



GREENFIELDS SWORDS LRD

Natura Impact Statement

Jackie Green Construction

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1 INTRODUCTION

1.1 Background

DNV was commissioned by Jackie Green Construction, to prepare an Appropriate Assessment (AA) Screening Report in relation to a Proposed Large-Scale Residential Development (LRD) entitled 'Greenfields Swords LRD' at Greenfields, Swords Business Park, Swords, Co. Dublin. The AA Screening Report concluded that a degree of uncertainty exists in whether the Proposed Development could give rise to potentially significant effects on three European sites, namely:

- *Malahide Estuary SAC (000205),*
- *Malahide Estuary SPA (004025),*
- *North-West Irish Sea SPA (004236).*

A Natura Impact Statement (NIS) has therefore been prepared for the Proposed Development. The purpose of this NIS report is to provide information for the relevant competent authority to carry out a Natura Impact Statement (NIS) in respect of the Proposed Development.

1.2 Quality Assurance and Competence

All surveying and reporting have been carried out by qualified and experienced ecologists and environmental consultants. CRK, ecologist with DNV undertook the field surveys and authored this report. BMC, ecologist with DNV undertook the winter bird scoping survey for the Site.

CRK is an Ecologist with a M.Sc. in Biodiversity and Conservation from Trinity College Dublin. CRK's experience as an ecologist is broad both variety of ecological reports and literature, and field surveys conducted. CRK has experience in surveying habitats, birds, plants, bats, mammals and invasive species, with some experience in assessing welfare conditions of animals using behavioural repertoires as indicators. CRK's experience in ecological report writing extends from Research associated reporting to AA screening reports and Natura 200 Impact (NIS) reports.

BMC is an Ecologist and experienced Ornithologist with 12 years of bird survey experience. Brian is a longstanding and active member of Bird Watch Ireland and has provided Ornithology survey work for ecological consultancies, e.g., vantage points surveys of gulls, terns, raptors, waders, and wildfowl; hinterland surveys of the above as well as riverine species; and breeding waders and country birds. Brian is highly experienced with all survey methodologies and with surveying all species groups of Irish birds and migrants.

1.3 Description of Proposed Development

1.3.1 Site Location

The Site of the Proposed Development is a 2.22 hectare (Ha) site in Greenfield, Swords Business Park, Swords, Co. Dublin, located approximately 140 meters (m) south of Seatown Park West, and 300m north of Swords Business Park. The Site is principally bound: to the north by an access road and ancillary car park to serve the commercial units in Swords Business Park; to the east by the M1 Motorway; to the south by Mantua Road; and to the west by the 'Total Produce PLC' warehouse.

Figure 1 shows the overall Site location for the Proposed Development.



FIGURE 1. SITE LOCATION

1.3.2 Proposed Development Description

The Proposed Development consists of a mixed-use development that constitutes a 'Large-Scale Residential Development' (LRD) at this site of 2.22 Ha principally located at Swords Business Park, Swords, Co. Dublin. The site is principally bound: to the north by an access road and ancillary car park to serve Swords Business Park; to the east by the M1 Motorway; to the south by Mantua Road; and to the west by an access road to serve Swords Business Park. The application site also extends to include parts of: the access road to the north and west for footpath, landscape and foul drainage connection works; Mantua Road to the west for foul drainage connection works; and the green strip to the south at Mantua Road for a pedestrian and cyclist connection.

Permission is sought for a mixed-use development with a gross floor area of 30,358 sq m and principally comprised in 5 No. blocks (A–E), with heights ranging from 1 No. to 9 No. storeys. The proposed block heights are as follows: Block A is 6 No. to 7 No. storeys; Block B is 6 No. to 7 No. storeys; Block C is 6 No. to 7 No. storeys; Block D is 6 No. to 9 No. storeys; and Block E is 1 No. to 9 No. storeys. The development consists of: 289 No. residential apartments (60 No. 1-bed, 200 No. 2-bed and 29 No. 3-bed); retail/commercial unit (701 sq m); and crèche (418 sq m) with outdoor play area (42 sq m).

Permission is also sought for: new multi-modal site entrance to the west; minor relocation of existing northern site entrance to the east; internal road, cycle and footpath network; 132 No. car parking spaces; 13 no. motorcycle parking spaces; cycle parking; hard and soft landscaping, including public open space, communal amenity space (at-grade and as roof gardens atop Block D and Block E) and incidental open space; private amenity space as balconies and terraces facing all directions; public lighting; bin stores; plant rooms; 2 No. sub-stations; green roofs; rooftop plant, PV panels, telecommunications infrastructure, lift overruns and automatic opening vents; and all associated works above and below ground.

A Natura Impact Statement has been prepared in respect of the proposed development. The Planning Application, along with the Natura Impact Statement, may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the offices of the Planning Authority during its public opening hours: Fingal County Council, Fingal County Hall, Main Street, Swords, Fingal, Co. Dublin. Opening Hours 09:30 16:30, Monday–Friday. (Cash Office opening hours are 09:30–15:30.) The Planning Application, along with the Natura Impact Statement, may also be inspected online at the following website set up by the applicant: XXX

A submission or observation in relation to the Application and Natura Impact Statement may be made in writing to the Planning Authority on payment of a fee of €20, within the period of 5 weeks, beginning on the date of receipt by Fingal County Council of the Application, and such submissions or observations will be considered by the Planning Authority in making a decision on the application. The Planning Authority may grant permission subject to or without conditions, or may refuse to grant permission.



FIGURE 2. PROPOSED SITE LAYOUT (MCORM 2026)

1.3.3 Drainage and Water Supply

1.3.3.1 Surface water

The following information is extracted from the Engineering Infrastructure Report & Stormwater Impact Assessment (Roger, 2026).

Existing Surface Water Drainage

As per the above report, the existing site is greenfield. However, there is an existing 900m surface water pipeline laid parallel to the eastern boundary of the Site. This pipe currently drains the Swords Business park to the south of the Proposed Development and also drains the public road (L6310) between. A remnant alignment of what was the Gaybrook watercourse remains on the Site but this has been diverted some c.30 years ago into the above noted 900mm culvert and the ditch remains “dry” with no upstream flows entering the site.

Proposed Surface Water Drainage

The surface water drainage design has been carried out in accordance with the Greater Dublin Regional Code of Practice, the GDSDS and the CIRIA Report c753 “The SuDS Manual” 2015. Attenuation and SuDS are included in the design.

It is proposed to outfall the attenuated surface water from the Proposed Development into the existing 900mm surface water pipeline located parallel to the eastern boundary of the Site (see Figure 3). From here, all surface water will be direct north to the 1350mm pipeline, before outfall into the Malahide estuary. The surface water drainage infrastructure for the Proposed Development will collect the rainfall on Site, via sustainable urban drainage systems (SuDS) proposed for the Site, and convey the water via intensive green roofs, bioretention areas, drained tree pits, permeable paving, underground pipes, manholes and direct towards a vortex flow restricting devices, Hydrobrake or similar. The retained water will be stored in 2 no. below ground void arched system, such as the StormTech system and 2 no. detention basins. Due to the constrained nature of the Proposed Development and requirement to provide useable open space for the residents, it is proposed to use 2 no. below ground attenuation storage areas between Blocks A/B and B/C in the privately managed landscaped open space areas. Bio-retention features are contained in these areas to replicate natural drainage characteristics and fulfil the SuDS principles. 2 no. open detention basins are also provided where the Site is less constrained.

Sustainable Drainage Systems (SuDS)

The Proposed Development will incorporate the design principles of Sustainable Drainage Systems (SuDS). The SuDS elements which were found applicable to the proposed scheme design and layout include the following:

- Intensive green roofs
- Permeable paving to all parking spaces
- Tree pits
- Bio-retention areas
- Filter swales
- Silt-trap/catchpit manholes
- Hydrobrake
- Detention basin and stone lines voided arch retention storage

1.3.3.2 Foul Drainage

The following information is extracted from the Engineering Infrastructure Report & Stormwater Impact Assessment (Roger, 2026).

Existing Foul Water Drainage

There are no known public foul drainage services on the Site of the Proposed Development. There are existing private foul drainage systems in the surrounding area, but the Proposed Development intends to construct a new foul pumping station on the Site to cater for the Development with a rising main extending to the Seatown road roundabout at the R132 Dublin Road.

Proposed Foul Water Drainage

Foul water drainage at the Site is to be in accordance with the Uisce Éireann Code of Practice for Wastewater Infrastructure. Uisce Éireann have issued a Confirmation of Feasibility (CDS25000867 - 21/07/25) approval noting that connection is feasible without upgrades to the existing infrastructure. A foul pumping station is proposed to service the Site, which will pump the effluent into the 100mm diameter rising main along the L6310 "Mantua Road". From here, the networks discharge into the existing UÉ network (750mm trunk sewer) in the R132 Dublin Road roundabout approximately 630m from the pumping station location on Site (see Figure 4). The pumping station is located at the required separation distances from existing neighbouring buildings and the proposed residential blocks. It is fully below ground level with only 2 no. above ground kiosks visible. All foul water from this network will be treated at Swords Wastewater Treatment Plant (WwTP).

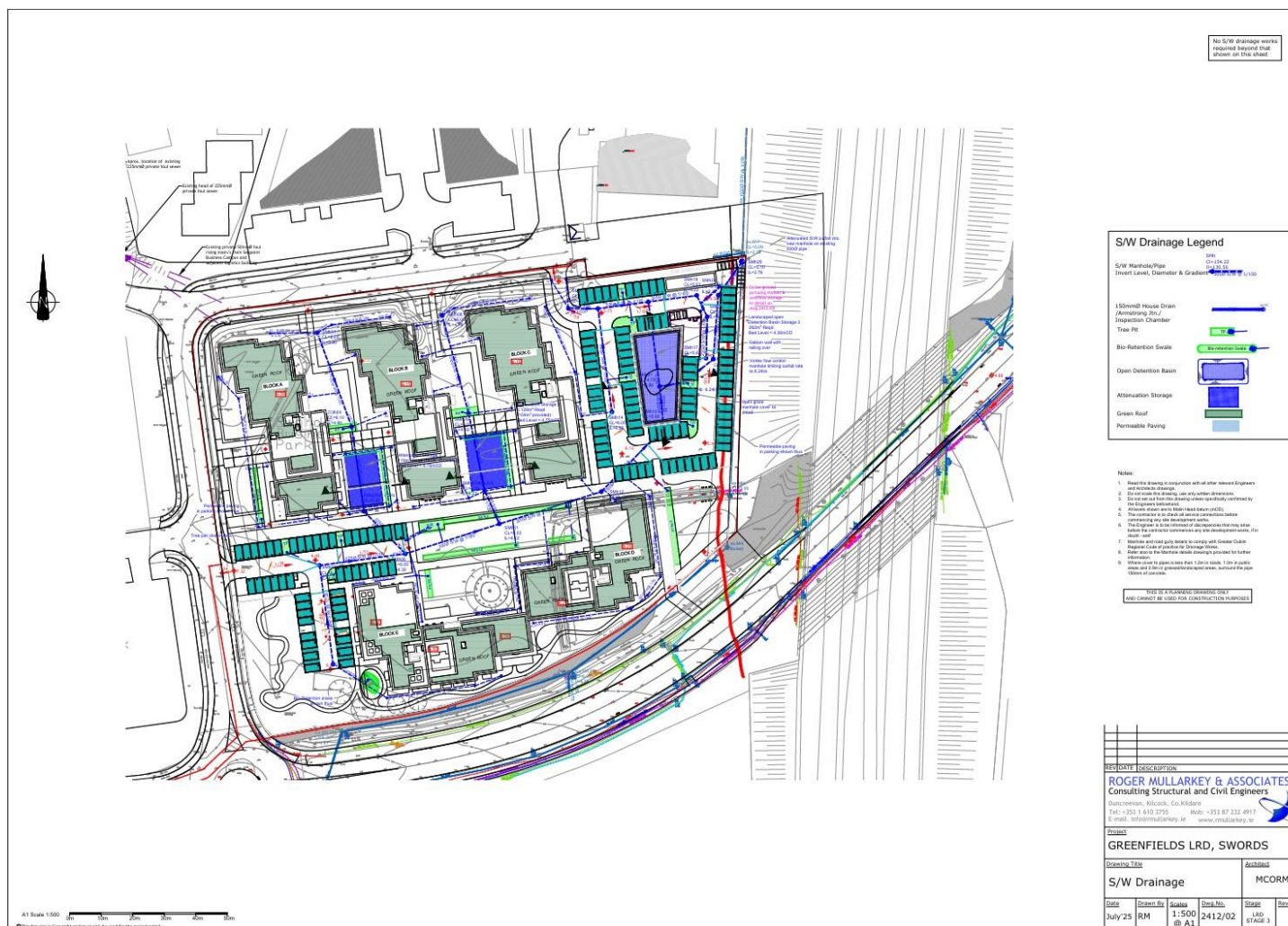


FIGURE 3. PROPOSED SURFACE WATER DRAINAGE LAYOUT FOR THE PROPOSED DEVELOPMENT (ROGER 2025A)

