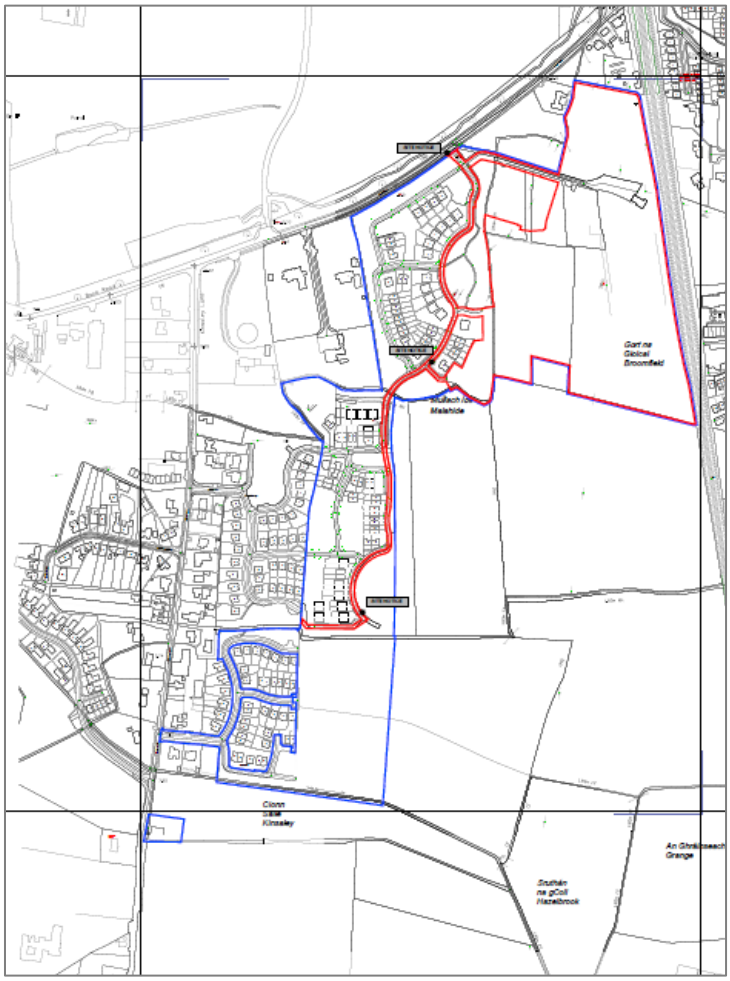
Proposed LRD development of the Northern Lands at Broomfield Back Road, Kinsealy Lane, Broomfield, Malahide, Co. Dublin
Natura Impact Statement (NIS)



FINAL REPORT

21st November 2024

Faith Wilson
ECOLOGICAL CONSULTANT

Faith Wilson Ecological Consultant BSc (Hons) MCIEEM CEnv
Kestrel Ridge, Tigroney West, Vale of Avoca,, Co. Wicklow

Proposed Large-scale Residential Development (Broomfield LRD)
Back Road, Broomfield, Malahide, Co. Dublin

Natura Impact Statement (NIS)

Table of Contents

Proposed Large-scale Residential Development (Broomfield LRD)
Back Road, Broomfield, Malahide, Co. Dublin
Natura Impact Statement (NIS)

1. INTRODUCTION

1.1 Background

Faith Wilson Ecological Consultant was commissioned by Birchwell Developments to prepare a Natura Impact Statement for a planning application for lands proposed for development at Back Road, Broomfield, Malahide, Co. Dublin.

Planning permission is sought for the following:

"The proposed development subject to this LRD application provides for the demolition of the former rugby clubhouse structure on site and the proposed construction of 297 no. residential units comprising 211 no. houses (14 no. 2 beds, 156 no. 3 beds, 39 no. 4 beds, and 2 no. 5 beds), 46 no. duplex units (9 no. 1 beds, 14 no. 2 beds, and 23 no. 3 beds), 40 no. apartments (23 no. 1 beds, 14 no. 2 beds, and 3 no. 3 beds); 1 no. childcare facility; 1 no. café/restaurant; 1 no. retail unit; 1 no. yoga studio; and all associated site infrastructure and engineering works necessary to facilitate the development including a temporary foul water pumping station."

This report contains the information required to assist the consenting authority (in this case Fingal County Council or An Bord Pleanála on appeal), to undertake the Appropriate Assessment for this development.

1.2 Legislative Background

The aim of the European Habitats Directive (Council Directive 92/43/EEC on the conservation of wild habitats and of wild fauna and flora) is to create a network of protected wildlife sites across Europe, which are to be maintained at a favourable conservation status.

