Appropriate Assessment Screening Report

for the Proposed Development of

additional salt barn, new mechanical services depot and 2no. new diesel pumps with associated underground fuel storage tanks, at the Existing Palmerstown Depot, Adjoining the Deadman's Inn, Old Lucan Road, Dublin 20

in accordance with the requirements of

Article 6(3) of the EU Habitats Directive

for: **South Dublin County Council**

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1. Introduction

1.1. Background

CAAS has been appointed by South Dublin County Council to carry out an Appropriate Assessment (AA) screening of the additional salt barn, new mechanical services depot and 2no. new diesel pumps with associated underground fuel storage tanks at , at the Existing Palmerstown Depot, Adjoining the Deadman's Inn, Old Lucan Road, Dublin 20(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 significant adverse 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:

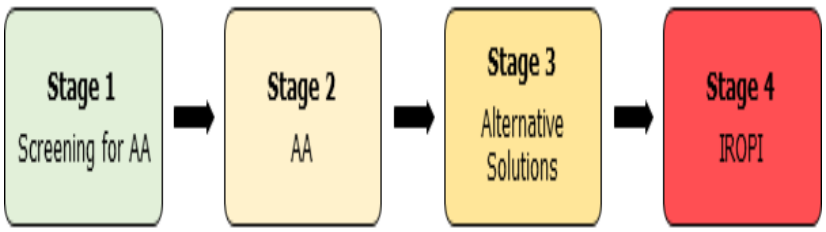
'A coherent European ecological network of special areas of conservation shall be set up under the title Natura 2000. This network, composed of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, shall enable the natural habitat types and the species' 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 project, comprised the following elements:

- Identification of European sites within 15km[1] of the subject lands;
- Identification of European sites pathways for effects from the site have been identfied (if relevant[2]) greater than 15km from the subject lands;
- Review of the NPWS site synopses and conservation objectives for European sites within 15km and for which potential pathways from the proposed site have been identified; and

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

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

- Examination of available information on protected species.

Source-Pathway Receptor Model

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

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

In the context of this report, a receptor is an ecological feature that is known to be utilised by the qualifying interests or special conservation interests of a European site. A source is any identifiable element of the Proposed Development that is known to interact with ecological processes. A pathway is any connection or link between the source and the receptor[3].

This report provides information on whether direct, indirect and cumulative adverse 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 subject site is located on existing South Dublin County Council depot lands adjacent to Dead Man's Inn at the Old Lucan Road, Fonthill, Dublin 20. The lands are bounded by Old Lucan Road to the north and east, by a slip-road to the N4 to the south and by Dead Man's Inn car park to the west. The site is a brownfield site with green areas located to the north and south. The site is gently sloping from South to North. The site is accessed from an existing vehicle access on the Old Lucan Road.

2.2. Overview of the Proposed Development

South Dublin County Council proposes to build an additional barn for storage of salt for road maintenance, a new mechanical services depot for the repair and general maintenance of South Dublin County Council vehicles, to include a vehicle maintenance workshop, offices and sanitary facilities, secure parking bays for vehicles and plant. The site is currently used by the Council for storage of materials, with one salt barn already on site. The proposed site is currently majority hard surface area and maintained grass patches. The proposed project aims to maximise utilisation of the site for mechanical services and road maintenance activities given its position connected with several major and minor road networks of the Lucan-Palmerstown area. More locally, the site lies between the Old Lucan Road and the N4/M50. The River Liffey runs west to the north, and the Liffey Valley Shopping Centre and Fonthill Business Park lie to the south.

2.3. Details of Proposal

The proposed development consists of the construction of an additional salt barn, new mechanical services depot, 2 new diesel pumps and associated works. It will have an overall site area of approximately 7,500 square metres, already in use by South Dublin County Council. The proposed site is 5.91 km away from the closest SAC, and 11.30 km away from the closest SPA. There are no direct hydrological connections between the proposed site and any European sites.

The proposal comprises of:

- Construction of an additional Salt Barn;
- New Mechanical Services Depot for servicing of SDCC vehicles and plant consisting of new vehicle maintenance workshop and ancillary support services including offices, canteen, storage and sanitary facilities.
- 2no. new diesel pumps with associated underground fuel storage tanks.
- Modifications to existing Salt barn site entrance.
- New site entrance and exit with security hut and entrance gates
- New Wastewater Treatment System and percolation area to EPA guidelines
- General site works, including new access and circulation driveways, landscaping, boundary walls and metal railings.