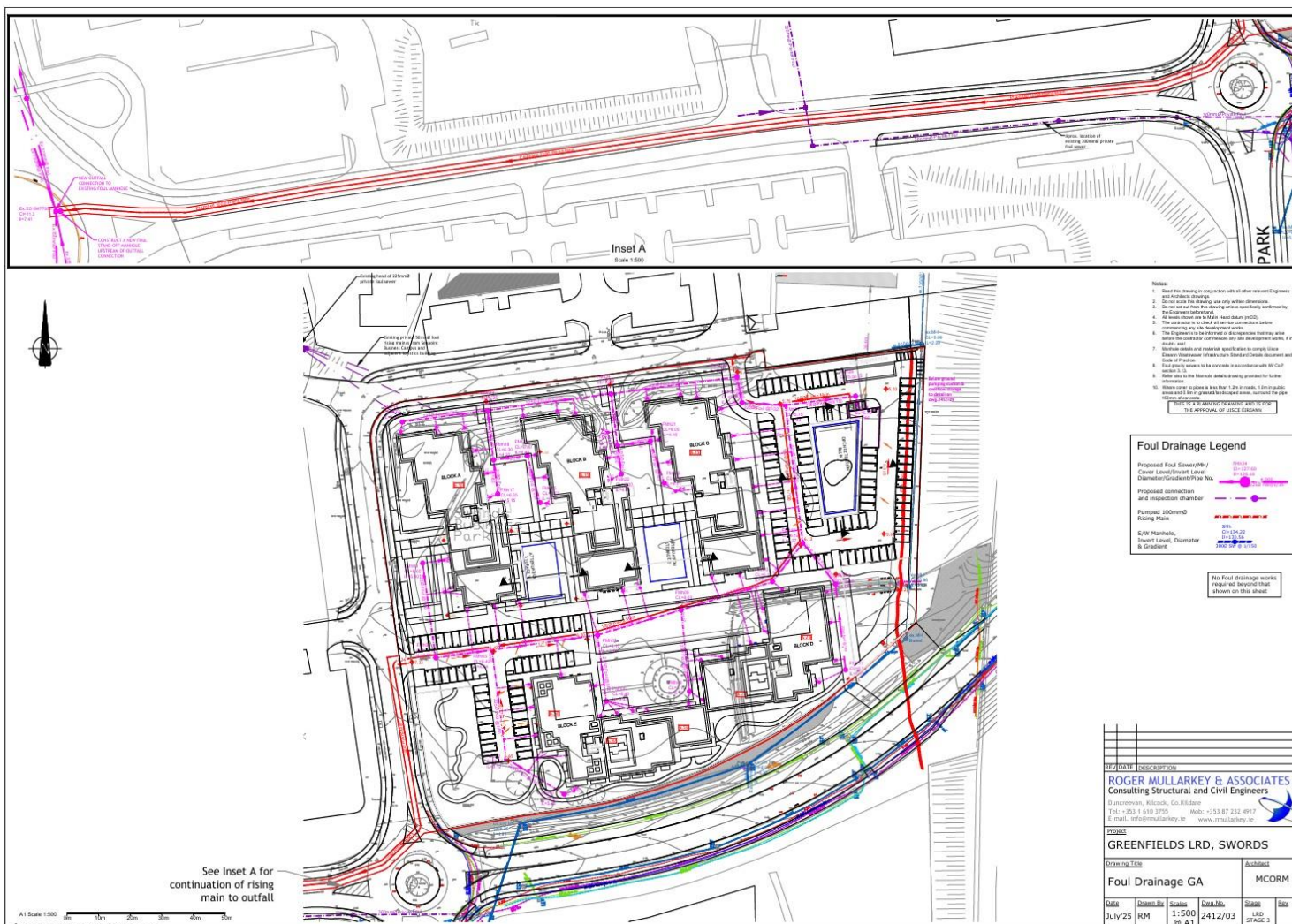


FIGURE 4. PROPOSED FOUL WATER DRAINAGE LAYOUT FOR THE PROPOSED DEVELOPMENT (ROGER 2025B)

2 LEGISLATIVE AND POLICY CONTEXT

2.1 Legislative Background

The Habitats Directive (92/43/EEC) seeks to conserve natural habitats and wild fauna and flora by the designation of Special Areas of Conservation (SACs) and the Birds Directive (2009/147/EC) seeks to protect birds of special importance by the designation of Special Protected Areas (SPAs). The Habitats Directive has been transposed into Irish law through the EC (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011). It is the responsibility of each member state to designate SPAs and SACs, both of which will form part of Natura 2000, a network of protected sites throughout the European Community.

SACs and SPAs are collectively known as “Natura 2000” or “European” sites. SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and other regularly occurring migratory birds and their habitats. The annexed habitats and species for which each site is selected correspond to the Qualifying Interests (QIs) and Special Conservation Interests (SCIs) of the sites; from these the conservation objectives of the site are derived.

An ‘Appropriate Assessment’ (AA) is an assessment required prior to the grant of planning permission to determine whether a plan or project, based on best scientific knowledge, will have an adverse effect on the integrity of a European site, either alone or in combination with other plans and projects. It is required for any plan or project not directly connected with or necessary to the management of a site but likely to have a significant effect on it.

An AA is required under Article 6 of the Habitats Directive where a project or plan may give rise to significant effects upon a Natura 2000 site. Paragraph 3 states that:

“6(3) 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.”

2.1.1 Legislative Context

The obligations in relation to a Natura Impact Statement (NIS) have been implemented in Ireland under Chapter 3 of Part 6 of the Planning and Development Act 2024, and in particular Section 215 in relation to Natura Impact Statements.

A NIS may be prepared and submitted to the competent authority by the applicant for permission.

The preparation of a NIS must comply with the following content requirements as per the Planning and Development Act 2024:

- The NIS must be prepared by a person with the necessary scientific competence.
- It must specify all habitat types and species for which the relevant European site(s) is (/ are) designated and those likely to be significantly affected by the development.
- The NIS must identify all potential significant effects of the development on the relevant European site(s), considering its (/ their) conservation objectives. This includes effects arising from the development itself or in combination with other plans or projects.
- It must assess the identified effects and their implications for the European site(s).
- The NIS should identify any measures proposed to avoid or reduce adverse effects on the European site(s).
- Based on the assessments, the NIS must conclude whether the proposed development will adversely affect the integrity of the European site(s). Additionally, this may extend to:

- Retrospective consent applications, the NIS must conclude whether the development has, is, or will adversely affect the integrity of the European site.
- Requests to alter or extend permissions, the NIS must conclude whether the proposed changes will adversely affect the integrity of the European site.

Following the preparation and submission of a NIS by the applicant for permission, the competent authority shall carry out an appropriate assessment of the relevant development as per the obligations set out in the Planning and Development Act 2024, Part 6, Chapter 3, Section 217.

2.2 Policy Context

2.2.1 Fingal County Development Plan 2023-2029

While the County Development Plan in its entirety is relevant to the Proposed Development and can be referred to separately, policies, principles and objectives of the Fingal County Development Plan 2023-2029 that are of relevance to this Screening Report are outlined below:

- **Policy GINHP5:** *“Develop the green infrastructure network to ensure the conservation and enhancement of biodiversity, including the protection of European Sites, the provision of accessible parks, open spaces and recreational facilities (including allotments and community gardens), the sustainable management of water, the maintenance of landscape character including historic landscape character and the protection and enhancement of archaeological and heritage landscapes.”*
- **Objective GINHO2:** *“Reduce fragmentation and enhance the resilience of Fingal’s green infrastructure network by strengthening ecological links between urban areas, Natura 2000 sites, proposed Natural Heritage Areas, parks and open spaces and the wider regional network by connecting all new developments into the wider green infrastructure network.”*
- **Policy GINHP12:** *“Protect areas designated or proposed to be designated as Natura 2000 sites (i.e., Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, and Refuges for Fauna.”*
- **Objective GINHO27:** *“Support the National Parks and Wildlife Service, in the maintenance and achievement of favourable conservation status for the habitats and species in Fingal by taking full account of the requirements of the Habitats and Birds Directives, in the performance of its functions.”*
- **Objective GINHO28:** *“Ensure that development does not have a significant adverse impact on proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, Refuges for Fauna, Habitat Directive Annex I sites and Annex II species contained therein, and on rare and threatened species including those protected by law and their habitats.”*
- **Policy GINHP17:** *“Strictly protect areas designated or proposed to be designated as Natura 2000 sites (i.e., Special Areas of Conservation (SACs) and Special Protection Areas (SPAs); also known as European sites) including any areas that may be proposed for designation or designated during the lifetime of this Plan.”*
- **Objective GINHO35:** *“In accordance with Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities 2010, any plans or projects that are likely to have a significant effect on a Natura 2000 site, either individually or in combination with other plans or projects, are subject to a screening for Appropriate Assessment unless they are directly connected with or necessary to the management of a Natura 2000 site.”*
- **Objective GINHO79:** *“Ensure that there is appropriate public access to the coast including the provision of coastal walkways and cycleways, while taking full account of the need to conserve and enhance the natural and cultural heritage of the coast and the need to avoid significant adverse impacts on European Sites and species protected by law, through Screening for*

Appropriate Assessment, and examine the designation of traditional walking routes thereto as public rights of way.”

2.2.2 Fingal Biodiversity Action Plan (2023-2030)

Fingal Biodiversity Action Plan (BAP) 2023-2030 is set out to protect and improve biodiversity through six topics:

- Delivery of the Ecological Network across Fingal;
- Building for Biodiversity and Managing Open Space for Biodiversity;
- Climate change Adaption and mitigation;
- Agri Environment Schemes and Rewilding;
- Research & Monitoring; and
- Raising Awareness.

2.2.3 National Biodiversity Action Plan 2023 – 2030

The National Biodiversity Plan (NBAP) 2023-2030, the fourth such plan for Ireland, captures the objectives, targets and actions for biodiversity that will be undertaken by a wide range of government, civil society and private sectors. Actions required to achieve the strategic objectives as well as the lead and key partners responsible for their implementation are set out for each of the objectives and their outcomes.

