054	Northern Pintail	*Anas acuta*	C03, F01, F03, G01, H01, H03, H07, J02	Renewable abiotic energy use, marine and freshwater aquaculture, 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, human induced changes in hydraulic 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
A067	Common Goldeneye	*Bucephala clangula*	C03, F01, F03, G01, H01, H03, H07, M02	Renewable abiotic energy use, marine and freshwater aquaculture, 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, changes in biotic conditions
A069	Red-Breasted Merganser	*Mergus serrator*	C03, F01, F02, G01, H03	Renewable abiotic energy use, marine and freshwater aquaculture, fishing and harvesting aquatic resources, outdoor sports and leisure activities, recreational activities, marine water 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 Plover	*Charadrius hiaticula*	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

[41] Including known threats and pressures

Species Code	Common Name	Scientific Name	Threats and Pressures Codes	Known Threats and Pressures
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
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	Sand erling	*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
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
A157	Bar-Tailed Godwit	*Limosa lapponica*	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
A179	Black-Headed Gull	*Larus ridibundus*	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
A193	Common Tern	*Sterna hirundo*	C03, D01, D03, G01, I01	Renewable abiotic energy use, roads, paths and railroads, shipping lanes, ports, marine constructions, outdoor sports and leisure activities, recreational activities, invasive non-native species

Species Code	Common Name	Scientific Name	Threats and Pressures Codes	Known Threats and Pressures
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

Appendix IV Conservation Objectives

Conservation objectives that have been considered by the assessment are included in the following NPWS/Department of Culture, Heritage and the Gaeltacht documents

NPWS (2012) Conservation Objectives for Baldoyle Bay SAC [IE0000199] Version 1.
NPWS (2013) Conservation Objectives for Malahide Estuary SAC [IE0000205] Version 1.
NPWS (2013) Conservation Objectives for North Dublin Bay SAC [IE0000206] Version 1.
NPWS (2013) Conservation Objectives for Rogerstown Estuary SAC [IE0000208] Version 1.
NPWS (2013) Conservation Objectives for South Dublin Bay SAC [IE0000210] Version 1.
NPWS (2021) Conservation Objectives for Rye Water Valley/Carton SAC [IE0001398] Version 1.
NPWS (2015) Conservation Objectives for North Bull Island SPA [IE0004006] Version 1.
NPWS (2013) Conservation Objectives for Rogerstown Estuary SPA [IE0004015] Version 1.
NPWS (2013) Conservation Objectives for Baldoyle Bay SPA [IE0004016] Version 1.
NPWS (2015) Conservation Objectives for South Dublin Bay and River Tolka Estuary SPA [IE0004024] Version 1.
NPWS (2013) Conservation Objectives for Malahide Estuary SPA [IE0004025] Version 1.
NPWS (2023) Conservation Objectives for North-west Irish Sea SPA [IE0004236] Version 1.