For detailed site plans see Figures 2.3 and 2.4

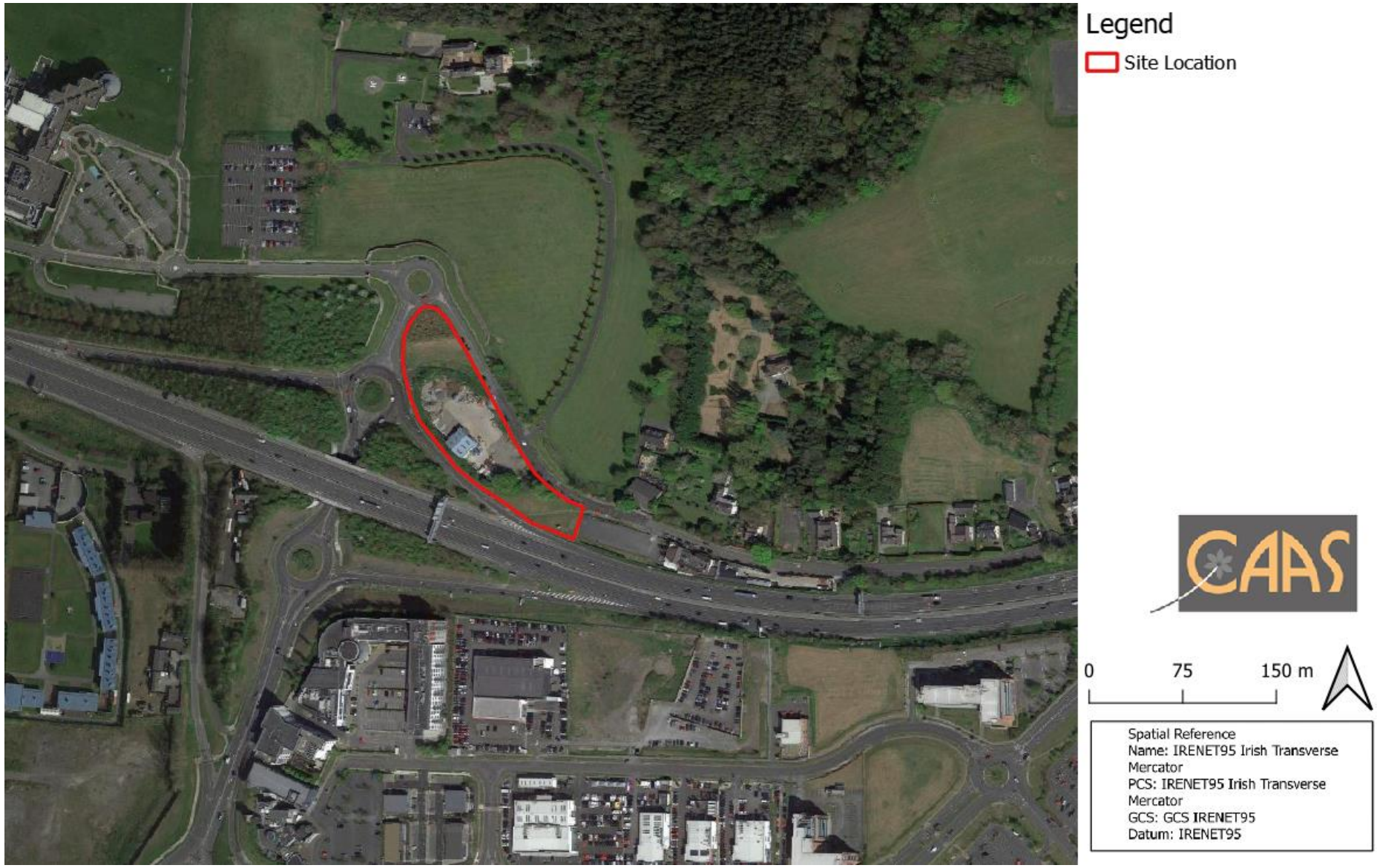


Figure 2.1. Location of the proposed development

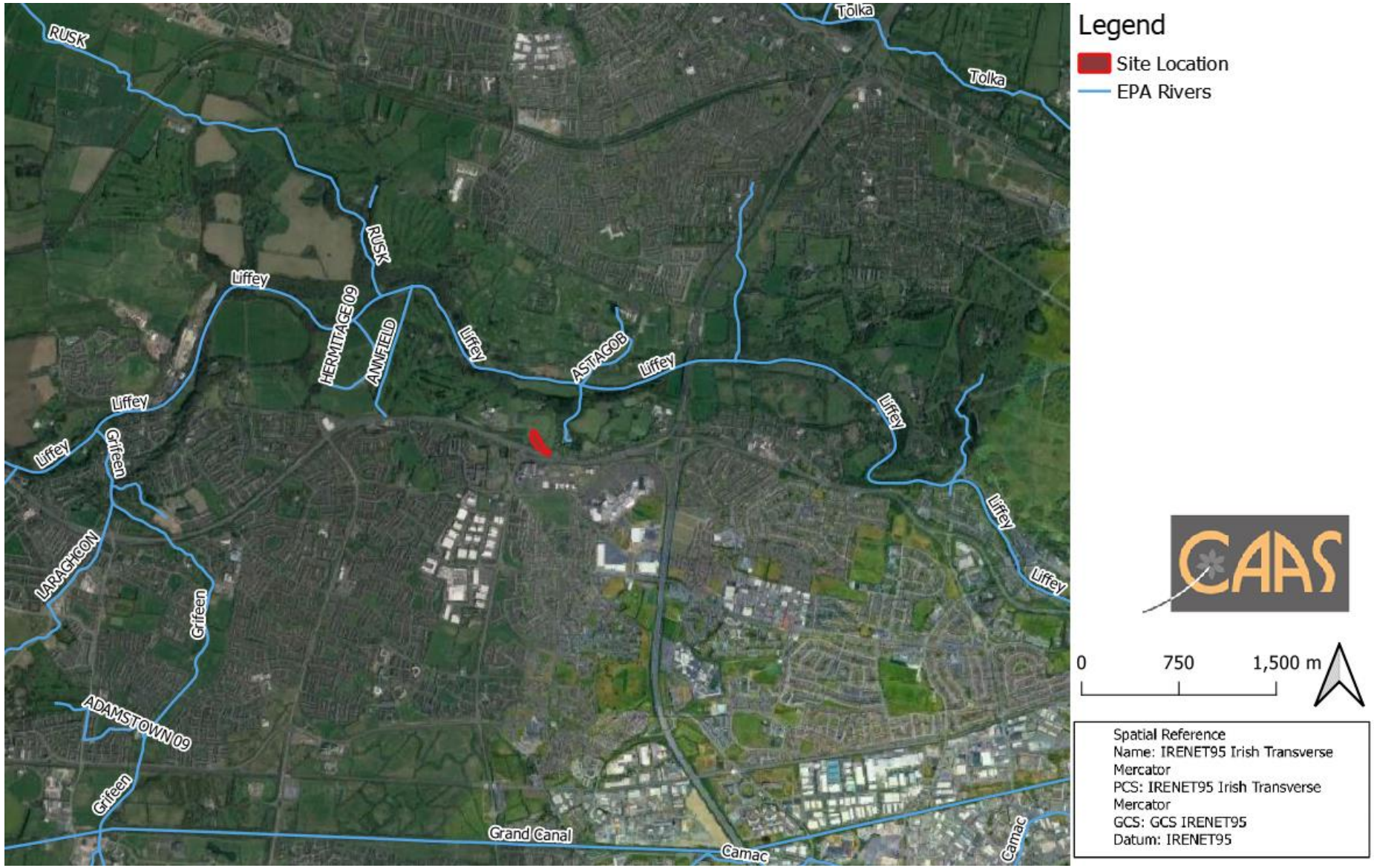


Figure 2.2. Location of EPA rivers with regard to the proposed development

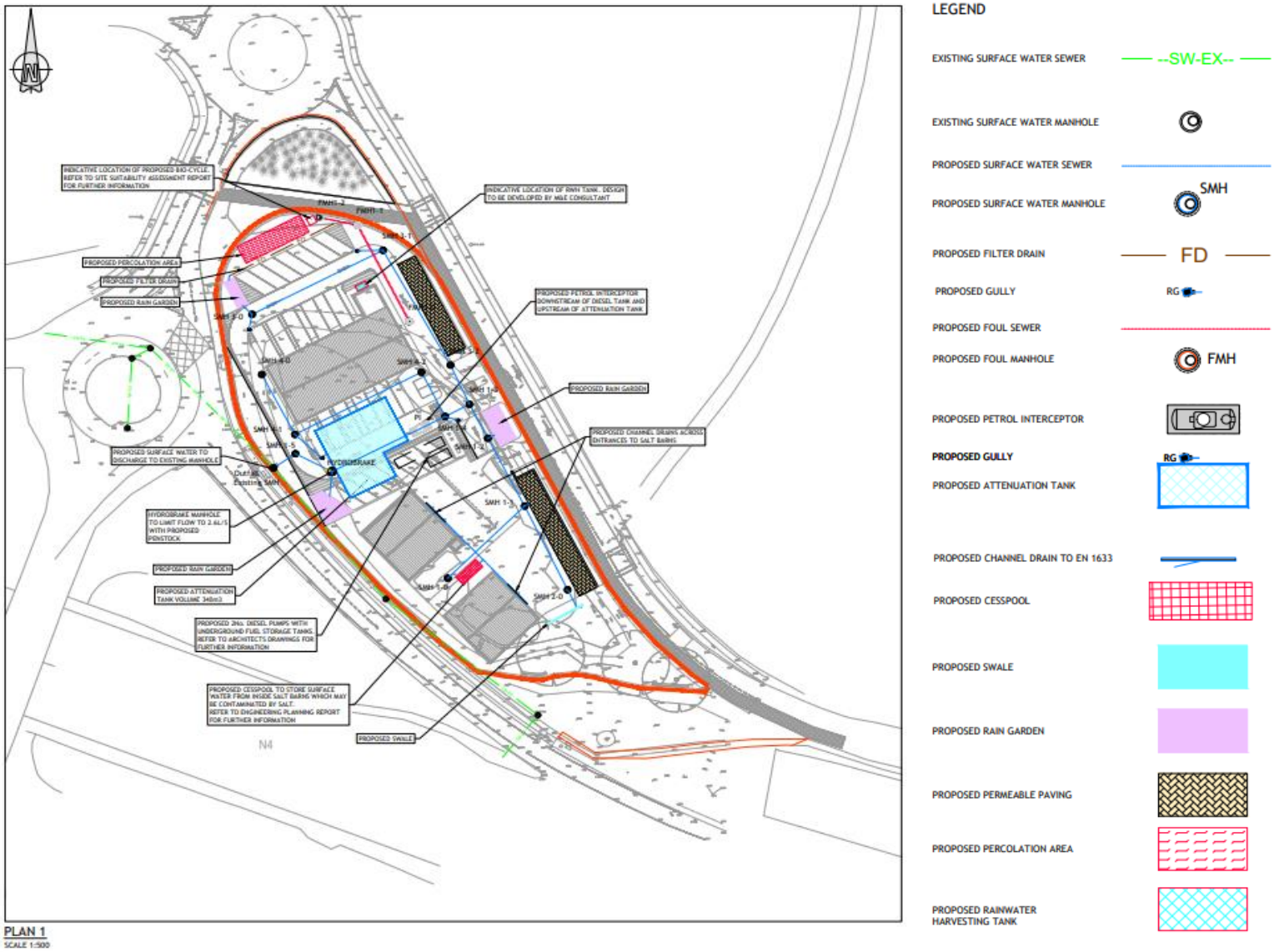


Figure 2.3. Proposed drainage plan of the proposed development

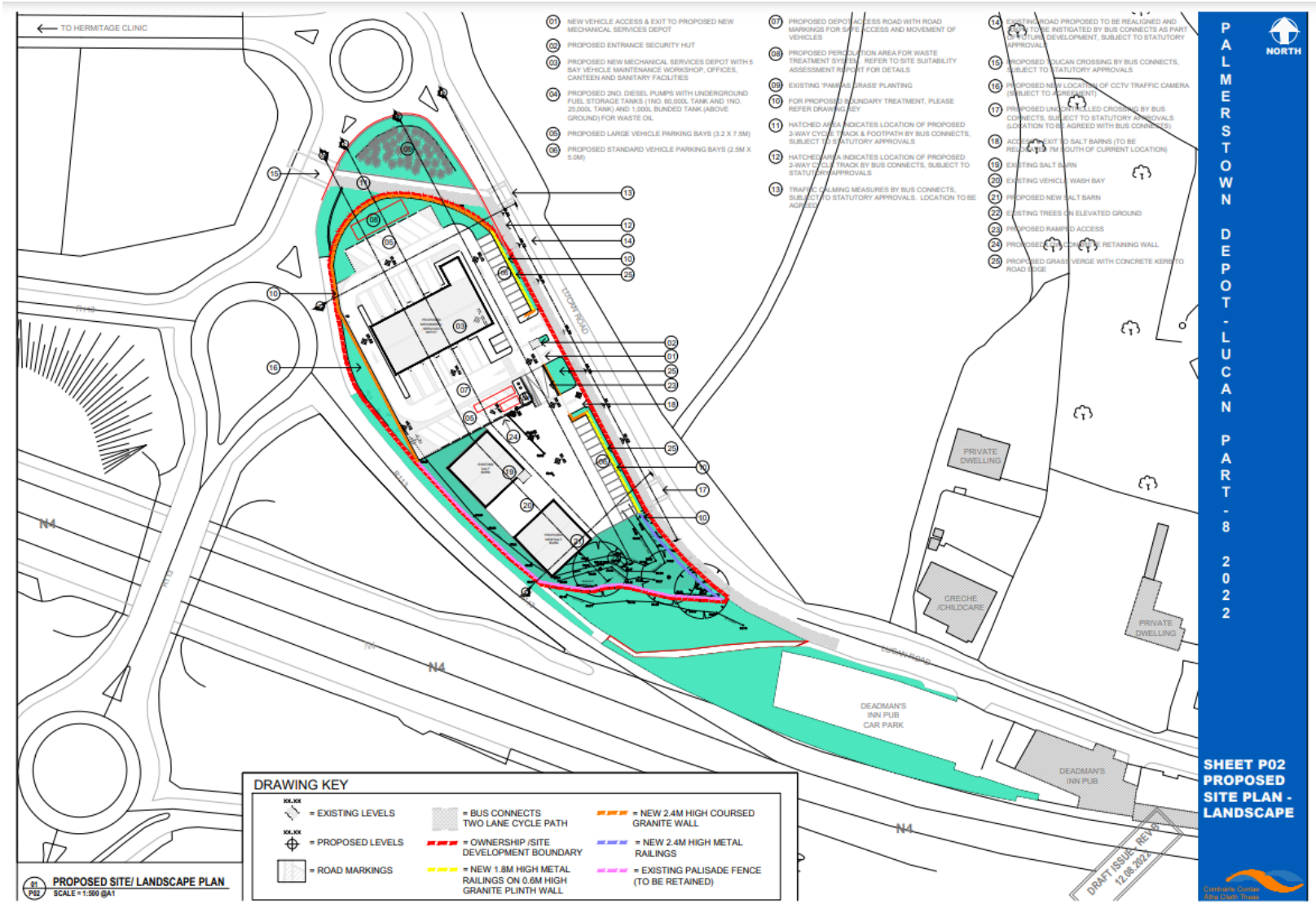


Figure 2.4. Proposed site layout of the proposed development

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 wgucg is a further pathway consideration zone (PCZ). It is understood that sites designated for vagile species are known to utilise isolated resources across the landscape could intersect with the localised zone of influence; however, beyond 15km potential effects to such species at this scale are not identified to be significant due to the broad home range available to these species and the availability of alternate resources. Therefore, a radius of 2km has been adopted as the ZoI and a 15km radius was adopted as the PCZ for this AA - however, further considerations were given to hydrological pathways from the Proposed Development which extended beyond the 15km limit.

European sites identified to have ecological connectivity pathways for potential effects from the Proposed Development are listed in 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[4]; and