TABLE 1. OBJECTIVES AND OUTCOMES OF THE NATIONAL BIODIVERSITY ACTION PLAN 2023 - 2030

Objective	Outcome
1: Adopt a Whole-of-Government, Whole-of-Society Approach to Biodiversity	1A: Governance structures and reporting outputs have improved.
	1B: Organisational capacity and resources for biodiversity have increased at all levels of Government.
	1C: Responsibility for biodiversity is shared across the whole of government.
	1D: Biodiversity initiatives are supported across the whole of society.
	1E: The legislative framework for biodiversity conservation is robust, clear and enforceable.
2: Meet Urgent Conservation and Restoration Needs	2A: The protection of existing designated areas and protected species is strengthened and conservation and restoration within the existing protected area network are enhanced.
	2B: Biodiversity and ecosystem services in the wider countryside are conserved and restored – agriculture & forestry.
	2C: Biodiversity and ecosystem services in the wider countryside are conserved and restored – peatlands & climate action.
	2D: Biodiversity and ecosystem services in the marine and freshwater environment are conserved and restored.
	2E: Genetic diversity of wild and domesticated species is safeguarded.
	2F: A National Restoration Plan is in place to contribute to the ambition of the EU Biodiversity Strategy 2030 and global restoration targets.
	2H: Invasive alien species (IAS) are controlled and managed on an all-island basis to reduce the harmful impact they have on biodiversity and measures are undertaken to tackle the introduction and spread of new IAS to the environment.

3. Secure Nature's Contribution to People	3A: Ireland's natural heritage and biocultural diversity is recognised, valued, enhanced and promoted in policy and practice.
	3B: The role of biodiversity in supporting wellbeing, livelihoods, enterprise and employment is recognised and enhanced.
	3C: Planning and development will facilitate and secure biodiversity's contributions to people.
4. Enhance the Evidence Base for Action on Biodiversity	4A: Research funding bodies will have an improved understanding of the research and skills required to address biodiversity research gaps.
	4B: Data relevant to biodiversity and ecosystems, including conservation needs, is widely accessible and standardised.
	4C: Long-term monitoring programmes are in place to guide conservation and restoration goals.
	4D: Ireland has prepared national assessments of ecosystem services.
5. Strengthen Ireland's Contribution to International Biodiversity Initiatives	5A: Science, policy and action on biodiversity conservation and restoration is effectively coordinated in an all-island approach.
	5B: Ireland takes action internationally to cooperate with other countries, sectors, disciplines and communities to address the biodiversity crisis.
	5C: Ireland enhances its contributions to the international biodiversity data drive.

2.3 Stages of Appropriate Assessment

The AA process is a four-stage process. Each stage requires different considerations, assessments and tests to ultimately arrive at the relevant conclusion for each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

The four stages of an AA, can be summarised as follows:

- **Stage 1: Screening.** The Screening for AA considers whether a plan or project is directly connected to or necessary for the management of a European site, or whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a European site in view of its conservation objectives.
- **Stage 2: NIS.** Where Stage 1 determines that significant effects are likely, uncertain or unknown, the preparation of a NIS is required. The NIS must include a scientific examination of evidence and data to classify potential impacts on any European site(s) in view of their conservation objectives in the absence of mitigation. The NIS will identify appropriate mitigation to remove the potential for likely significant adverse effects on any European site(s). If the competent authority determines that the plan or project would have an adverse effect on the integrity of any European site(s) despite mitigation, it can only grant consent after proceeding through stages 3 and 4.
- **Stage 3: Assessment of alternative solutions.** If the outcome of Stage 2 is negative i.e., adverse impacts to the sites cannot be scientifically ruled out, despite mitigation, the plan or project should proceed to Stage 3 or be abandoned. This stage examines alternative solutions to the proposal.
- **Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain.** The final stage is the main derogation process examining whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project to adversely affect a European site, where no less damaging solution exists.

The Habitats Directive promotes a hierarchy of avoidance, mitigation, and compensatory measures. First the project should aim to avoid any negative effects on European sites by identifying possible effects early

in the planning stage and designing the project to avoid such effects. Second, mitigation measures should be applied, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If the project is still likely to result in adverse effects, and no further practicable mitigation is possible, a refusal for planning permission may be recommended. In this case, the project will generally only be considered where no alternative solutions are identified and the project is required for IROPI, or, in the case of priority habitats, considerations of health or safety, or beneficial consequences of primary importance for the environment or to other IROPI. Then compensation measures are required for any remaining adverse effects.

2.4 Stage 1: Appropriate Assessment Screening Conclusion

An AA Screening Report was prepared for the Proposed Development by DNV in April/May 2026 (DNV, 2026).

The conclusion of the AA Screening Report is as follows:

“The Proposed Development at Greenfields, Swords Business Park, Swords, Co. Dublin has been assessed taking into account:

- The nature, size and location of the proposed works and possible impacts arising from the construction works.*
- The QIs and conservation objectives of the European sites*
- The potential for in-combination effects arising from other plans and projects.*

*In conclusion, upon the examination, analysis and evaluation of the relevant information and applying the precautionary principle, it is concluded by the authors of this report that the possibility **cannot be excluded** that the Proposed Development will have a significant effect on any of the European sites listed below:*

- Malahide Estuary SAC (000205),*
- Malahide Estuary SPA (004025),*
- North-West Irish Sea SPA (004236).*

In carrying out this AA screening, any targeted ecological mitigation measures and/or measures intended or included for the purposes of avoiding adverse effects arising as a result of the Proposed Development on any European site have not been taken into account.

*On the basis of the screening exercise carried out above, it can be concluded, on the basis of the best scientific knowledge available and objective information, that the possibility of any significant effects on the above listed European sites, whether arising from the project itself or in combination with other plans and projects, **cannot be excluded** in light of the above listed European sites’ conservation objectives. Thus, there is a **requirement** to proceed to Stage 2 of the Appropriate Assessment process; and a **NIS has been prepared** and accompanies this submission under separate cover.”*

As such, this NIS will assess the potential effects of the Proposed Development on:

- Malahide Estuary SAC (000205),
- Malahide Estuary SPA (004025),
- North-West Irish Sea SPA (004236).

The pathway to these European sites from the Proposed Development is presented in the table below and shown in Figure 5.

TABLE 2. EUROPEAN SITES AND THEIR IDENTIFIED PATHWAYS TO THE PROPOSED DEVELOPMENT

European Site	Land	Air	Hydrological	Hydrogeological
Malahide Estuary SAC (000205)	No	No	Yes	No
Malahide Estuary SPA (004025)	No	No	Yes	No
North-West Irish Sea SPA (004236)	No	No	Yes	No

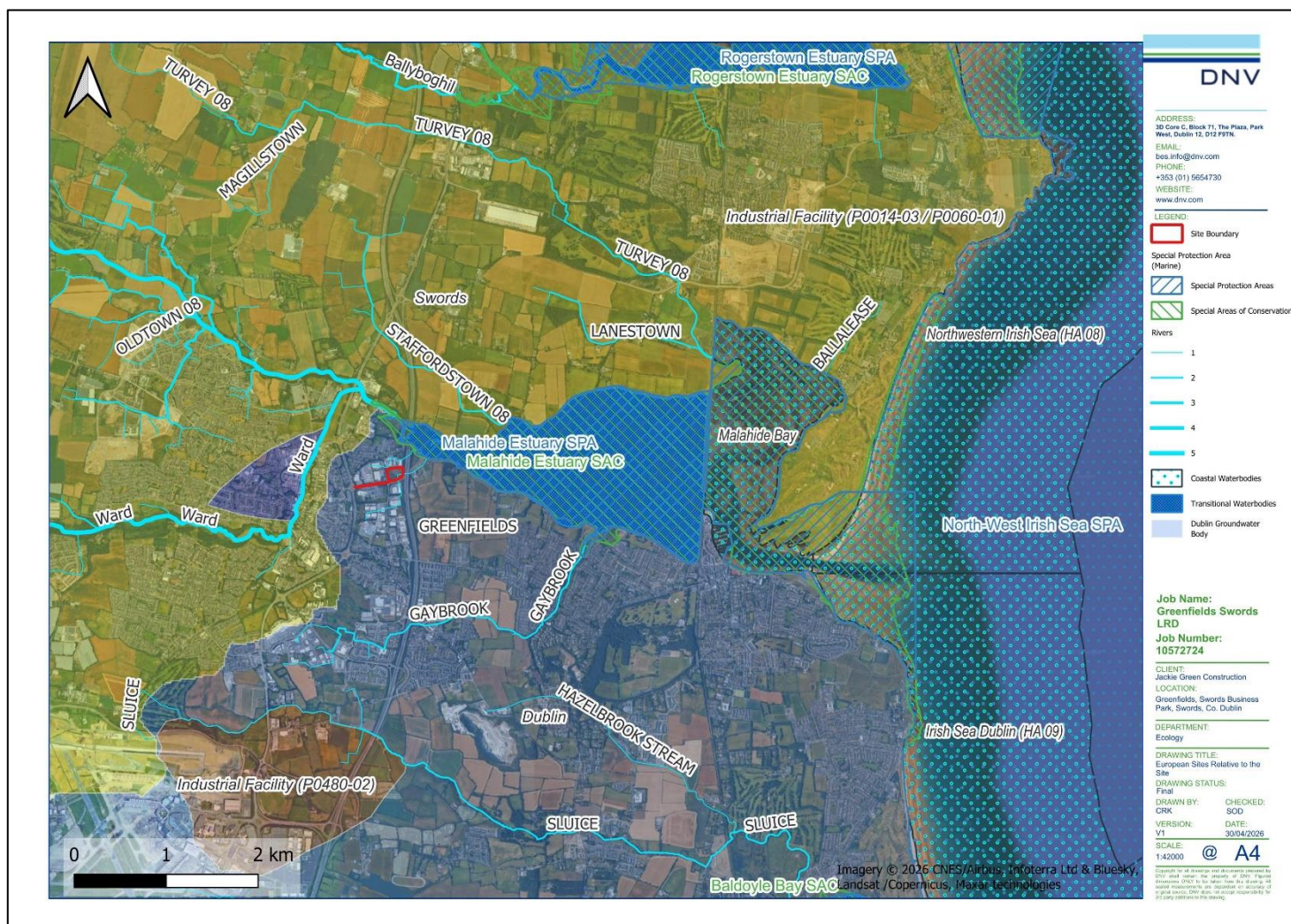


FIGURE 5. LOCATION OF RELEVANT EUROPEAN SITES AS IDENTIFIED IN AA SCREENING (DNV, 2026)

3 NIS METHODOLOGY

3.1 Guidance

This NIS has been undertaken in accordance with the following guidance:

- *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities*. (Department of Environment, Heritage and Local Government, 2010 revision);
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular NPW 1/10 & PSSP 2/10;
- *Communication from the Commission on the precautionary principle* (European Commission, 2000);
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC* (European Commission, 2019);
- *Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission, 2021);
- *Appropriate Assessment Screening for Development Management, OPR Practice Note PN01, Office of the Planning Regulator March 2021*; and
- *Amendments to section 42 of the Planning and Development Act 2000, as amended and associated Planning and Development Regulations 2001. Department of the Environment, Heritage and Local Government. (2021). Circular Letter: EUIPR 01/2021.*

3.2 NIS Steps

This NIS has been prepared following the steps described below:

- Description of the baseline existing environment at the Site of the Proposed Development;
- Review and description of available data for the relevant European site(s) potentially affected as identified in the Screening Report (DNV, 2026);
- Identification and description of potential effects on the relevant European site(s) and their designated QIs/SCIs;
- Assessment of the likely significance of the effects and/or impacts identified on the relevant QIs/SCIs in view of their Site Specific Conservation Objectives (SSCOs) where available;
- Description and characterisation of other projects or plans that in combination with the Proposed Development have the potential for having significant effects on the relevant QIs/SCIs;
- Identification of appropriate mitigation measures to remove the likelihood of significant effects on any European site(s) and their QIs/SCIs; and
- Exclusion of sites where it can be objectively concluded that there will be no significant effects once mitigation measures are adhered to.