Each member state must designate their most important natural areas as Special Areas of Conservation (SAC). The Directive specifies the scientific criteria on the basis of which SAC sites must be selected and very strictly curtails the grounds that can be used as justification for damaging a site. The network of sites is referred to as the NATURA 2000 network and includes SACs (Special Areas of Conservation) for protected habitats and species and SPAs (Special Protection Areas) for birds, which are designated under the European Birds Directive (Council Directive 79/409/EEC as amended by Directive 2009/147/EC).

It is a requirement of the Habitats Directive ((92/43/EEC) that the competent consenting authority (which in this instance is An Bord Pleanála) must ensure that a proposal, which is likely to have a significant effect on an SAC or SPA, is authorised only to the extent that the authority is satisfied it will not adversely affect the integrity of the Natura 2000 site and that an appropriate assessment of the implications of the development for the conservation status of the site is undertaken.

The European Parliament, in a communication to the European Council in September 2000, states:

"*The implementation of the European Habitats Directive and Birds Directive, both with respect to species conservation and with respect to the establishment of the Natura 2000 network, is one of the most important tools for achieving the objectives of the Convention on Biological Diversity in the European Union and member states (European Parliament 2000)*".

Article 6 of the Habitats Directive provides a strict assessment procedure for any plan or project not directly connected with or necessary to the management of a designated European site but which has the potential to have implications for the site in view of the site's conservation objectives.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1).

Article 6(3) establishes the requirement for Appropriate Assessment (AA):

"*Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In 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.*"

Article 6(4) states:

"*If, in spite of a negative assessment of the implications for the [Natura 2000] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those*

relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

In Ireland, the requirements of Article 6(3) and (4) of the Habitats Directive have been broadly transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), which has been amended by:

- European Union (Birds and Natural Habitats) (Sea-fisheries) Regulations 2013 (S.I. No. 290 of 2013)
- European Communities (Birds and Natural Habitats) (Amendment) Regulations 2013 (S.I. No. 499 of 2013)
- European Communities (Birds and Natural Habitats) (Amendment) Regulations 2015 (S.I. No. 355 of 2015)
- Planning and Development, Heritage and Broadcasting (Amendment) Act 2021 (Act No. 11 of 2021)
- European Union (Birds and Natural Habitats) (Amendment) Regulations 2021 (S.I. No. 293 of 2021)

This report has taken into consideration the relevant requirements of the Planning and Development Act, 2000 (as amended by the Planning and Development Act 2010).

1.3 Methodology

Desk study

A desk study was carried out to collate the available information on the ecological environment potentially impacted by the proposed development at Broomfield and to determine the proximity of the proposed development to designated areas for conservation.

A review of existing information on European sites, their Qualifying Interests and Conservation Objectives, and other available information on the terrestrial and marine ecology in the vicinity of the proposed development was conducted.

Data sources relevant to each European site include the Site Synopsis, Conservation Objectives, the Conservation Objectives backing documents, and the Natura 2000 Standard Data Form, all of which are publicly available online at www.npws.ie were also reviewed.

The National Parks and Wildlife Service (NPWS) of the Department of Housing, Local Government and Heritage database of designated conservation areas and NPWS records of rare and protected plant species as listed under the Irish Red List

- Vascular Plants (Wyse Jackson, et al. 2016) or Flora (Protection) Order 2022 were checked with regard to the location of the lands at Broomfield.

Information on protected species of fauna and flora listed for protection under Annex II of the EU Habitats Directive (92/43/EEC), Annex I of the Birds Directive (79/409/EEC) and the Wildlife (Amendment) Act (2000) was also sought from NPWS, the National Biodiversity Data Centre and published sources.

Further ecological information was gathered in relation to the study area by examining GIS datasets, maps and aerial photographs, and by drawing on other existing information.

A review was also completed of the ecological and faunal interest from the general environs of Back Road. Much of this information was gathered by the author of this report during field surveys of previous surveys completed for Ashwood Hall and Broomfield, lands to the west of here at Lamorlaye, and of studies conducted in Malahide Demesne for Fingal County Council Parks Department.

Field Surveys - Habitat & Botanical Survey

The wider 'Broomfield' lands have been the subject of many years of field surveys by Faith Wilson the first being on the 3rd September 2013 with further surveys conducted on 28th May 2014, 16th May 2017, 11th June 2018, 20th June 2018, and 26th June 2018.

Additional habitat surveys focusing on the lands which form part of this application were conducted on 16th June 2020, 31st August 2020, 16th October 2020, 1st December 2020, 8th January 2021, 24th February 2022, 29th March 2022, 27th November 2023 and most recently on the 9th and 17th July 2024.