- NATURA 2000 Standard Data Forms[5].

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.

[4] 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 9th August 2022

[5] 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 9th August 2022

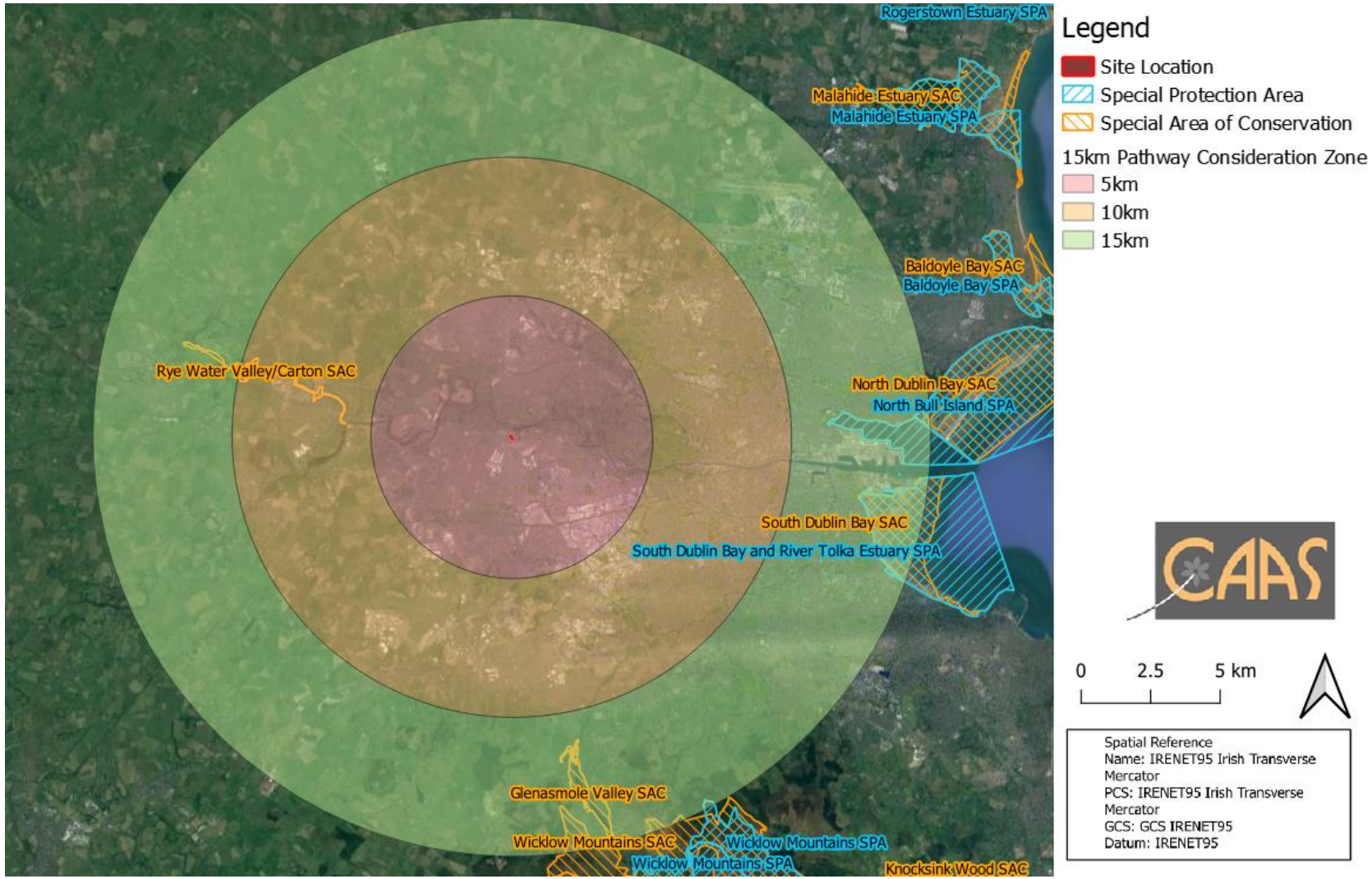


Figure 3.1 European sites within 15km of the Proposed Development boundary[6]

[6] Source: NPWS (datasets downloaded 9th August 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 generally to provide for addition and expansion of storage and service infrastructure for road maintenance services at the Deadman's Inn , between Lucan and Palmerstown. 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 project is identified as having both construction and operational phase effects in the local scale context but no effects in relation to European sites. The operational phase of the project will be consistent with the existing site use within the current built storage complex in a sub-urban context. The operations of the facility will be consistent with existing operations on site; therefore, is not foreseen to interact with European sites. The construction phase elements of the project also introduce potential sources for effects to ecological processes such as:

- Disturbance effects through noise;
- Earthworks (removal of vegetation etc.);
- Dust; and
- Surface water run-off.