3.3 Desk Study

A desktop study was carried out in April 2026 to collate and review available information, datasets and documentation sources relevant for the completion of the NIS. The desk-top study, completed in April 2026, relied on the following sources:

- Information on the network of European sites, relevant boundaries, QIs and conservation objectives, obtained from the National Parks and Wildlife Service (NPWS) at www.npws.ie and the European Environment Agency (EEA) at <https://natura2000.eea.europa.eu/>;

- Information on the status of EU protected habitats and species in Ireland, obtained from the NPWS Article 17 reports;
- Text summaries of the relevant European sites taken from the respective Site Synopses for each site, available at www.npws.ie;
- Information on waterbodies, catchment areas and hydrological connections obtained from the Environmental Protection Agency (EPA) at www.gis.epa.ie;
- Information on bedrock, groundwater, aquifers and their statuses, obtained from Geological Survey Ireland (GSI) at www.gsi.ie;
- Satellite imagery and mapping obtained from various sources and dates including Google, Digital Globe, Bing and Ordnance Survey Ireland; and
- Information on the extent, nature and location of the Proposed Development, provided by the applicant and their design team.

A comprehensive list of all the specific documents and information sources consulted in the completion of this report is provided in Section 6 - References.

3.4 Field Surveys

A PEA walkover survey has been carried out at the Site to date, which involved a survey of habitats and flora (including invasive species), mammal survey, and bird scoping survey. This was carried out on 14th March 2025. No limitations to field surveys were encountered which would prevent robust conclusions being drawn as to the potential impacts of the Proposed Development. Results relevant to this Screening Report have been summarised in section 4.2.

TABLE 3. FIELD SURVEYS UNDERTAKEN AT THE PROPOSED DEVELOPMENT SITE.

Survey	Surveyor	Dates
Habitats and Floral Survey (incl. invasive species)	DNV (CRK & BS)	14 th March 2025
General Mammal Survey	DNV (CRK & BS)	14 th March 2025
Bird Scoping Survey	DNV (CRK & BS)	14 th March 2025
Winter Bird Scoping Survey	DNV (BMC)	26 th February 2025

3.5 Impact Prediction

Potential impacts on the relevant European site(s) identified during the AA Screening are based on information regarding their QIs and/or SCI species, and the attributes and targets relating to their SSCOs where available. These have been informed by the desk study and any field surveys carried out prior to the preparation of this report.

Impact prediction is based on the Source-Pathway-Receptor (S-P-R) model. The following describes the steps of the S-P-R approach taken in this NIS:

- Potential sources of effects were identified based on the Proposed Development description and details, including changes to potentially suitable ex-situ habitats at the Site (i.e., habitats utilised by Species of Conservation Importance (SCI) bird species outside of their designated SPAs).
- Up-to-date GIS spatial datasets for water catchments as well as any information from relevant site investigations and/or field surveys were used to identify the QIs/ SCIs within the relevant European site(s) that have a notable S-P-R connection to the Proposed Development:

- The catchment data were used to establish or discount potential hydrological connectivity between the Proposed Development and any QIs/SCIs.
 - Groundwater and bedrock information used to establish or discount potential hydrogeological connectivity between the Proposed Development and any QIs/SCIs.
 - Air and land connectivity assessed based on Proposed Development details and proximity to QIs/SCIs.
 - Consideration of potential indirect pathways, e.g., impacts to flight paths, *ex-situ* habitats, etc.
- Identification of potential impacts for those QIs/SCIs linked to the Proposed Development via notable S-P-R connections.

Where the preceding steps identified any potential for adverse impacts on any QIs/SCIs for the relevant European site(s), appropriate mitigation measures to eliminate the potential for significant adverse effects are identified in this report.

3.6 Limitations

No limitations were encountered which would prevent robust conclusions being drawn as to the potential impacts of the Proposed Development on the relevant European sites.

4 NATURA IMPACT STATEMENT

4.1 Existing Environment

4.1.1 Desk Study Results

4.1.1.1 Hydrology, Geology and Hydrogeology

The Site is located in the *Liffey and Dublin Bay* catchment (I.D.: 09), and in the *Mayne_SC_010* sub-catchment (I.D.: 09_17).

Two channels of the Gaybrook_010 (IE_EA_08G080700) watercourse, namely Greenfields and Seapoint, of the first order flows through the existing ditch at the Site and 13m north of the Site. The Greenfields channel traversing the Site is currently disused (dry) and was diverted approximately 30 years ago into the 900mm culvert running north parallel to the eastern boundary of the Site. These watercourses flows in the northeastern direction, ultimately draining into the Broadmeadow Water Estuary transitional waterbody (IE_EA_060_0100) approximately 270m downstream of the Site. This transitional waterbody flows into the Irish Sea via Malahide Bay (IE_EA_060_0000), Northwestern Irish Sea (HA 08) (IE_EA_020_0000), and Irish Sea Dublin (HA 09) (IE_EA_070_0000) coastal waterbodies. The Ward_040 (IE_EA_08W010610) watercourse of the fifth order is the closest river system to the Site, located 800m west of the Site (EPA, 2026). This watercourse also ultimately drains into the Broadmeadow Water Estuary transitional waterbody 1.3km downstream from the closest point from the Site via the Broadmeadow_040 (IE_EA_08B020800) watercourse of the sixth order.

The Site is situated on the *Dublin* (IE_EA_G_008) groundwater body, and the vulnerability to contamination of said groundwater from human activities is classified as 'Low' for the Site and the surrounding area (GSI, 2026). The aquifer type in the surrounding area is 'Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones' (LI) (GSI, 2026). The groundwater rock unit underlying the Site is the Malahide Formation, and is classified as 'Argillaceous bioclastic limestone, shale' (ML).

The soil underneath the Site of the Proposed Development is classified as 'Urban – soil concreted over' for the predominant area, with the eastern section of the Site classified as 'Fine loamy drift with siliceous stones'. The sub-soil underneath the Site is 'Man-made' for the predominant area where the Urban soil type is found, and the 'Limestone till (Carboniferous)' (TLs) for the eastern section of the Site (GSI, 2026).

The waterbody status for the waterbodies relevant to the Site as recorded by EPA (EPA, 2026) in accordance with European Communities Regulations 2003 (SI no. 722/2003) are provided in Table 4 below.

TABLE 4. EPA MONITORING STATIONS AND ASSIGNED Q VALUES

EPA Monitoring Station name	Station Code	Location from Site	Distance from Site	Assigned value	Q
WARD - Br at SW end of Swords (Well Rd Br)	RS08W010500	Southwest	1.2km	3	"Poor"
WARD - Scotchstone Br (Watery Lane)	RS08W010600	West	0.78km	3	"Poor"
Br d/s Scotchstone Br	RS08W010610	Northwest	0.9km	3-4	"Moderate"

TABLE 5. WFD RISK AND WATER BODY STATUS

Waterbody Name	Water body; EU code	Location from Site	Distance from Site (km)	WFD water body status (2019-2024)	WFD 3 rd cycle Risk Status	Hydraulic Connection to the Site
Surface Water Bodies						
Gaybrook_010	IE_EA_08G080700	North and Within Site	0.01 and Within Site	Poor	Review	Upstream of Site (for Northern channel) and within Site (disused and redirected)
Ward_040	IE_EA_08W010610	East	0.8	Moderate	At Risk	None
Broadmeadow_040	IE_EA_08B020800	North	0.9	Moderate	At Risk	None
Transitional Water Bodies						
Broadmeadow Water	IE_EA_060_0100	Northeast	0.26	Moderate	At Risk	Downstream of Gaybrooke_010, Ward_040 and Broadmeadow_040
Coastal Water Bodies						
Malahide Bay	IE_EA_060_0000	East	3.3	Good	Not at Risk	Downstream of Gaybrooke_010, Ward_040 and Broadmeadow_040, and connected to Broadmeadow water Estuary
Northwestern Irish Sea (HA08)	IE_EA_020_0000	East	4.5	Good	At Risk	Connected to Malahide Bay

Waterbody Name	Water body; EU code	Location from Site	Distance from Site (km)	WFD water body status (2019-2024)	WFD 3 rd cycle Risk Status	Hydraulic Connection to the Site
Irish Sea (HA 09)	IE_EA_070_0000	East	4.7	Good	Not at Risk	Connected to Malahide Bay and Northwest Irish Sea (HA 08)
Groundwater Bodies						
Dublin	IE_EA_G_008	N/A	N/A	Good	Review	Underlying groundwater-body

4.2 Relevant Field Survey results

4.2.1 Habitats & Flora

The habitat types, invasive species and other ecological conditions present within the Site, as recorded during the field survey, are described in this section, and summarised below (see Figure 6).

The majority of the Site consists of dry meadows and grassy verges (GS2) habitat that consists of herb dominated plant species. This habitat transitions into the scrub (WS1) habitat along the northwestern and western boundary of the Site, where woody and often large floral species are found. The (mixed) broadleaved woodland (WD1) is found at the southwestern section of the Site, where medium-large sized tree species were recorded. The exposed sand, gravel or till (ED1) habitat was recorded at the Site access gate along the northern boundary of the Site, where its extent was largely restricted as recorded during the field survey on 14th March 2025. However, this habitat has transitioned into the recolonising bare ground (ED3) habitat since the time of the survey, where pioneer floral species typically found on recolonising ground were observed during the bat surveys conducted for the Site in the month of August 2025. Along the western and eastern boundary of the Site, treelines (WL2) habitat is found, where larger sized tree species have been recorded. The hedgerows (WL1) habitat is found along the southern boundary of the Site, where floral species typically found in hedgerows were recorded. The GS2 habitat along the hedgerow and treeline habitats consist of rudimentary plant species that are typically found along the base of linear habitats. At the southern section of the Site, a drainage ditch (FW4) is found, While the ditch was dry during the time of survey with the absence of wet habitat based flora, the ditch is a former channel of the Gaybrook_010 stream flowing through the Site. Given that the ditch was dry during the field survey, it is assumed that it would contain water during heavy rainfall events, with its flow localised to the Site.

No signs of any rare flora were observed on Site during the survey.

Invasive Plant Species

No 'High Impact' or 'Medium Impact' invasive plant species or Third Schedule listed species were recorded on Site during the field surveys.

4.2.2 Fauna

Mammals

No rare or protected mammals were observed during the field surveys conducted for the Site. The overall Site has very low habitat suitability for terrestrial mammals, where the scrub (WS1), dry meadows and grassy verges (GS2), woodland (WD1), treeline (WL2) and hedgerow (WL1) habitats should they be present. However, given the lack of direct sightings, or signs of mammals recorded at the Site, and the absence of larger linear green corridors connecting the Site to greater green spaces in the larger area, it is considered that the presence of badgers or other larger mammals at the Site is very unlikely. Additionally, no riparian habitats or suitable watercourses are present within the Site, therefore, otters

(*Lutra lutra*) were not observed during the survey. No signs of otters such as spraints, holts, slide tracks or footprints were observed during the field survey and the Site does not contain suitable habitat for otters.

While the woodland habitats at the southern section of the Site and the treeline along the western and eastern boundary are potential suitable habitats for pine marten (*Martes martes*), this species was not recorded during the survey conducted in 2025. Moreover, no evidence of this species such as dropping, footprints, or feeding remains were recorded during the survey conducted for the Site. Given that there are suitable habitats within the Site and along the boundaries of the Site, it is considered that the presence of pine marten at the Site is possible.

Habitats recorded at the Site may offer some cover for small mammals such as European hedgehog (*Erinaceus europaeus*), pygmy shrew (*Sorex minutus*), red squirrel (*Sciurus vulgaris*), wood mouse (*Apodemus sylvaticus*), and Irish hare (*Lepus timidus subsp. hibernicus*) should they be present. Despite this, these species were not recorded on Site and is therefore considered that the habitats on Site do not have the potential to act as suitable habitats for these terrestrial mammals.