The lands have been surveyed to describe and map the habitats present using the habitat survey and mapping techniques described by Smith *et al.* (2011). The habitats within the site were described to level three using the Heritage Council Guide to Habitats of Ireland (Fossitt (2000)). Plant species within the site were identified using Parnell and Curtis (2012).

A particular focus of the surveys was to determine if any protected species of plant under the Flora (Protection) Order (2022) or listed in the Irish Vascular Plants Red Data Book are present on the site or if any of the habitats present correspond to any of the habitats listed under Annex I of the EU Habitats Directive.

Invasive species present in the site were also identified and mapped if present. A particular focus of the surveys was for those invasive species listed in the Birds and Habitats Regulations 2011.

Field Surveys – Fauna

Bat Survey

The bat survey consisted of several elements – a desktop review and consultation with Bat Conservation Ireland, an inspection of trees within the site for their potential to support roosting bats, an inspection of the rugby club building on site due for demolition and several bat detector activity surveys of the property.

The aims of the surveys were to:

a) To determine what species of bats are known from the site and the immediate environs.
b) To identify if a bat roosting site is present in the rugby club building within the site.
c) To determine the use of any mature trees and other habitats in the site as feeding and commuting areas for bats.
d) To ensure that bats are considered and protected in the development.

Bat activity is usually detected by the following signs (though direct observations are also occasionally made):

- bat droppings (these will accumulate under an established roost or under access points);
- insect remains (under feeding perches);
- oil (from fur) and urine stains;
- scratch marks; and
- bat corpses.

The nature and type of habitats present are also indicative of the species likely to be present.

Trees within the wider Broomfield lands had been previously assessed for their potential to support roosting bats on 1st December 2020 and 8th January 2021 by completing a preliminary ground level roost assessment. These assessments were updated on 17th July 2024.

Potential tree roosts were identified using the following standard criteria, which were created by bat specialists from Bat Conservation Ireland for use in the assessments of tree roosts on large infrastructural projects and are summarised in NRA (2006):

- Presence or absence of bat droppings (these can be hard to find amongst leaf litter or may be washed away following periods of wet weather),
- Bat droppings may also be seen as a black streak beneath holes, cracks, branches, etc.,

- Presence or absence of smooth edges with dark marks at potential entrances to roosts,
- Presence or absence of urine stains at potential entrances to roosts,
- Presence of natural cracks and rot holes in the trunk or boughs of the tree,
- Hollow trees,
- Presence or absence of creepers such as ivy or honeysuckle on trees (ivy clad trees are often used by bat species such as pipistrelles as roosts),
- Presence or absence of loose bark such as that of sycamore, or flaky bark on coniferous species such as cedars, cypress and Scot's pine,
- Presence or absence of bracket fungi which may indicate a rotten or potentially hollow centre to the tree,
- Known bat roosts previously identified,
- Trees with storm or machinery damage or broken boughs,
- Clutter level - where the branches and trunk are easily accessible, this is considered a better tree for bat roosts,
- Adjoining habitat - if there are a variety of feeding opportunities for bats, this increases the potential of a tree as a bat roost,
- Adjoining potential roosts / known roosts. This raises the likelihood of a tree being of benefit as bats may move roosts if the roost becomes too hot or cold during roosting and a nearby alternative roost is highly desirable.

The arboricultural features described in the Bat Tree Habitat Key (Andrews, 2013) also informed the survey.

In accordance with best practice as described in the 'Guidelines for the Treatment of Bats During the Construction of National Road Schemes' (NRA 2006) and 'Bat Mitigation Guidelines for Ireland' (Kelleher 2006), a bat activity survey of the property was conducted during the active bat season.

The bat surveys of the wider Broomfield lands were first conducted on 28th May 2014, 16th May 2017, 20th June 2018, 26th /27th June 2018 by Faith Wilson. The rugby club building and the lands within the LRD application were resurveyed for bats on the 16th October 2019, 29th March 2022 and 9th July 2024.

These surveys assisted in determining if any bat roosts remained present in the rugby club building on the site, what bat species occur within the site and how bats are using the property for foraging or commuting purposes.

Bat activity is predominantly bi-modal, with bats taking advantage of increased insect numbers on the wing during the periods after dusk and before dawn, (there

is usually a lull in activity in the middle of the night). While this holds true for 'hawking' species (bats that capture prey in the open air), 'gleaning' species such as brown long-eared (*Plecotus auritus*), Natterer's (*Myotis nattereri*) and Whiskered/Brandt's bats (*Myotis mystacinus/brandtii*) remain active throughout the night, as prey is available on foliage for longer periods.