The construction phase will be small scale and temporary. The construction phase 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[7] outlines the types of effects that may affect European sites. These include effects from the following activities:

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

The 2001 European Commission AA guidance outlines the following potential changes that may occur

[7] 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

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 considered in a broader sense below.

Loss/reduction of habitat area

There are no European sites present within the redline boundary and the closest European site is 5.92 km away. 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

The site is already a hard surface site in an urban context and there are no surface hydrological connections to any European sites. Therefore, there are no direct surface ecological corridors connecting any of the European sites identified above. 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.

Disturbance to key species

None of the species and/or habitats identified in Table 3.1 were recorded on site. The nearest European site is 5.92 km away from the proposed site and therefore disturbance effects due to noise or lighting etc. are not present.

Reduction in species density

There are no ecological corridors between the site and any European site. Similarly, there are no habitats identified on site of any ecological significance. As there is no supporting habitat and/or connectivity between the Proposed Development and any European site, there will be no reduction in species density of any of the QI or SCI species.

Changes of indicators of conservation value

The site is 5.91 km from the closest European site. The proposed development is small in scale, localised and the construction phase is temporary in nature with negligible effects identified. There are no direct surface hydrological linkages identified between the site and any European site. The works relate to and provide for the addition and expansion of storage and service infrastructure and mechanical services at the current Palmerstown Depot, adjoining the Deadman's Inn, Old Lucan Road, Dublin 20. There are no ecological pathways for effects between European sites and the Proposed Development. Therefore, there are no sources for effects with pathways that will affect any conservation indicators related to European sites.

Climate change

The proposed development will not result in any greenhouse gas emissions to air during the

operational phase. The construction phase works will have increased temporary emissions which will be localised however, given the distance to the nearest European site these are determined to be negligible. Such effects upon greenhouse gas emissions will not affect changes projected to arise from climate change to the degree that it would affect the QIs or SCIs of the European sites considered.

Table 3.1 Screening assessment of the potential effects arising from the Proposed Development

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
001398	Rye Water Valley/Carton SAC	5.92	Petrifying springs with tufa formation *(Cratoneurion)* [7220], Desmoulin`s whorl snail *(Vertigo moulinsiana)* [1016], Narrow-mouthed whorl snail *(Vertigo angustior)* [1014]	The SAC is sensitive to hydrological interactions, land use management activities and groundwater interactions. There are no sources for effect to land use management or groundwater interactions to the SAC or the surrounding area. There are no hydrological pathways between the proposed development and the SAC. Given the distance between the proposed development and the SAC, the small-scale short-term nature of the construction phase and the absence of a direct hydrological pathway, there are no likely significant effects identified to the SAC.	No	No
001209	Glenasmole Valley SAC	11.04	Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)* [6410], Petrifying springs with tufa formation *(Cratoneurion)* [7220], Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* * important orchid sites [6210]	The SAC is sensitive to direct land use management activities, groundwater and hydrological interactions. There are no sources for effect to land use management or groundwater interactions to the SAC or the surrounding area. In addition, there are no hydrological pathways between the proposed development and the SAC. Given the distance between the proposed development and the SAC, the small-scale short-term nature of the construction phase and the absence of a direct hydrological pathway, there are no likely significant effects identified to the SAC.	No	No

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
004024	South Dublin Bay and River Tolka Estuary SPA	11.30	Oystercatcher *(Haematopus ostralegus)* [A130], Bar-tailed Godwit *(Limosa lapponica)* [A157], Redshank *(Tringa totanus)* [A162], Dunlin *(Calidris alpina)* [A149], Sanderling *(Calidris alba)* [A144], Light-bellied Brent Goose *(Branta bernicla hrota)* [A674], Arctic tern *(Sterna paradisaea)* [A194], Common tern *(Sterna hirundo)* [A193], Ringed Plover *(Charadrius hiaticula)* [A137], Grey Plover *(Pluvialis squatarola)* [A141], Black-headed Gull *(Chroicocephalus ridibundus)* [A179], Roseate Tern *(Sterna dougallii)* [A192], Wetland and Waterbirds [A999], Knot *(Calidris canutus)* [A143]	The hydrologically sensitive habitats and species of this SAC are highly sensitive to changes in siltation loads, the distribution of silt loads, pollutants, water levels, and anthropogenic disturbance. There are no sources for effect to ground water, land use management or disturbance effects of the SPA or the surrounding area. There are no hydrological pathways between the proposed development and the SPA. Disturbance effects are known to be negligible beyond 1.5km[8] and this SPA is 11.30 km from the proposed site. There is potential for the SCI species in this SPA to be affected by disturbance effects from the proposed development via ex-situ foraging. However, the site is does not provide extensive suitable foraging habitat for the SCI species. Given the distances and availability of alternate resources at a landscape scale there are no significant effects identified in this regard. Given the distance, the small-scale temporary nature of the potential effects and the and the absence of direct pathways, there are no likely significant effects identified to the SPA.	No	No

[8] https://www.nature.scot/doc/review-disturbance-distances-selected-bird-species

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
000210	South Dublin Bay SAC	12.57	Annual vegetation of drift lines [1210], Mudflats and sandflats not covered by seawater at low tide [1140], Embryonic shifting dunes [2110], Salicornia and other annuals colonising mud and sand [1310]	The hydrologically sensitive habitats of this SAC are highly sensitive to changes in siltation loads, the distribution of silt loads, pollutants and water levels, and anthropogenic disturbance. There are no sources for effect to land use management of the SAC or the surrounding area. There are no direct hydrological pathways between the proposed project and the SAC. Given the distance, the small-scale temporary nature of the potential effects and the substantial dilution effects through the marine environment, there are no likely significant effects identified to the SAC.	No	No
002122	Wicklow Mountains SAC	13.29	Siliceous rocky slopes with chasmophytic vegetation [8220], Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0], Siliceous scree of the montane to snow levels *(Androsacetalia alpinae and Galeopsietalia ladani)* [8110], Alpine and Boreal heaths [4060], Species-rich Nardus grasslands, on siliceous substrates in mountain areas - and submountain areas in Continental Europe [6230], Calcareous rocky slopes with chasmophytic vegetation [8210], European dry heaths [4030], Natural dystrophic lakes and ponds [3160], Blanket bogs * if active bog [7130], Oligotrophic waters containing very few minerals of sandy plains *(Littorelletalia uniflorae)* [3110], Otter *(Lutra lutra)* [1355], Northern Atlantic wet heaths with Erica tetralix [4010], Calaminarian grasslands of the Violetalia calaminariae [6130]	The SAC is sensitive to disturbance effects, direct land use management activities and hydrological interactions. There are no sources for effect to land use management of the SAC or the surrounding area. There are no hydrological pathways between the proposed project and the SAC. Given the distance between the proposed project and the SAC, the small-scale temporary nature of the potential effects and the absence of direct pathways there are no effects identified to the SAC.	No	No

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
004006	North Bull Island SPA	14.44	Pintail *(Anas acuta)* [A054], Dunlin *(Calidris alpina)* [A149], Sanderling *(Calidris alba)* [A144], Black-tailed Godwit *(Limosa limosa)* [A156], Grey Plover *(Pluvialis squatarola)* [A141], Turnstone *(Arenaria interpres)* [A169], Light-bellied Brent Goose *(Branta bernicla hrota)* [A674], Wetland and Waterbirds [A999], Knot *(Calidris canutus)* [A143], Curlew *(Numenius arquata)* [A160], Redshank *(Tringa totanus)* [A162], Black-headed Gull *(Chroicocephalus ridibundus)* [A179], Bar-tailed Godwit *(Limosa lapponica)* [A157], Shelduck *(Tadorna tadorna)* [A048], Teal *(Anas crecca)* [A052], Golden Plover *(Pluvialis apricaria)* [A140], Oystercatcher *(Haematopus ostralegus)* [A130], Shoveler *(Anas clypeata)* [A056]	The hydrologically sensitive species of this SPA are highly sensitive to changes in siltation loads, the distribution of silt loads, pollutants, water levels and anthropogenic disturbance. There are no sources for effect to ground water or land use management of the SPA or the surrounding area. There are no direct hydrological pathways between the proposed project and the SPA. Disturbance effects are known to be negligible beyond 1.5km and this SPA is 14.44 km from the proposed site. There is potential for the SCI species in this SPA to be affected by disturbance effects from the project via ex-situ foraging. The site is does not provide extensive suitable foraging habitat for the SCI species. Given the distances and availability of alternate resources at a landscape scale there are no significant effects identified in this regard. Given the distance, the small-scale temporary nature of the potential effects and the absence of direct pathways, there are no likely significant effects identified to the SPA.	No	No