Bird Species

While the habitats on Site have limited potential to support terrestrial mammals, bird species may utilise the various habitats on Site for breeding and/or nesting behaviours. During the Site visit on 14th March 2025, ten bird species were recorded (see Table 6 below) at the Site. Of these, only one species is amber listed and none are red listed on the most recent 'Birds of Conservation Concern Ireland' (BoCCI) (Gilbert et al. 2021). The remaining bird species are green listed bird species.

TABLE 6. BIRD SPECIES RECORDED DURING WALKOVER SURVEY ON 14TH MARCH 2025

Species	BoCCI Status
Blackbird (<i>Turdus merula</i>)	Green
Great Tit (<i>Parus major</i>)	Green
Blue Tit (<i>Cyanistes caeruleus</i>)	Green
European Herring Gull (<i>Larus argentatus</i>)	Amber
Goldfinch (<i>Carduelis carduelis</i>)	Green
Jackdaw (<i>Coloeus monedula</i>)	Green
Magpie (<i>Pica pica</i>)	Green
Rook (<i>Corvus frugilegus</i>)	Green
Woodpigeon (<i>Columba palumbus</i>)	Green
Wren (<i>Troglodytes troglodytes</i>)	Green

Winter Bird Scoping Survey

Given the close proximity to a Special Protection Area in the vicinity of the Site, a winter bird scoping survey was conducted on 26th February 2025. In total, 15 bird species were recorded during the survey, which have been listed in Table 7 below.

TABLE 7. BIRD SPECIES RECORDED DURING THE WINTER BIRD SCOPING SURVEY ON 26TH FEBRUARY 2025.

Species	BoCCI Status	Activity
Blue Tit (<i>Cyanistes caeruleus</i>)	Green	Common in and in the vicinity of the Site.
Chaffinch (<i>Fringilla coelebs</i>)	Green	Ten individuals in the western treeline.
Dunnock (<i>Prunella modularis</i>)	Green	Common in and in the vicinity of the Site. Several calling from cover.
Goldfinch (<i>Carduelis carduelis</i>)	Green	Found in loose association with chaffinch.
Grey Wagtail (<i>Motacilla cinerea</i>)	Red	Flyover
Hooded Crow (<i>Corvus corone</i>)	Green	Flyover
Jackdaw (<i>Coloeus monedula</i>)	Green	Flyover
Magpie (<i>Pica pica</i>)	Green	Flyover
Robin (<i>Erithacus rubecula</i>)	Green	Several present on Site
Rook (<i>Corvus frugilegus</i>)	Green	Common
Siskin (<i>Spinus spinus</i>)	Green	Six individuals in the western treeline.
Song Thrush (<i>Turdus philomelos</i>)	Green	One individual flushed from scrub habitat on Site.
Starling (<i>Sturnus vulgaris</i>)	Amber	Flyover
Woodpigeon (<i>Columba palumbus</i>)	Green	Eleven individuals feeding on Site
Wren (<i>Troglodytes troglodytes</i>)	Green	Common in and in the vicinity of the Site.



FIGURE 6. BASELINE HABITATS AT THE PROPOSED DEVELOPMENT AS RECORDED ON 14TH MARCH 2025

4.3 Summary Of Relevant European Sites

The following descriptions of the relevant habitats and species occurring within the European site(s) considered in this NIS have been extracted from the Standard Data Forms (EEA 2026), Site Synopses (NPWS 2019a) and any supporting documents available for the relevant site(s).

4.3.1 Malahide Estuary SAC (000205)

The following description of the Malahide Estuary SAC is extracted from the Site Synopsis (NPWS 2017) for the site:

“Malahide Estuary is situated immediately north of Malahide and east of Swords in Co. Dublin. It is the estuary of the River Broadmeadow. The site is divided by a railway viaduct which was built in the 1800s.

*The outer part of the estuary is mostly cut off from the sea by a large sand spit, known as ‘the island’. The outer estuary drains almost completely at low tide, exposing sand and mud flats. There is a large bed of Eelgrass (Dwarf Eelgrass, *Zostera noltii*, and Narrow-leaved Eelgrass, *Z. angustifolia*) in the north section of the outer estuary, along with Beaked Tasselweed (*Ruppia maritima*) and extensive mats of green algae (*Enteromorpha* spp., *Ulva lactuca*). Common Cord-grass (*Spartina anglica*) is also widespread in this sheltered part of the estuary.”*

*“The inner estuary does not drain at low tide apart from the extreme inner part. Here, patches of saltmarsh and salt meadows occur, with Sea Aster, Sea Plantain (*Plantago maritima*) and Sea Club-rush (*Scirpus maritimus*). Beaked Tasselweed occurs in one of the channels.*

The site includes a fine area of rocky shore south-east of Malahide and extending towards Portmarnock. This represents the only continuous section through the fossiliferous Lower Carboniferous rocks in the Dublin Basin, and is the type locality for several species of fossil coral.”

“The estuary also attracts migrant species such as Ruff, Curlew Sandpiper, Spotted Redshank and Little Stint. Breeding birds of the site include Ringed Plover, Shelduck and Mallard. Up to the 1950s there was a major tern colony at the southern end of the island and the habitat remains suitable for these birds.

The inner part of the estuary is heavily used for water sports. A section of the outer estuary has recently been infilled for a marina and housing development.

This site is a fine example of an estuarine system with all the main habitats represented. The site is important ornithologically, with a population of Brent Goose of international significance.”

4.3.2 Malahide Estuary SPA (004025)

The following description of Malahide Estuary SPA is extracted from the Site Synopsis Supporting (NPWS 2013c) for the site:

*“Malahide Estuary is situated in north Co. Dublin, between the towns of Malahide and Swords. The site encompasses the estuary, saltmarsh habitats and shallow subtidal areas at the mouth of the estuary. A railway viaduct, built in the 1800s, crosses the site and has led to the inner estuary becoming lagoonal in character and only partly tidal. Much of the outer part of the estuary is well-sheltered from the sea by a large sand spit, known as “The Island”. This spit is now mostly converted to golf-course. The outer part empties almost completely at low tide and there are extensive intertidal flats exposed. Substantial stands of eelgrass (both *Zostera noltii* and *Z. angustifolia*) occur in the sheltered part of the outer estuary, along with Tasselweed (*Ruppia maritima*). Green algae, mostly *Ulva* spp., are frequent on the sheltered flats. Common Cord-grass (*Spartina anglica*) is well established in the outer estuary and also in the innermost part of the site. The intertidal flats support a typical macroinvertebrate fauna, with polychaete worms (*Arenicola marina* and *Hediste diversicolor*), bivalves such as *Cerastoderma edule*, *Macoma balthica* and *Scrobicularia plana*, the small gastropod *Hydrobia ulvae* and the crustacean *Corophium volutator*. Salt marshes, which provide important roosts during high tide, occur in parts of the outer estuary and in the extreme inner part of the inner estuary. These are characterised by such species as Sea Purslane (*Halimione portulacoides*), Sea Aster (*Aster tripolium*), Thrift (*Armeria maritima*), Sea Arrowgrass (*Triglochin maritima*) and Common Saltmarsh-grass (*Puccinellia maritima*).”*

“This site is of high importance for wintering waterfowl and supports a particularly good diversity of species. It has internationally important populations of Lightbellied Brent Goose (1,104 individuals or 5% of the all-Ireland total) and Black-

tailed Godwit (409 individuals or 2.9% of the all-Ireland total) - figures given here and below are mean peaks for the five winters 1995/96-1999/2000. Furthermore, the site supports nationally important populations of an additional 12 species: Great Crested Grebe (63), Shelduck (439), Pintail (58), Goldeneye (215), Red-breasted Merganser (99), Oystercatcher (1,360), Golden Plover (1,843), Grey Plover (201), Knot (915), Dunlin (1,594), Bar-tailed Godwit (156) and Redshank (581). The high numbers of diving ducks reflects the lagoon-type nature of the inner estuary, and this is one of the few sites in eastern Ireland where substantial numbers of Goldeneye can be found."

"Malahide Estuary SPA is a fine example of an estuarine system, providing both feeding and roosting areas for a range of wintering waterfowl. The lagoonal nature of the inner estuary is of particular value as it increases the diversity of birds which occur. The site is of high conservation importance, with internationally important populations of Light-bellied Brent Goose and Black-tailed Godwit, and nationally important populations of a further 12 species. Two of the species which occur regularly (Golden Plover and Bar-tailed Godwit) are listed on Annex I of the E.U. Birds Directive. Malahide Estuary (also known as Broadmeadow Estuary) is a Ramsar Convention site."

4.3.3 North-west Irish Sea SPA (004236)

The following description of North-West Irish Sea is extracted from the Site Synopsis Supporting (NPWS 2023b) for the site:

"The North-west Irish Sea cSPA constitutes an important resource for marine birds. The estuaries and bays that open into it along with connecting coastal stretches of intertidal and shallow subtidal habitats, provide safe feeding and roosting habitats for waterbirds throughout the winter and migration periods. These areas, along with more pelagic marine waters further offshore, provide additional supporting habitats (for foraging and other maintenance behaviours) for those seabirds that breed at colonies on the north-west Irish Sea's islands and coastal headlands. These marine areas are also important for seabirds outside the breeding period.

This SPA extends offshore along the coasts of counties Louth, Meath and Dublin, and is approximately 2,333km² in area. This SPA is ecologically connected to several existing SPAs in this area.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Common Scoter, Red-throated Diver, Great Northern Diver, Fulmar, Manx Shearwater, Shag, Cormorant, Little Gull, Kittiwake, Black-headed Gull, Common Gull, Lesser Black-backed Gull, Herring Gull, Great Black-backed Gull, Little Tern, Roseate Tern, Common Tern, Arctic Tern, Puffin, Razorbill and Guillemot.

The breeding seabird species listed for those SPAs, which about the North-West Irish Sea SPA are: Fulmar (Lambay Island SPA); Cormorant (Skerries Island SPA; Ireland's Eye SPA; Lambay Island SPA); Shag (Skerries Island SPA; Lambay Island SPA); Lesser Black-backed Gull (Lambay Island SPA); Herring Gull (Skerries Island SPA; Ireland's Eye SPA; Lambay Island SPA); Kittiwake (Lambay Island SPA; Ireland's Eye SPA; Howth Head SPA); Roseate Tern (Rockabill SPA); Common Tern (Rockabill SPA); Arctic Tern (Rockabill SPA); Little Tern (Boyne Estuary SPA); Guillemot (Lambay Island SPA, Ireland's Eye SPA); Razorbill (Lambay Island SPA, Ireland's Eye SPA); and Puffin (Lambay Island SPA). The Common Tern population that is listed for the nearby South Dublin Bay and River Tolka Estuary SPA is also likely to use this SPA as a foraging resource.

Informed by two surveys of the western Irish Sea region in 2016 an estimated 120,232 and 34,626 individual marine birds occurred in this SPA during autumn and winter respectively. Those marine bird species whose estimated abundances equalled or exceeded 1% of the total estimated size of the winter assemblage are: Red-throated Diver (538), Fulmar (506), Little Gull (391), Kittiwake (944), Black-headed Gull (508), Common Gull (2,866), Herring Gull (6,893), Great Black-backed Gull (2,096), Razorbill (4,638) and Guillemot (13,914). The estimated 2016 summer abundance of Manx Shearwater in the North West Irish Sea SPA is 13,010 and is of international importance. The estimated 2016 autumn and winter abundances of Great Northern Diver in the North West Irish Sea SPA is 248 and 230 respectively and are of international importance. The estimated abundances of Common Scoter over parts of this SPA can reach significant numbers (e.g. 14,567 in December 2018) which is also of international importance."

4.3.4 Qualifying Interests and Conservation Objectives

The QIs/SCIs and their respective conservation objectives for each of the relevant European site(s) are detailed in Table 8 below.