Site Code	Site Name	Distance	Qualifying Feature	Potential Effects	Pathway for Significant Effects	Potential for In-Combination Effects
000206	North Dublin Bay SAC	14.45	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], Embryonic shifting dunes [2110], Mediterranean salt meadows *(Juncetalia maritimi)* [1410], Humid dune slacks [2190], Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)* [1330], Petalwort *(Petalophyllum ralfsii)* [1395], Annual vegetation of drift lines [1210]	The SAC is sensitive to land use management and hydrological and groundwater interactions.	No	No
004040	Wicklow Mountains SPA	14.69	Merlin *(Falco columbarius)* [A098], Peregrine falcon *(Falco peregrinus)* [A103]	The SPA is sensitive to disturbance effects and direct land use management activities. There are no sources for effect to land use management of the SPA or the surrounding area. Disturbance effects are known to be negligible beyond 1.5km and this SPA is 14.69 km from the proposed site. There is potential for the SCI species in this SPA to be affected by disturbance effects from the project via ex-situ foraging. The site does not provide extensive suitable foraging habitat for the SCI species. Given the distances and availability of alternate resources at a landscape scale there are no significant effects identified in this regard. Given the distance, the small-scale temporary nature of the potential effects of the proposed project, there are no likely significant effects identified to the SPA.	No	No

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 adversely 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 landscape;
- Having disperse emissions or far-reaching sources for effects;
- Having sources for effects to ecological connectivity.

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

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

- South Dublin County Development Plan 2016-2022
- Draft South Dublin County Development Plan 2022 - 2028
- No relevant Local Area Plan

Considering that the proposed development has a small-scale temporary construction phase and the operational phase is consistent with the existing land use, it is not foreseen that proposed development will have any significant in-combination effects with the above plans.

Projects considered for possible in-combination effects from the Proposed Development:
Further to section 3.2 – which details the existing land uses and general characteristics of the area – a focus was placed on current and future development applications. To identify projects for consideration for the in-combination effects section, the Dept of Housing, Local Government and Heritage planning database was used[9]. A review of all planning applications within the identified zone was conducted focusing on all application within the past 5 years[10].

[9] https://data-housinggovie.opendata.arcgis.com/datasets/planning-application-sites-2010-onwards; 9th August 2022

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

With the proposed site being located relatively urban area, there are numerous other proposed projects 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 relating to the altering of existing structures, extensions, along with medium scale projects (see Table 3.2 for complete list).

All construction and infrastructure work in the local area are small – medium in scale and best practice construction measures will also be implemented for each. Due to the scale and nature of the proposed works there are no significant adverse effects identified as a result of the implementation of the proposed development. On this basis, assessment guidance (CIEEM, 2018) indicated that there is no need to consider cumulative effects. However, taking a precautionary approach, relevant plans and projects have nonetheless been reviewed and assessed (Table 3.2).

The proposed project has temporary small-scale effects associated with the construction phase identified. None of the projects identified below introduce significant levels of effects with respect to the pathways to European sites. Therefore, given the nature and scale of the proposed development and the temporary nature of the associated effects there are no in combination effects identified that are likely to have significant effects on any European sites.

Table 3.2 Local planning applications within the receiving environment of the Proposed Development[11]

Project Code	Status	Overview	Grant Date	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
SD12A/0014/EP	Grant Extension Of Duration Of Permission	Development consisting of 2 phases (1A and 1B): Phase 1A comprises the construction of (i) a retail anchor of c. 7935sq.m. gross floor area (c. 3500sq.m. convenience net sales area and c.1728sq.m. comparison net sales area) including a licensed alcohol sales area, ancillary offices, staff facilities, bulk store and cage marshalling area at first floor level; (ii) a cafe (235sq.m.) and retail services unit (180sq.m.) on the first floor level; (iii) circulation space to include an atrium at ground and first floor levels; (iv) signage; (v) service yard at first floor level; (vi) 551 car parking spaces to be provided at grade, part under first floor retail; (vii) CHP plant, ESB substation and all ancillary landscaping, site works and services; (viii) road upgrades to the following junctions - (1) St. Lomans Road-Fonthill-Bothar an Life/Shancastle Avenue roundabout junction, (2) Fonthill Road/Coldcut Road junction, (3) Bothar an Life/Ascaill an Life roundabout junctions (west and south), (4) N4/Fonthill Road off-ramp junction. Phase 1B comprises 5 ground floor retail services units (c.1041sq.m. total gross) and an additional 36 car parking spaces at grade (to bring the total to 587 spcaes) to be provided on completion of the east-west boulevard all on c.2.39ha site located to the southeast of the Liffey Valley Shopping Centre and north of the B & Q Unit off the Coldcut Road. (An Environmental Impact Statement was submitted with the application).	N/A	46,992	This is a medium-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment due to the project being a material change of infrastructure already permitted on site. Considering the above, and the lack of any connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No

[11] planning application from within the last 5 years were searched using a radius of 200m around the proposed site

Project Code	Status	Overview	Grant Date	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
SD18A/0062	Grant Permission	Material change of use of previously permitted ground floor retail space, (Ref. Ref. SD06A/0957), to include the internal subdivision of existing retail space to create an administration office ancillary to the operations of the existing adjoining hotel. Associated minor alterations to the ground floor external elevations to include the relocation of the existing east facing entrance door and the installation of opening sections to existing south facing windows	2018/06/05	14,800	This is a medium-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment due to the project being a material change of infrastructure already permitted on site. Considering the above, and the lack of any connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No

Project Code	Status	Overview	Grant Date	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
SD21A/0184	Grant Permission	Extension to the existing motor sales outlet with servicing area and associated development consisting of the construction of a single storey (double height) extension (c.568sq.m) to the existing motor sales outlet with servicing area which will compris e of a car body shop and valet area; single storey remote sales office (c.20sq.m); a covered bike shelter; ancillary petrol fill area; alterations to vehicle storage area; alterations and relocation of the exiting vehicle display provision (resulting in total of 79 defined display spaces (59 additional) together with indicative display areas with capacity for c.72 vehicles); a reduction in service spaces (resulting in total of 23 service spaces (3 less)) and relocation and additions to the existing staff car parking provision (resulting in total of 25 staff spaces (5 additional)); provision of a new pedestrian site entrance; signage (3 signs (4.45sq.m; 2.71sq.m; 0.58sq.m); alterations and additions to the soft and hard landscaping, including the removal of existing fence; new boundary treatment and internal vehicle access gate; pedestrian paths and access; paving; tarmac and planting; relocation of vehicle sliding gate; an additional vehicle display podium; additional electric charging bays; new lighting; elevational changes to the existing building to facilitate the extension; an additional attenuation tank; all piped infrastructure and ducting; plant; all associated site development and excavation works above and below ground.	2022/05/17	14,136	This is a medium-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment due to the project being a material change of infrastructure already permitted on site. Considering the above, and the lack of any connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No

Project Code	Status	Overview	Grant Date	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
SD11A/0142/EP	Grant Extension Of Duration Of Permission	Single storey paediatric clinic 5.5 metres high accommodating 18 consulting suites and associated ancillary accommodation, measuring 1104sq.m; the reorganisation of an existing car park currently accommodating 56 spaces and its extension to provide an ad ditional 50 spaces (106 in total); 18 bicycle spaces; an electricity sub-station internalised in a plant room within the building; a pedestrian connection to the existing clinic; all associated site development and landscape works, including the incorporation of excess spoil material within the landscaped grounds of the Hermitage Clinic. Access is provided via the existing internal road network at the Hermitage Clinic.	N/A	9,218	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No
SD21A/0284	Grant Permission	Construction of self-storage facility with small ground floor café with total area of 8620sq.m composed of; part basement area consisting of self-storage area, open car parking and area for classic car storage; ground floor containing reception /office area, cafe of 124.5sq.m and self-storage area; first floor containing office area of 112.3sq.m and second and third floor containing self-storage areas; the proposed building is approximately 21.9 metres high from ground floor level; development includes external signage to building plus associated landscaping and drainage works; vehicular access to the ground floor is from the estate road and to the basement level is from the existing shared access road; the proposed site is located to South of N4, to the West of the existing Johnson and Johnson office building, to the north/east of Giraffe Childcare and to the north of Liffey Valley secondary estate road.	2022/07/13	7,244	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No

Project Code	Status	Overview	Grant Date	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
SD17A/0251	Grant Permission	4 storey multi car park with 8 car parking levels, accommodating 487 car parking spaces in a building with an area of 13,667sq.m and a height of ca.11.2m at it's highest point; all associated site development and landscaping works including alterations to the existing internal road network. The multi-storey car park will be located south east of the existing hospital building.	N/A	3,596	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No
SD18A/0182	Grant Permission For Retention	Retention permission for the installation of Klargester Biodisc treatment plant plus change of use of store to daycare rooms at first floor of existing two storey childcare facility.	2018/08/27	1,315	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No
SD22A/0083	Grant Permission	New enclosure to existing fire escape stairs and new exit to existing two storey childcare facility.	2022/06/21	1,314	This is a small-scale project with a temporary construction phase and the operation phase will have localised effects that have negligible interactions with the environment. Considering the above, and the lack of any connection to a European site, it is not considered that there will be any potential in-combination significant adverse effects to the ecological integrity of any European sites.	No	No

4. Conclusion

This stage one screening for AA of the additional salt barn, new mechanical services depot and 2no. new diesel pumps with associated underground fuel storage tanks at Lucan, County Dublin demonstrates that the Proposed Development is not likely to have significant effects on any European site.

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 project. Through an assessment of the pathways for effects and an evaluation of the project characteristics, taking account of the processes involved and the distance of separation from European sites, it has been evaluated that there are no likely significant adverse effects on the qualifying interests, special conservation interest or the conservation objectives of any designated European site.

The Proposed Development is 5.92 km away from the closest SAC and 11.3 km away from the closest SPA. Given the nature of the proposed work, the scale and the localised and temporary nature of the potential effects, the proposed project will not lead to any significant effects in-combination with effects arising from any other plans or projects.

It is concluded that the proposed development is not foreseen to give rise to any significant adverse effects on any designated European sites, alone or in combination with other plans or projects. 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

European sites with functional connectivity (ecological pathways) to the Proposed Development area including their Qualifying Interests, known threats and pressures

Site Code	Site Name	Qualifying Feature	Pressures Codes	Known Threats and Pressures
000206	North Dublin Bay SAC	Mudflats and sandflats not covered by seawater at low tide [1140], Annual vegetation of drift lines [1210], Atlantic salt meadows *(Glauco-Puccinellietalia maritimae)* [1330], Embryonic shifting dunes [2110], Humid dune slacks [2190], Shifting dunes along the shoreline with Ammophila arenaria - white dunes [2120], Salicornia and other annuals colonising mud and sand [1310], Petalwort *(Petalophyllum ralfsii)* [1395], Mediterranean salt meadows *(Juncetalia maritimi)* [1410], Fixed coastal dunes with herbaceous vegetation - grey dunes [2130]	A04, G01.02, F02.03, G01.01, E03, I01, E01, E02, K03.06, G05.05, H01.03, J01.01, G02.01, F02.03.01, H01.09	Grazing, Walking, horseriding and non-motorised vehicles, Leisure fishing, Nautical sports, Discharges, Invasive non-native species, Urbanised areas, human habitation, Industrial or commercial areas, Antagonism with domestic animals, Intensive maintenance of public parcs or cleaning of beaches, Other point source pollution to surface water, Burning down, Golf course, Bait digging or collection, Diffuse pollution to surface waters due to other sources not listed
000210	South Dublin Bay SAC	Salicornia and other annuals colonising mud and sand [1310], Annual vegetation of drift lines [1210], Embryonic shifting dunes [2110], Mudflats and sandflats not covered by seawater at low tide [1140]	E01, K02, H03, G01.01, K02.02, D01.01, G01.01.02, G01.02, E03, D01.02, J02.01.02, E02, F02.03.01, M01	Urbanised areas, human habitation, Biocenotic evolution, succession, Marine water pollution, Nautical sports, Accumulation of organic material, Paths, tracks, cycling tracks, Non-motorized nautical sports, Walking, horseriding and non-motorised vehicles, Discharges, Roads, motorways, Reclamation of land from sea, estuary or marsh, Industrial or commercial areas, Bait digging or collection, Changes in abiotic conditions

Site Code	Site Name	Qualifying Feature	Pressures Codes	Known Threats and Pressures
001209	Glenasmole Valley SAC	Petrifying springs with tufa formation *(Cratoneurion)* [7220], Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)* * important orchid sites [6210], Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)* [6410]	A03, A03.03, F02.03, A08, D01, H02.07, A04, I01, B01.01, B01.02, A04.02.01, A04.02.02, A04.02.03, H01.08, D01.03, B02.01.02, C01.03, J02, E01.02, B02.02, H01.05	Mowing or cutting of grassland, Abandonment or lack of mowing , Leisure fishing, Fertilisation, Roads, paths and railroads, Diffuse groundwater pollution due to non-sewered population, Grazing, Invasive non-native species, Forest planting on open ground (native trees), Artificial planting on open ground (non-native trees), Non intensive cattle grazing, Non intensive sheep grazing, Non intensive horse grazing, Diffuse pollution to surface waters due to household sewage and waste waters, Car parcs and parking areas, Forest replanting (non native trees), Peat extraction, Human induced changes in hydraulic conditions, Discontinuous urbanisation, Forestry clearance, Diffuse pollution to surface waters due to agricultural and forestry activities
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]	E01.01, A04, E01.03, B, A08, D01.02, J02.05.02, A10.01	Continuous urbanisation, Grazing, Dispersed habitation, Sylviculture, forestry, Fertilisation, Roads, motorways, Modifying structures of inland water courses, Removal of hedges and copses or scrub
002122	Wicklow Mountains SAC	Otter *(Lutra lutra)* [1355], Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0], Species-rich Nardus grasslands, on siliceous substrates in mountain areas - and submountain areas in Continental Europe [6230], European dry heaths [4030], Blanket bogs * if active bog [7130], Siliceous scree of the montane to snow levels *(Androsacetalia alpinae and Galeopsietalia ladani)* [8110], Northern Atlantic wet heaths with Erica tetralix [4010], Natural dystrophic lakes and ponds [3160], Alpine and Boreal heaths [4060], Oligotrophic waters containing very few minerals of sandy plains *(Littorelletalia uniflorae)* [3110], Siliceous rocky slopes with chasmophytic vegetation [8220], Calcareous rocky slopes with chasmophytic vegetation [8210], Calaminarian grasslands of the Violetalia calaminariae [6130]	G01.02, A05.02, G02.09, G05.04, E03.01, G01, G05.09, B06, G04.01, K01.01, F03, B02.05, G05.06, D01.01, C01.03, I01, F03.02.02, F04.02, J01.01, G01.03.02, G01.04, L05, K04.05, E01, A04, G05.01, G05.07	Walking, horseriding and non-motorised vehicles, Stock feeding, Wildlife watching, Vandalism, Disposal of household or recreational facility waste, Outdoor sports and leisure activities, recreational activities, Fences, fencing, Grazing in forests or woodland, Military manouvres, Erosion, Hunting and collection of wild animals (terrestrial), Non- intensive timber production (leaving dead wood or old trees untouched), Tree surgery, felling for public safety, removal of roadside trees, Paths, tracks, cycling tracks, Peat extraction, Invasive non-native species, Taking from nest (e.g. falcons), Collection (fungi, lichen, berries etc.), Burning down, Off-road motorized driving, Mountaineering, rock climbing, speleology, Collapse of terrain, landslide, Damage by herbivores (including game species), Urbanised areas, human habitation, Grazing, Trampling, overuse, Missing or wrongly directed conservation measures