TABLE 8. QUALIFYING INTERESTS (QIs) / SPECIAL CONSERVATION INTERESTS (SCIs) AND THEIR CONSERVATION OBJECTIVES FOR THE RELEVANT EUROPEAN SITES. THE CONSERVATION STATUS OF EACH QI / SCI WAS SOURCED FROM THE RELEVANT STANDARD DATA FORM(S) (SOURCE: EEA (2026)) AND THE LATEST NATIONAL STATUS IS TAKEN FROM THE LATEST ARTICLE 17 REPORT (NPWS, 2019A & 2019B) AND BOCCI¹ RESPECTIVELY.

QI / SCI (* = priority habitat)	Conservation Status	National Status	Conservation Objective
Malahide Estuary SAC (000205) (NPWS 2013a)			
1140 Mudflats and sandflats not covered by seawater at low tide	Good	Inadequate	To <u>maintain</u> the favourable conservation condition of this habitat in Malahide Estuary SAC
1310 <i>Salicornia</i> and other annuals colonising mud and sand	Good	Favourable	
1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)	Good	Inadequate	To <u>restore</u> the favourable conservation condition of this habitat in Malahide Estuary SAC
1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)	Significant	Inadequate	To <u>maintain</u> the favourable conservation condition of this habitat in Malahide Estuary SAC
2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	Significant	Inadequate	To <u>restore</u> the favourable conservation condition of this habitat in Malahide Estuary SAC
2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)	Good	Bad	
Malahide Estuary SPA (004025) (NPWS 2013b)			
A005 Great Crested Grebe (<i>Podiceps cristatus</i>)	Good	Amber	To <u>maintain</u> the favourable conservation condition of this species in Malahide Estuary SPA
A046 Light-bellied Brent Goose (<i>Branta bernicla hrota</i>)	Excellent	Amber	
A048 Shelduck (<i>Tadorna tadorna</i>)	Excellent	Amber	
A054 Pintail (<i>Anas acuta</i>)	Excellent	Amber	
A067 Goldeneye (<i>Bucephala clangula</i>)	Excellent	Red	
A069 Red-breasted Merganser (<i>Mergus serrator</i>)	Excellent	Amber	
A130 Oystercatcher (<i>Haematopus ostralegus</i>)	Excellent	Red	To <u>maintain</u> the favourable conservation condition of this species in Malahide Estuary SPA
A140 Golden Plover (<i>Pluvialis apricaria</i>)	Good	Red	
A141 Grey Plover (<i>Pluvialis squatarola</i>)	Excellent	Red	

¹ Birds of Conservation Concern in Ireland (BOCCI) 2020-2026 (Gilbert, Stanbury & Lewis, 2021). The colours represent the species designation on the various BOCCI lists.

QI / SCI (* = priority habitat)	Conservation Status	National Status	Conservation Objective
A143 Knot (<i>Calidris canutus</i>)	Excellent	Red	
A149 Dunlin (<i>Calidris alpina</i>)	Excellent	Red	
A156 Black-tailed Godwit (<i>Limosa limosa</i>)	Excellent	Red	
A157 Bar-tailed Godwit (<i>Limosa lapponica</i>)	Good	Red	
A162 Redshank (<i>Tringa totanus</i>)	Excellent	Red	
A999 Wetland and Waterbirds	N/A	N/A	To <u>maintain</u> the favourable conservation condition of this habitat in Malahide Estuary SPA
North-West Irish Sea SPA (004236) (2023a)			
A001 Red-throated Diver (<i>Gavia stellata</i>)	N/A	Amber	To <u>maintain</u> the favourable conservation condition of this species in North-West Irish Sea SPA
A003 Great Northern Diver (<i>Gavia immer</i>)	N/A	Amber	
A009 Fulmar (<i>Fulmarus glacialis</i>)	N/A	Amber	To <u>restore</u> the favourable conservation condition of this species in North-West Irish Sea SPA
A013 Manx Shearwater (<i>Puffinus puffinus</i>)	N/A	Amber	To <u>maintain</u> the favourable conservation condition of this species in North-West Irish Sea SPA
A017 Cormorant (<i>Phalacrocorax carbo</i>)	N/A	Amber	To <u>restore</u> the favourable conservation condition of this species in North-West Irish Sea SPA
A018 Shag (<i>Phalacrocorax aristotelis</i>)	N/A	Amber	
A065 Common Scoter (<i>Melanitta nigra</i>)	N/A	Red	To <u>maintain</u> the favourable conservation condition of this species in North-West Irish Sea SPA
A179 Black-headed Gull (<i>Chroicocephalus ridibundus</i>)	N/A	Amber	
A182 Common Gull (<i>Larus canus</i>)	N/A	Amber	
A183 Lesser Black-backed Gull (<i>Larus fuscus</i>)	N/A	Amber	
A184 Herring Gull (<i>Larus argentatus</i>)	N/A	Amber	To <u>restore</u> the favourable conservation condition of this species in North-West Irish Sea SPA

QI / SCI (* = priority habitat)	Conservation Status	National Status	Conservation Objective
A187 Great Black-backed Gull (<i>Larus marinus</i>)	N/A	Green	To <u>maintain</u> the favourable conservation condition of this species in North-West Irish Sea SPA
A188 Kittiwake (<i>Rissa tridactyla</i>)	N/A	Red	To <u>restore</u> the favourable conservation condition of this species in North-West Irish Sea SPA
A192 Roseate Tern (<i>Sterna dougallii</i>)	N/A	Amber	To <u>maintain</u> the favourable conservation condition of this species in North-West Irish Sea SPA
A193 Common Tern (<i>Sterna hirundo</i>)	N/A	Amber	
A194 Arctic Tern (<i>Sterna paradisaea</i>)	N/A	Amber	
A199 Guillemot (<i>Uria aalge</i>)	N/A	Amber	
A200 Razorbill (<i>Alca torda</i>)	N/A	Red	
A204 Puffin (<i>Fratercula arctica</i>)	N/A	Red	To <u>restore</u> the favourable conservation condition of this species in North-West Irish Sea SPA
A862 Little Gull (<i>Hydrocoloeus minutus</i>)	N/A	Amber	To <u>maintain</u> the favourable conservation condition of this species in North-West Irish Sea SPA
A195 Little Tern (<i>Sternula albifrons</i>)	N/A	Amber	



FIGURE 7. MALAHIDE ESTUARY SAC HABITATS IN VICINITY OF THE PROPOSED DEVELOPMENT.

4.4 Impact Prediction

This section follows the S-P-R method as outlined in section 3.5 to identify if and how any of the QIs/SCIs of the relevant European site are linked to the Proposed Development. Once the connections have been identified the potential impacts of the Proposed Development on ***Malahide Estuary SAC (000205)***, ***Malahide Estuary SPA (004025)***, and ***North-West Irish Sea SPA (004236)*** in light of its QIs/SCIs are assessed.

For the purposes of objectivity and clarity, mitigation measures **are not considered in the impact prediction**. This includes all measures that will act limit or eliminate the potential for significant adverse impacts on the relevant European site.

4.4.1 Potential impacts of the Proposed Development on key Species and Habitats

The following elements of the Proposed Development were identified and assessed for their potential to cause likely significant effects on European sites.

Construction Phase (*Estimated duration: 24 months*)

- Uncontrolled releases of silt, sediments and/or other pollutants to air due to earthworks;
- Surface water run-off containing silt, sediments and/or other pollutants into nearby waterbodies or surface water network;
- Surface water run-off containing silt, sediments and/or other pollutants into the local groundwater;
- Waste generation during the Construction Phase comprising soils and construction wastes;
- Increased noise, dust and/or vibrations as a result of construction activity;
- Increased dust and air emissions from construction traffic;
- Increased lighting in the vicinity as a result of construction activity; and
- Increased human presence and activity as a result of construction activity.

Operational Phase (*Estimated duration: Indefinite*)

- Surface water drainage from the Site of the Proposed Development;
- Foul water from the Proposed Development;
- Increased lighting at the Site and in the vicinity emitted from the Proposed Development; and
- Increased human presence and activity at the Site and in the vicinity as a result of the Proposed Development.
- Increased collision risk at the Site as a result of the high-rise buildings.

Table 9 below outlines the identified pathways between the Proposed Development and the relevant QIs/SCIs, and assesses the potential significant effects of the Proposed Development on these. The assessment outlined below does not consider mitigation measures that will be implemented as part of the Proposed Development, but the nature of mitigation that will be required to eliminate the potential for significant adverse impacts is identified in the table, if any.

TABLE 9. ASSESSMENT OF THE POTENTIAL IMPACT OF THE PROPOSED DEVELOPMENT ON THE QIs AND SCIs OF THE RELEVANT EUROPEAN SITES. THOSE QIs/SCIs FOR WHICH NOTABLE IMPACT PATHWAYS WERE IDENTIFIED HAVE BEEN HIGHLIGHTED IN GREEN.

Description	Impact Pathway(s)	Assessment of likely significant effects	Mitigation Requirement
Malahide Estuary SAC (000205)			
1140 Mudflats and sandflats not covered by seawater at low tide			
<i>Conservation objective:</i> To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in Malahide Estuary SAC.			
Mudflats and sandflats not covered by seawater at low tide covers an estimate area of 311 hectares (ha) in this SAC. The habitat is recorded within the upper and lower reaches of the SAC. The nearest mapped location of this habitat is located approx. 240m northeast of the Site.	<u>Hydrological connection.</u> The 900mm culvert parallel to the eastern boundary of the Site outflows into Malahide Estuary where this habitat is located with the SAC.	Due to the estimated location of this habitat, it is considered to be at risk of any significant Construction and Operational Phase impacts, such as construction related surface water runoff and the discharge of surface water during the Operational Phase. The conservation attributes and targets for this habitat relate to maintaining the extent of the <i>Zostera</i>-dominated community and the <i>Mytilus edulis</i>-dominated community complex. Therefore, water quality and limiting any additional nutrient inputs to this habitat is an important consideration to ensure that this habitat meets its targets. It is therefore deemed that potential effects on this habitat type are related to water quality deterioration and subsequent deterioration of the habitat during both the Construction and Operational Phases.	Construction Phase: Surface water protection measures. Operational Phase: Embedded SuDS mitigation
1310 <i>Salicornia</i> and other annuals colonizing mud and sand			
<i>Conservation Objective:</i> To maintain the favourable conservation condition of <i>Salicornia</i> and other annuals colonising mud and sand in Malahide Estuary SAC.			
Based on data from Saltmarsh Monitoring Project (SMP) (McCorry, 2007). Habitat surveyed and mapped as a single sub-site, giving a total estimated area of 1.93ha in this SAC. <i>Salicornia</i> is an annual species, so its distribution can vary significantly from year to year. The largest area of <i>Salicornia</i> flats occurs in the outer estuary	<u>Weak Hydrological connection.</u> The 900mm culvert parallel to the eastern boundary of the Site outflows into Malahide Estuary where this habitat is located within the SAC. However, this habitat is located at the lower	This habitat is considered to be at risk of any significant Construction and Operational Phase impacts, such as construction related surface water runoff and the discharge of surface water during the operational phase. However, given the significant distance of this habitat from the Site, the tidal nature of waters at the estuary and the associated dilution and dispersion capacity of the receiving water at Malahide estuary, it is considered that the potential for adverse effects on this habitat is negligible. Furthermore, the implementation of best practice construction methodologies and SuDS measures will further reduce the risk of any significant impacts.	None required