Site Code	Site Name	Qualifying Feature	Pressures Codes	Known Threats and Pressures
004006	North Bull Island SPA	Wetland and Waterbirds [A999], Black-tailed Godwit *(Limosa limosa)* [A156], Oystercatcher *(Haematopus ostralegus)* [A130], Light-bellied Brent Goose *(Branta bernicla hrota)* [A674], Turnstone *(Arenaria interpres)* [A169], Pintail *(Anas acuta)* [A054], Bar-tailed Godwit *(Limosa lapponica)* [A157], Shelduck *(Tadorna tadorna)* [A048], Knot *(Calidris canutus)* [A143], Grey Plover *(Pluvialis squatarola)* [A141], Redshank *(Tringa totanus)* [A162], Curlew *(Numenius arquata)* [A160], Teal *(Anas crecca)* [A052], Black-headed Gull *(Chroicocephalus ridibundus)* [A179], Dunlin *(Calidris alpina)* [A149], Golden Plover *(Pluvialis apricaria)* [A140], Sanderling *(Calidris alba)* [A144], Shoveler *(Anas clypeata)* [A056]	G02.01, E01.04, D03.02, F02.03.01, G01.01, D01.05, G01.02, E03, D01.02, G03, E01.01, E02	Golf course, Other patterns of habitation, Shipping lanes, Bait digging or collection, Nautical sports, Bridge, viaduct, Walking, horseriding and non-motorised vehicles, Discharges, Roads, motorways, Interpretative centres, Continuous urbanisation, Industrial or commercial areas
004024	South Dublin Bay and Tolka Estuary SPA	Ringed Plover *(Charadrius hiaticula)* [A137], Dunlin *(Calidris alpina)* [A149], Wetland and Waterbirds [A999], Knot *(Calidris canutus)* [A143], Common tern *(Sterna hirundo)* [A193], Oystercatcher *(Haematopus ostralegus)* [A130], Redshank *(Tringa totanus)* [A162], Black-headed Gull *(Chroicocephalus ridibundus)* [A179], Grey Plover *(Pluvialis squatarola)* [A141], Light-bellied Brent Goose *(Branta bernicla hrota)* [A674], Roseate Tern *(Sterna dougallii)* [A192], Sanderling *(Calidris alba)* [A144], Bar-tailed Godwit *(Limosa lapponica)* [A157], Arctic tern *(Sterna paradisaea)* [A194]	F02.03, E03, E02, G01.01, D01.02, F02.03.01, K02.03, E01, J02.01.02, G01.02	Leisure fishing, Discharges, Industrial or commercial areas, Nautical sports, Roads, motorways, Bait digging or collection, Eutrophication (natural), Urbanised areas, human habitation, Reclamation of land from sea, estuary or marsh, Walking, horseriding and non-motorised vehicles
004040	Wicklow Mountains SPA	Peregrine falcon *(Falco peregrinus)* [A103], Merlin *(Falco columbarius)* [A098]	C01.03, G01.02, D01.01, B, A04, G03	Peat extraction, Walking, horseriding and non-motorised vehicles, Paths, tracks, cycling tracks, Sylviculture, forestry, Grazing, Interpretative centres

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

Qualifying Interests of SACs that have undergone assessment 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
[1014]	Narrow-mouthed Whorl Snail *(Vertigo angustior)*	Pressures facing this species are associated with land abandonment, undergrazing and the creation of toursism 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 undergrazing 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 undergrazing 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.
[1140]	Mudflats and sandflats not covered by seawater at low tide	Pressures on mudflats and sandflats are partly caused by pollution ffrom agricultural, forestry and wastewater sources, as well as impacts associated with marine aquaculture, particularly the Pacific oyster (Magallana gigas).	A28, F20, G16	Agricultural activities generating marine pollution, Residential or recreational activities and structures generating marine pollution (excl. marine macro- and micro- particular pollution, Marine aquaculture generating marine pollution	Surface and marine water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to pollution. Changes to salinity and tidal regime. Coastal development.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[1210]	Annual vegetation of drift lines	Most of the pressures on drift lines are associated with activites 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.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[1355]	Otter *(Lutra lutra)*	There are no pressures facing this species	Xxp, Xxt	No pressures, No threats	Surface and marine water dependent. Moderately sensitive to hydrological change. Sensitivity to pollution.
[1395]	Petalwort*(Petalophyllum ralfsii)*	There are no pressures facing this species.	Xxp, Xxt	No pressures, No threats	None identified.
[1410]	Mediterranean salt meadows *(Juncetalia maritimi)*	Most of the pressures on Mediterranean salt meadows are associated with agriculture, including overgrazing, undergrazing and land reclamation.	A09, A10, A33, A36	Intensive grazing or overgrazing by livestock, Extensive grazing or undergrazing 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.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[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.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[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 undergrazing 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.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[3110]	Oligotrophic waters containing very few minerals of sandy plains *(Littorelletalia uniflorae)*	This habitat is under significant pressure from eutrophication, and from drainage and other damage to peatland. Damage to peatland can result in hydrological chnages in lakes, increased organic matter, water colour and turbidity, changes in sediment characteristics, acidification and enrichment.	A26, A31, B23, B27, C05, F12	Agricultural activities generating diffuse pollution to surface or ground waters, Drainage for use as agricultural land, Forestry activities generating pollution to surface or ground waters, Modification of hydrological conditions, or physical alteration of water bodies and drainage for forestry (including dams), Peat extraction, Discharge of urban waste water (excluding storm overflows and/or urban run-offs) generating pollution to surface or ground water	Surface dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
[3160]	Natural dystrophic lakes and ponds	The pressures on this habitat are associated with pollution from agricultural and forestry activities and also from drainage.	A26, A31, B23, B27, C05, D08	Agricultural activities generating diffuse pollution to surface or ground waters, Drainage for use as agricultural land, Forestry activities generating pollution to surface or ground waters, Modification of hydrological conditions, or physical alteration of water bodies and drainage for forestry (including dams), Peat extraction, Energy production and transmission activities generating pollution to surface or ground waters	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution
[4010]	Northern Atlantic wet heaths with Erica tetralix	Overgrazing,burning, wind farm development and erosion are the main pressures associated with this habitat, along with nitrogen deposition from agricultural activities that generate air pollution.	A09, A11, A27, B01, D01, L01, N01, N02	Intensive grazing or overgrazing by livestock, Burning for agriculture, Agricultural activities generating air pollution, Conversion to forest from other land uses, or afforestation (excluding drainage), Wind, wave and tidal power, including infrastructure, Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization), Temperature changes (e.g. rise of temperature & extremes) due to climate change	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[4030]	European dry heaths	A number of significant pressures were recorded for this habitat in the current reporting period, particularlty overgrazing by sheep and burning for agriculture with afforestation and wind farms also being recognised as pressures.	A09, A11, B01, D01, N01, N02	Intensive grazing or overgrazing by livestock, Burning for agriculture, Conversion to forest from other land uses, or afforestation (excluding drainage), Wind, wave and tidal power, including infrastructure, Temperature changes (e.g. rise of temperature & extremes) due to climate change	Moderately sensitive to hydrological change. Changes in management. Changes in nutrient status.
[4060]	Alpine and Boreal heaths	Overgrazing by livestock, tourism (hill walking) and agricultural activities that cause air pollution are considered significant pressures for this habitat.	A09, A27, F07, N01, N02	Intensive grazing or overgrazing by livestock, Agricultural activities generating air pollution, Sports, tourism and leisure activities, Temperature changes (e.g. rise of temperature & extremes) due to climate change	Changes in management. Changes in nutrient or base status. Moderately sensitive to hydrological change.
[6130]	Calaminarian grasslands of the Murawy galmanowa*(Violetalia calaminariae)*	Pressures on this habitat are associated with abiotic natural processes (leaching of metals) and succession, as well as impacts from recreational activities (walking/hiking).	F07, L01, L02	Sports, tourism and leisure activities, 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 in management such as grazing regime. Changes in nutrient or base status. Changes to vegetation composition. Introduction of alien species.
[6210]	Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)** important orchid sites	The significant pressures related to this habitat are mainly associated wit agricultural intensifictaion causing loss of species-rich communities, or abandonment of farmland resulting in succession to scrub.	A02, A09, A10, C01, I02, I04	Conversion from one type of agricultural land use to another (excluding drainage and burning), Intensive grazing or overgrazing by livestock, Extensive grazing or undergrazing by livestock, Extraction of minerals (e.g. rock, metal ores, gravel, sand, shell), Other invasive alien species (other than species of Union concern), Problematic native species	Changes in management such as grazing regime. Changes in nutrient or base status. Changes to vegetation composition. Introduction of alien species.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[6230]	Species-rich Nardus grasslands, on siliceous substrates in mountain areas *(and submountain areas, in Continental Europe)*	The main pressures on this habitat are due to bracken encroachment and succession.	I04, L02	Problematic native species, Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices)	Changes in management such as grazing regime. Changes in nutrient or base status. Changes to vegetation composition. Introduction of alien species.
[6410]	Molinia meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)*	The main pessures on the habitat are associated with agricultural intensification (e.g. land drainage, fertiliser application), undergrazing and forestry.	A02, A06, A10, A14, A31, B01	Conversion from one type of agricultural land use to another (excluding drainage and burning), Abandonment of grassland management (e.g. cessation of grazing or of mowing), Extensive grazing or undergrazing by livestock, Livestock farming (without grazing), Drainage for use as agricultural land, Conversion to forest from other land uses, or afforestation (excluding drainage)	Changes in management such as grazing regime. Changes in nutrient or base status. Changes to vegetation composition. Introduction of alien species.
[7130]	Blanket bogs *(* if active bog)*	The main pressures on blanket bogs are overgrazing, burning, afforestation, peat extraction, and agricultural activities causing nitrogen deposition. Erosion, drainage and wind farm construction are also pressures relating to this habitat.	A09, A11, A27, B01, C05, D01, K02, L01, N01, N02	Intensive grazing or overgrazing by livestock, Burning for agriculture, Agricultural activities generating air pollution, Conversion to forest from other land uses, or afforestation (excluding drainage), Peat extraction, Wind, wave and tidal power, including infrastructure, Drainage, Abiotic natural processes (e.g. erosion, silting up, drying out, submersion, salinization), Temperature changes (e.g. rise of temperature & extremes) due to climate change	Surface water interactions. Drainage and land use management are the key things.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[7220]	Petrifying springs with tufa formation *(Cratoneurion)*	Pressures related to this habitat are associated with drainage, pollution to ground and surface aters, recreational activities, infrastructure, overgarzing 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 undergrazing 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.
[8110]	Siliceous scree of the montane to snow levels *(Androsacetalia alpinae and Galeopsietalia ladani)*	The main pressures on siliceous scree come from overgrazing, undergrazing and succession.	A09, A10, L02	Intensive grazing or overgrazing by livestock, Extensive grazing or undergrazing by livestock, Natural succession resulting in species composition change (other than by direct changes of agricultural or forestry practices)	Erosion, overgrazing and recreation.
[8210]	Calcareous rocky slopes with chasmophytic vegetation	The majority of pressures related to this habitat are associated with overgrazing and the non-native invasive species New Zealand willherb (Epilobium brunnescens).	A09, A27, I02	Intensive grazing or overgrazing by livestock, Agricultural activities generating air pollution, Other invasive alien species (other than species of Union concern)	Erosion, overgrazing and recreation.
[8220]	Siliceous rocky slopes with chasmophytic vegetation	Pressure on this habitat is associated with the non-native invasive species New Zeland willowherb (Epilobium brunnescens).	I02	Other invasive alien species (other than species of Union concern)	Erosion, overgrazing and recreation.