Description	Impact Pathway(s)	Assessment of likely significant effects	Mitigation Requirement
The nearest mapped location of this habitat is located approx. 3.9km east of the Site.	reaches of the SAC, at a distance of 3.9km from the Site.		
1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) <u>Conservation Objective:</u> To restore the favourable conservation condition of Atlantic salt meadows (<i>GlaucoPuccinellietalia maritima</i>) in Malahide Estuary SAC.			
Based on data from Saltmarsh monitoring Project (SMP) (McCorry, 2007). Habitat surveyed and mapped as a single sub-site, giving a total estimated area of 25.33ha in this SAC. This habitat is also the most prominent saltmarsh habitat in the SAC, where it occurs in mosaics with other saltmarsh habitats. The nearest mapped location of this habitat is located approx. 240m northeast of the Site.	<u>Hydrological connection.</u> The 900mm culvert parallel to the eastern boundary of the Site outflows into Malahide Estuary where this habitat is located within the SAC.	Due to the estimated location of this habitat, it is considered to be at risk of any significant Construction and Operational Phase impacts, such as construction related surface water runoff and the discharge of surface water during the Operational Phase. The conservation attributes and targets for this habitat relate to maintaining the of halophytic plant communities that it hosts, which are sensitive to changes in nutrient levels, salinity and other contaminant inputs. It is therefore deemed that potential effects on this habitat type are related to water quality deterioration and subsequent deterioration of the habitat during both the Construction and Operational Phases.	Construction Phase: Surface water protection measures. Operational Phase: Embedded SuDS mitigation
1410 Mediterranean salt meadows (<i>Juncetalia maritima</i>) <u>Conservation Objective:</u> To maintain the favourable conservation condition of Mediterranean salt meadows (<i>Juncetalia maritimi</i>) in Malahide Estuary SAC, which is defined by the following list of attributes and targets:			
Based on data from the Saltmarsh Monitoring Project (SMP) (McCorry, 2007). Habitat surveyed and mapped as a single sub-site of 0.64ha in this SAC. Mediterranean salt meadows is found high up in the saltmarsh but requires occasional tidal inundation. The nearest mapped location of this	<u>Weak Hydrological connection.</u> The 900mm culvert parallel to the eastern boundary of the Site outflows into Malahide Estuary where this habitat is located with the SAC. However, this habitat is located at the lower	This habitat is considered to be at risk of any significant Construction and Operational Phase impacts, such as construction related surface water runoff and the discharge of surface water during the operational phase. However, given the significant distance of this habitat from the Site, the tidal nature of waters at the estuary and the associated dilution and dispersion capacity of the receiving water at Malahide estuary, it is considered that the potential for adverse effects on this habitat is negligible. Furthermore, the implementation of best practice construction	None required

Description	Impact Pathway(s)	Assessment of likely significant effects	Mitigation Requirement
habitat is located approx. 4.8km northeast of the Site.	reaches of the SAC, at a distance of 4.8km from the Site.	methodologies and SuDS measures will further reduce the risk of any significant impacts.	
2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) <i>Conservation Objective:</i> To restore the favourable conservation condition of Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes') in Malahide Estuary SAC, which is defined by the following list of attributes and targets:			
Based on data from the Coastal Monitoring Project (CMP) (Ryle et al., 2009). Habitat was mapped from a single sub-site - Malahide Island in this SAC. Dunes are naturally dynamic systems that require continuous supply and circulation of sand. Marram grass (<i>Ammophila arenaria</i>) reproduces vegetatively and requires constant accretion of fresh sand to maintain active growth encouraging further accretion. At Malahide Island, there are transitional communities between the range of sand dune habitats and the range of saltmarsh habitats. The nearest mapped location of this habitat is located approx. 4km east of the Site.	<u>Weak Hydrological connection.</u> The 900mm culvert parallel to the eastern boundary of the Site outflows into Malahide Estuary where this habitat is located with the SAC. However, this habitat is located at the lower reaches of the SAC, at a distance of 4km from the Site.	This habitat is considered to be at risk of any significant Construction and Operational Phase impacts, such as construction related surface water runoff and the discharge of surface water during the operational phase. However, given the significant distance of this habitat from the Site, the tidal nature of waters at the estuary and the associated dilution and dispersion capacity of the receiving water at Malahide estuary, it is considered that the potential for adverse effects on this habitat is negligible. Furthermore, the implementation of best practice construction methodologies and SuDS measures will further reduce the risk of any significant impacts.	None required

Description	Impact Pathway(s)	Assessment of likely significant effects	Mitigation Requirement
2130 Fixed coastal dunes with herbaceous vegetation (grey dunes) <i>Conservation Objective:</i> To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation ('grey dunes') in Malahide Estuary SAC, which is defined by the following list of attributes and targets:			
Based on data from Coastal Monitoring Project (CMP) (Ryle et al., 2009). Habitat was mapped from a single sub-site- Malahide Island. The fixed dune habitat flanks the eastern and southern edge of Malahide Island. At Malahide Island, there are transitional communities between the range of sand dune habitats and the range of saltmarsh habitats, which represents one of the most intact examples of a dune-saltmarsh complex on the northeastern coastline. The nearest mapped location of this habitat is located approx. 3.9km east of the Site.	<u>Weak Hydrological connection.</u> The 900mm culvert parallel to the eastern boundary of the Site outflows into Malahide Estuary where this habitat is located with the SAC. However, this habitat is located at the lower reaches of the SAC, at a distance of 3.9km from the Site.	This habitat is considered to be at risk of any significant Construction and Operational Phase impacts, such as construction related surface water runoff and the discharge of surface water during the operational phase. However, given the significant distance of this habitat from the Site, the tidal nature of waters at the estuary and the associated dilution and dispersion capacity of the receiving water at Malahide estuary, it is considered that the potential for adverse effects on this habitat is negligible. Furthermore, the implementation of best practice construction methodologies and SuDS measures will further reduce the risk of any significant impacts.	None required
Malahide Estuary SPA (004025)			

Description	Impact Pathway(s)	Assessment of likely significant effects	Mitigation Requirement
This Site support nationally and internationally importance numbers of migratory and resident shorebird species. See Table 6 and Table 7 for a detailed list of SCI species	<u>Hydrological connection (210m downstream).</u> The 900mm culvert parallel to the eastern boundary of the Site outflows into Malahide Estuary where this SPA is located.	The potential effects on the waterbirds designated within this SPA are related to water quality deterioration and subsequent deterioration of waterbird habitat and food source during both the Construction and Operational Phase.	<u>Construction Phase:</u> Surface water protection measures. <u>Operational Phase:</u> Embedded SuDS mitigation.
North-West Irish Sea SPA (004236)			
This Site support nationally and internationally importance numbers of migratory and resident shorebird species. See Table 6 and Table 7 for a detailed list of SCI species	<u>Weak hydrological connection (5km downstream).</u> The 900mm culvert parallel to the eastern boundary of the Site outflows into Malahide Estuary in the vicinity of the SPA.	The potential effects on the waterbirds designated within this SPA are related to water quality deterioration and subsequent deterioration of waterbird habitat and food source during both the Construction and Operational Phase.	<u>Construction Phase:</u> Surface water protection measures. <u>Operational Phase:</u> Embedded SuDS mitigation.

4.4.2 Potential for In-combination Effects

4.4.2.1 Existing Planning Permissions

A search of planning applications located within a 300m radius of the Site of the Proposed Development was conducted using online planning resources such as the National Planning Application Database (NPAD) (MyPlan.ie) and Fingal County Council Planning Applications online map (FCC 2026). A 300m radius was selected for assessment of in-combination effects on the basis of the size, scale, and nature of the Proposed Development. Any planning applications listed as granted or decision pending from within the last five years were assessed for their potential to act in-combination with the Proposed Development and cause likely significant effects on the relevant European sites. Long-term developments granted outside of this time period were also considered where applicable.

It is noted that the majority of the few developments within the vicinity of the Site of the Proposed Development are applications granted for industrial parks and residential developments. The larger developments within the vicinity of the Site are listed in Table 10 below:

TABLE 10. GRANTED AND PENDING DEVELOPMENT APPLICATIONS WITHIN 300 M OF THE PROPOSED DEVELOPMENT. LOCATION AND DISTANCE GIVEN IS RELATIVE TO THE PROPOSED DEVELOPMENT.

Planning Reference	Planning Authority	Status	Location
F22A/0365	Fingal County Council	Granted Permission	South and west of the Proposed Development (approx. 25m away)
Development Description All in or in the vicinity of the townlands of Mainscourt, Roscall, Richardstown, Gracedieu, Brownstown, Magillstown, Skidoo, Dollards, Balheary, Newtown, broadmeadow, Balheary Demesne, Seatown West, Swords Demesne, Mantua, Greenfields, Seatown East and Mountgorry, Co. Dublin. The development of grid connection infrastructure to connect the approved solar photovoltaic ('PV') energy development on lands at Mainscourt, Ballyboghil, Co. Dublin under Register Reference F17A/0340, PL06F.249174 to the ESB Mountgorry 38kV Substation, Swords Business Park, Swords, Co. Dublin, comprising the laying of. 9,470 metres of 38kV underground electricity cables in ducts and associated infrastructure substantially under public roads and beneath the Ward River Bridge, Gracedieu Bridge and the Broadmeadow river by means of horizontal directional drilling. A Natura Impact Statement (NIS) will be submitted to the Planning Authority with the planning application.			
Potential for In-combination effects This development shares a hydrological pathway with the Proposed Development via surface water run-off into the existing 900mm culvert running parallel to the eastern boundary of the Site. The NIS report dated 18/07/2022 concluded that the Proposed Development will not result in any adverse effects on the QIs/SCIs of European sites on the basis that the specific mitigations measures, as outlined in the NIS, will be implemented. Specifically, the proposed construction works will be undertaken to avoid impairment of water quality. As such, in-combination effects with the Proposed Development can be ruled out.			
F23A/0438	Fingal County Council	Granted Permission	Northeast of the Proposed Development (approx. 800m away)
Development Description Permission is sought for (a) internal demolition of some non-original partitions on the upper and lower levels to facilitate new layout, (b) internal demolition and removal of some parts of upper floor and lower floor slabs to provide for new simplified floor levels internally, (c) removal of internal non-original stairs, (d) knock out section of exterior wall to the south to provide for new enlarged window opening, (e) opening			

up some original openings to the south elevation to provide for new windows, (f) new internal building works to provide for new floors in part and new partitions, (g) renovations to the house internally and new window replacement externally, (h) new waste water treatment plant WWTP to replace existing septic tank on site. All to split level 2 storey house which is a protected structure.

Potential for In-combination effects

This development shares a hydrological pathway with the Proposed Development at Malahide Estuary, where the culvert running parallel to the eastern boundary of the Site discharges into.

An Appropriate Assessment report dated 02/01/2024 concluded as follows- *“The proposed development is unlikely to give rise to any significant direct or indirect effect upon the Malahide Estuary SPA and SAC, the North-West Irish Sea SPA, the Rockabill to Dalkey Island SAC and the Lambay Island SPA and SAC. It can be concluded therefore that this proposed development will not significantly or adversely affect any the European Site comprising the Natura 2000 site network within the Zol and that a finding of no significant impact (FONSI) can be reached. The proposed development therefore is not considered to necessitate or warrant progression to Stage 2 Appropriate Assessment (Natura Impact Statement).”*

As such, in-combination effects with the Proposed Development can be ruled out.

4.4.2.2 Relevant Policies and Plans

The local policies and plans were reviewed and considered for possible in-combination effects with the Proposed Development. The Fingal County Development Plan (2023-2029) has directly addressed the protection of European sites through specific policy objectives (see section 2.2.1). These policies ensure that no new development will give rise to significant effects on any European sites, either individually or in-combination with other plans or projects (except in the rare cases where imperative reasons of overriding public interest exist).

Additionally, the Fingal Biodiversity Action Plan (2023-2030) is set out to protect and improve biodiversity and thus will not result in negative in-combination effects with the Proposed Development. Therefore, no in-combination effects are expected with the relevant policies and plans.