EU Code	Qualifying Interests	Article 17 Report Summary - Threats and Pressures	Threats and Pressures Codes	Known Threats and Pressures	Sensitivity of Qualifying Interests
[91A0]	Old sessile oak woods with Ilex and Blechnum in the British Isles	The significant pressure facing this habitat are associated with invasive non-native species such as Rhododendron ponticum, cherry laurel (Prunus laurocerasus) and beech (Fagus sylvatica) and overgrazing by deer.	A09, B09, I02, I04, M07	Intensive grazing or overgrazing by livestock, Clear-cutting, removal of all trees, Other invasive alien species (other than species of Union concern), Problematic native species, Storm, cyclone	Changes in management. Changes in nutrient or base status. Introduction of alien species.

Appendix III Further information on the Special Conservation Interests of SPAs that have undergone assessment

Special Conservation Interests and Vulnerabilities of SPAs that have undergone assessment

Species Code	Common Name	Scientific Name	Threats and Pressures Codes	Known Threats and Pressures
A048	Common Shelduck	*Tadorna tadorna*	F01, F02, G01, H03, M01	Marine and Freshwater Aquaculture, Fishing and harvesting aquatic ressources, 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
A098	Merlin	*Falco columbarius*	A02, B01, B02, C03, M02	Modification of cultivation practices, Forest planting on open ground, Forest and Plantation management & use, Renewable abiotic energy use, Changes in biotic conditions
A130	Eurasian Oystercatcher	*Haematopus ostralegus*	C03, F01, F02, G01, H03, J02	Renewable abiotic energy use, Marine and Freshwater Aquaculture, Fishing and harvesting aquatic ressources, 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 ressources, Outdoor sports and leisure activities, recreational activities, Marine water pollution, Human induced changes in hydraulic conditions, Other Ecosystem Modifications, Changes in abiotic conditions

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 ressources, 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 ressources, Outdoor sports and leisure activities, recreational activities, Marine water pollution, Human induced changes in hydraulic conditions, Other Ecosystem Modifications, Changes in abiotic conditions
A144	Sanderling	*Calidris alba*	C03, F01, G01, H03, M01	Renewable abiotic energy use, Marine and Freshwater Aquaculture, Outdoor sports and leisure activities, recreational activities, Marine water pollution, Changes in abiotic conditions
A149	Dunlin	*Calidris alpina*	C03, F01, F02, G01, H03, J02, J03, M01	Renewable abiotic energy use, Marine and Freshwater Aquaculture, Fishing and harvesting aquatic ressources, 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 ressources, Outdoor sports and leisure activities, recreational activities, Marine water pollution, Human induced changes in hydraulic conditions, Other Ecosystem Modifications, Changes in abiotic conditions

Species Code	Common Name	Scientific Name	Threats and Pressures Codes	Known Threats and Pressures
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 ressources, 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 ressources, 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
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 (2013) Conservation Objectives for North Dublin Bay SAC [IE0000206] Version 1.

NPWS (2013) Conservation Objectives for South Dublin Bay SAC [IE0000210] Version 1.

NPWS (2021) Conservation Objectives for Glenasmole Valley SAC [IE0001209] Version 1.

NPWS (2021) Conservation Objectives for Rye Water Valley/Carton SAC [IE0001398] Version 1.

NPWS (2017) Conservation Objectives for Wicklow Mountains SAC [IE0002122] Version 1.

NPWS (2015) Conservation Objectives for North Bull Island SPA [IE0004006] Version 1.

NPWS (2015) Conservation Objectives for South Dublin Bay and River Tolka Estuary SPA [IE0004024] Version 1.

NPWS (2022) Generic Conservation Objectives for Wicklow Mountains SPA [IE0004040] Version 9.

Appendix V Author Details

Lead Author - Callum O'Regan is a graduate ecologist who holds a B.Sc. degree in Zoology from University College Cork and obtained a Master's degree in Conservation Behaviour from Galway-Mayo Institute of Technology in 2021. Callum has skills in data management and analysis, report writing and mapping. Callum has worked on a number of reports including Ecological Impact Assessments (EcIAs) on Rathcool Aerodrome and on the Platform for Growth in both Ballycuggaran and Kilkee.

Supervisor - Andrew Torsney is a Principal Ecologist with 9 years' experience working on major national and local scale projects. Andrew graduated from University College Dublin in 2011 with a B.Sc. degree in Zoology and obtained Master's degree in Biodiversity and Conservation from the University of Leeds in 2012. He has a range of ecological skills which include habitat mapping, ecological surveying, data interpretation and report writing. Andrew is a vegetative plant specialist, who has a wealth of experience classifying riparian habitats and identifying rare floral species. Andrew has a vast knowledge of riparian and freshwater ecosystems and undertakes freshwater surveys regularly. Andrew holds 4 national protected species licenses and has a lot of experience optioning surveying licenses for aquatic species such as the white clawed crayfish. He is also a Bat specialist with a wealth of experience, in acoustic surveying and monitoring of bats. Throughout Andrews's career he has worked on a number of large-scale multifaceted projects such as the Killaloe to Dublin water supply project NIS. For this work, Andrew designed and oversaw all ecological field work relating to the Environmental Impact Assessment (EIA) and AA.

Andrew has been the principal ecologist for a range of projects including the AA of the National Wind Energy Guidelines, a number of AAs for County Councils and a range of large-scale infrastructure projects.

Reviewer - Andrew Reynolds has a BSc in Environmental Planning and Management, Dublin Institute of Technology, 2015. Andrew has contributed to a number of complex Environmental Impact Statements, planning applications and environmental reports. He has experience working as part of team projects and in the preparation of EIA documents on behalf of multi-nationals and infrastructural providers for a diverse range of projects.