4.5 Avoidance and Mitigation Measures

The following sections outline the avoidance and mitigation measures identified to eliminate the potential for significant adverse impacts on the relevant European sites. Once the recommended measures outlined in the following sections are implemented in full, no adverse impacts on the relevant European sites or their QIs/SCIs are anticipated as a result of the Proposed Development. These mitigation measures will be included in a Construction and Environmental Management Plan (CEMP) that will be prepared prior to commencing works by the appointed construction contractor.

4.5.1 Summary of Potential Effects

Potential significant effects arising from the **Construction Phase** include:

- Water quality impacts in designated sites arising from surface water run-off during the Construction/Infill Phase, in particular during flooding events,
- Contamination of water and subsequent impacts on SCI species via alteration of water-based resources they may depend upon.

Potential significant effects arising from the **Operational Phase** include:

- Water quality impacts in designated sites arising from increased human activity and deviation from baseline surface water run-off levels at the Site.

The following mitigation and enhancement measures will ensure no significant effects arise on designated sites as a result of the Proposed Development, either alone or in-combination with other projects.

4.5.2 Avoidance by Design

4.5.2.1 Surface Water Management Approach

Surface water discharge rates from the proposed surface water drainage network will be controlled by a series of SuDS measures that have been proposed for the Site. SuDS in the form of green roofs, permeable paving across the parking space, tree pits, bio-retention areas, catchpit manholes, hydrobrakes, and open detention basins will act together to ensure efficient discharge of surface water from the Site to the 900mm culvert parallel to the eastern boundary of the Site. The inclusion of bio-retention areas and detention basins will have the capacity to provide attenuation on the surface water run-off from the Site, thereby reducing run-off rates from surface water on Site during its Operational Phase, and further mitigating the risk of surface water overflow during excessive rainfall/flooding events.

4.5.3 Construction Phase

4.5.3.1 Mitigation 1: Water Quality Protection

The following applies to all stages of the Construction Phase for the Proposed Development unless specific measures have been identified. As it has been identified that the Proposed Development could potentially affect SCI/QI species associated with the relevant European sites during the Construction Phase as a result of water quality impacts, the mitigation measures listed in the following sections will be undertaken.

Construction Phase Best Practice

The following measures, designed to protect surface water quality, will serve to prevent any negative effects occurring in the European sites situated in Malahide Estuary as a result of Construction Phase groundwater discharges from the Site. These mitigation measures will treat the source (e.g., refuelling of plant to be carried out at designated refuelling station locations on Site) or remove the pathway (e.g., no release of wastewater generated on-Site to ground during the Construction Phase).

All works carried out as part of the Proposed Development will comply with all Statutory Legislation including the Local Government (Water Pollution) acts, 1977 and 1990.

Personnel working on the Site will be trained in the implementation of environmental control and emergency procedures. Procedures and relevant documents produced will be formulated in consideration of standard best international practice including but not limited to:

- CIRIA, (2001), Control of Water Pollution from Construction sites, Guidance for Consultants and Contractors;
- Construction Industry Research and Information Association (CIRIA) Environmental Good Practice on Site (C650), 2005;
- BPGCS005, Oil Storage Guidelines;
- UK Pollution Prevention Guidelines (PPG) UK Environment Agency, 2004;
- Construction Industry Research and Information Association CIRIA C648: Control of water pollution from linear construction projects: Technical guidance (Murnane et al. 2006);
- CIRIA C648: Control of water pollution from linear construction projects: Site guide (Murnane et al. 2006); and
- Inland Fisheries Ireland (2016). Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters.

In addition, standard best practice measures will be implemented throughout the Construction Phase to ensure no construction-related pollutants are discharged into the surface water or groundwater at and surrounding the Site, that could subsequently be transferred by same to the SACs/SPAs. Standard best practice measures that will be implemented on the Site during the Construction Phase are as follows:

- Silt fencing will be used along the water boundary and any streams and/or drainage ditches on Site which may have a hydrological link to nearby designated sites.

- Any drains or sewers, where present, which could act as pathways for contamination from the Site will be blocked where required.
- Discharge water generated during placement of concrete will be stored and removed off Site for treatment and disposal.
- There will be no washing out of any concrete trucks on Site. Any washing of chutes will be carefully collected in a designated container which will be subsequently sent off site for compliant waste management.
- Specific areas for storage, delivery, loading/unloading of materials will be designated, which will have appropriate containment/spill protection measures where required. These storage areas will be located in suitable areas and at distance from any watercourses hydrologically connected to the relevant designated sites.
- Leachate generation from stockpiles or waste receptacles will be prevented by using waterproof covers.
- Prolonged exposure of contaminated soils or groundwater to the atmosphere will be avoided where practical or unnecessary.
- Appropriate bunding, storage and signage arrangements for all deleterious substances will be used.
- Robust and appropriate Spill Response Plan and Environmental Emergency Plans will be included within the Contractor's CEMP and the details of which will be communicated, resourced and implemented for the duration of the works.
- Control measures and spill clean-up equipment adequate to treat spills at the Site will be available and staff will be trained and experienced in using said equipment.
- A register will be kept of all hazardous substances either used on Site or expected to be present. The register shall be available at all times and shall include as a minimum: valid safety sheets; Health & Safety, environmental controls to be implemented when storing, handling, using and in the event of spillage of materials; emergency response procedures/precautions for each material; the Personal Protective Equipment (PPE) required when using the material.
- All existing services will be mapped, and a plan will be put in place to decommission/divert and manage any drains or sewers which are associated with the Site.
- A plan for dealing with any unknown drains or services which may be encountered during the works will be set out and implemented.
- Any surface water inflow into the main areas of excavation will be minimised where possible.

Maintenance of Plant and Machinery

- All plant and equipment will be regularly cleaned and properly maintained.
- There will be no washing out of any concrete trucks on Site.
- Pumped concrete will be monitored to ensure there is no accidental discharge and will be carried out in dry weather and with impermeable pouring mats laid down where possible.

Building/Road Network and Services

- Constructing buildings and roads above flood level to ensure that backflows through the surface water outfalls will not occur.
- The Proposed Development's road network will be finished with tarmac or asphalt surface which will discharge runoff to a piped drainage system, and surface water drains will be installed in roads and streets and in pre-determined wayleaves adjacent to building structures.
- All car parking and refuel areas at the Site will be located on substrate underlain with an impermeable liner to prevent contaminant leaching to groundwater.

Earthworks Mitigation

The proposed earthworks mitigation measures for the Construction Phase include:

- A street sweeper will attend Site regularly to clean the road when there are truck movements in and out of the Site.
- Hard surface roads will be regularly swept to remove mud and aggregate materials from their surface;

- Public roads outside the Site will be regularly inspected for cleanliness, and cleaned as necessary;
- Material handling systems and Site stockpiling of materials will be designed and laid out to minimise exposure to wind; and
- Water misting or sprays will be used on stockpiles as required if particularly dusty activities are necessary during dry or windy periods.

Storage and Use of Fuels, Oils and Chemicals

- Appropriate bunding, storage and signage arrangements for all deleterious substances (e.g., fuels, oils, and chemicals) will be used.
- Fuels, lubricants, and hydraulic fluids for equipment used on the construction Site will be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment according to best codes of practice (Enterprise Ireland BPGCS005).
- Waste oils and hydraulic fluids will be collected in leak-proof containers and removed from the Site for disposal or recycling.
- Diesel tanks, used to store fuel for the various items of machinery, will be self-contained and double-walled.
- Spillage and leaks of oil from cars parked in the Development during the Construction Phase are unavoidable. To reduce the potential impacts, oil interceptors will be incorporated into the Site drainage design.
- Any spillage of fuels, lubricants or hydraulic oils will be immediately contained and the contaminated soil removed from the Site and properly disposed of.
- Refuelling will be carried out from tanks or delivery vehicles on a designated impermeable surface and will not be left unattended.
- Plant will not be left running when not in use (i.e., no idling) and plant with dust arrestment equipment will be used where practical.

Spill/Emergency Response Plans

- Robust and appropriate Spill Response Plan and Site Environmental Emergency Plans (SEP) will be implemented for the duration of the works:
 - Identifying fuel storage and refuelling locations on designated areas within the compound, away from drainage ditches/waterbodies (where present), and on substrate underlain with an impermeable liner to prevent contaminant leaching to groundwater;
 - Identifying spill kit locations (spill kits will be required for each piece of heavy equipment (e.g., excavators, loaders, trucks, etc.) which will be at least 21L drum size each with spill pads, sorbent, small boom, plastic garbage bag and gloves;
 - A specially trained and dedicated Environmental and Emergency Spill Response team will be appointed before the commencement of works on Site.
 - Staff will be trained and experienced in using appropriate control measures and spill kits on-Site, and will be familiar with the location of all spill kit locations and the Site layout.
- A register will be kept of all hazardous substances either used on Site or expected to be present. The register shall be available at all times and shall include as a minimum:
 - Valid safety sheets; Health & Safety, environmental controls to be implemented when storing, handling, using and in the event of spillage of materials;
 - Emergency response procedures/precautions for each material;
 - PPE is required when using the material.

Waste Management and Disposal

Waste management and disposal will comprise the following:

- All existing services will be mapped, and a plan will be put in place to decommission/divert and manage any drains or sewers which are associated with the Site.

- Portaloos and/or containerised toilets and welfare units will be used to provide facilities for Site personnel. All associated waste will be removed from the Proposed Development Site by a licenced waste disposal contractor.
- Mixer washings are not to be discharged into ground or drainage ditches and will be collected and disposed of at a suitably licenced facility.

In addition, a minimal waste approach of reduction, reuse and recycling will be utilized where practicable/appropriate. Where this cannot be carried out, all wastes will be disposed of at licenced waste facilities.

4.5.4 Operational Phase

No additional mitigation (on top of the embedded measures described in Section 4.5.2) is required during the Operational Phase of the Proposed Development.

4.6 Monitoring

4.6.1 Construction Phase

During the Construction Phase, the following monitoring will be carried out by the construction contractor to ensure the implemented mitigation measures are maintained effectively:

- Surface water and groundwater protection measures will be checked weekly to ensure they remain effective, and more often during moderate to heavy rainfall events as appropriate.

4.6.2 Operational Phase

No monitoring is required during the Operational Phase of the Proposed Development.

5 CONCLUSION

This Natura Impact Statement details the findings of the Stage 2 Appropriate Assessment conducted to further examine the potential direct and indirect impacts of the Proposed Development planning application at Greenfields, Swords Business Park, Swords, Co. Dublin, on the following European Sites:

- *Malahide Estuary SAC (000205),*
- *Malahide Estuary SPA (004025),*
- *North-West Irish Sea SPA (004236).*

The above sites were identified by a screening exercise that assessed likely significant effects of a range of impacts that have the potential to arise from the Proposed Development. The AA investigated the potential direct and indirect effects of the proposed works, both during construction/infill and operation, on the integrity and qualifying interests of the above European Site, alone and in combination with other plans and projects, taking into account the site's structure, function and conservation objectives.

Where potentially significant effects were identified, a range of mitigation and avoidance measures have been suggested to avoid them. This NIS has concluded that, once the avoidance and mitigation measures are implemented as proposed, the Proposed Development will not have an adverse effect on the integrity of the above European site(s), individually or in combination with other plans and projects. Where applicable, a suite of monitoring surveys have been proposed to confirm the efficacy of said measures in relation to ensuring no adverse impacts on the habitats of the relevant European sites have occurred.

As a result of the complete, precise and definitive findings in of this NIS, it has been concluded, beyond reasonable scientific doubt, that the Proposed Development will have no significant adverse effects on the QIs, SCIs and on the integrity and extent of *Malahide Estuary SAC (000205)*, *Malahide Estuary SPA (004025)*, and *North-West Irish Sea SPA (004236)*. Accordingly, the Proposed Development will not adversely affect the integrity of any relevant European site.

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