Badger Survey

A speedy and productive means of determining the mammal fauna within a site is to walk the entire site concerned, paying particular attention to all hedgerows, treelines, drainage ditches/watercourses, fence lines, paths etc. to locate mammal signs. These include setts, old bedding material, feeding signs, latrines, badger tracks or paw prints, badger paths and badger hair caught on vegetation or fences.

Badger surveys of the lands within and adjoining the Broomfield LRD application lands were first conducted on 28th May 2014, 16th May 2017, 11th June 2018, 20th June 2018, and 26th June 2018 as part of surveys and monitoring work completed for the Ashwood Hall/Broomfield developments. These surveys focused on badger activity along the eastern boundary of the Ashwood Hall development (which lies to the west of, and shares a common boundary with the proposed Broomfield LRD application lands).

Further surveys of badger activity along this shared boundary continued during 2019/2020/2021 and 2022. A potential sett was identified to the north of the Rugby Club Building during the initial walkover survey of the property conducted on 16th October 2019 and this was followed up with further surveys on 16th June 2020, 1st December 2020, 5th October 2021, 8th January 2021, 24th February 2022, 29th March 2022 and 27th November 2023. A camera trap had been previously deployed between the 1st December 2020 and 8th January 2021 at this potential sett. The area was re-examined for badger activity on the 9th and 17th July 2024 as part of this application.

The survey was carried out by an experienced mammal specialist (Faith Wilson) in accordance with best practice as described in the 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes' (NRA 2009) and 'Guidelines for the treatment of badgers prior to the construction of National Road Schemes' (NRA 2005).

Otter Survey

An otter survey was conducted along drainage ditches (and the Hazelbrook Stream in the wider Broomfield lands) during the site visits conducted on 16th June 2020, 1st December 2020, 8th January 2021, 5th October 2021, 24th February 2022, 29th March 2022 and most recently on the 9th and 17th July 2024 in accordance with best practice as described in the 'Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes' (NRA 2009), 'Otter

Breeding Sites. Conservation and Management. Conserving Natura 2000 Rivers Conservation Techniques Series No. 5, (Liles, 2003)' and 'Guidelines for the treatment of otters prior to the construction of National Road Schemes'. (NRA 2006).

Other Mammals

A dedicated survey for other mammals was carried out during the site visits on 31st August 2020, 16th September 2020, 10th June 2021, 5th October 2021, 24th February 2022, 29th March 2022 and most recently on the 9th and 17th July 2024 using the techniques as prescribed in Ecological Survey Techniques for Protected Flora and Fauna (NRA, 2008). This entailed searching for and identification of signs, tracks and droppings of various mammals (including pine marten, Irish stoat, Irish hare, red squirrel, hedgehog and pygmy shrew along with non-native species such as fallow deer, American mink, grey squirrel and rabbit) within the site.

Bird Survey

All birds seen and heard during the walkover surveys of the Broomfield Lands on the 16th October 2019, 16th June 2020, 31st August 2020, 16th October 2020, 1st December 2020, 8th January 2021, 24th February 2022, 29th March 2022 and most recently on the 9th and 17th July 2024 were recorded.

Assessment

This information was used to determine the potential for likely significant effects arising from the proposed Project on the European Sites of Conservation Interest.

If the outcome of the screening exercise is that there is no likelihood for significant effects, then any further stages in the Appropriate Assessment process are not required.

If, based upon the currently available information, there are aspects of the proposed development that could have a significant effect on any European sites, then further analysis in the form of a Natura Impact Statement (NIS) to inform the Appropriate Assessment is required (see Section 3).

The information presented in Section 2 of this report is therefore as follows:

- Description of the proposed development.
- Identification of relevant European sites within the likely zone of impact of the proposed development (using the source – pathway – receptor criteria) including any downstream of the proposed development.
- Description of the existing ecological environment/sensitive receptors at the site.
- Assessment of likely significant effects on the integrity of European sites.
- Appropriate Assessment Screening conclusions.

1.4 Guidance Documents

This report has been prepared with regard to the following guidance documents where relevant:

- Office of the Planning Regulator Practice Note PN01 - Appropriate Assessment Screening for Development Management (OPR, 2021).
- *Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC 2021/C 437/01.* (Commission notice C/2021/6913. Dated 28.10.2021).
- *Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission Environment Directorate General, 2001)
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC* (Commission Notice C(2018) 7621 final, Brussels, 21.11.2018)
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC* (EC Environment Directorate General, 2000)
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities Circular* NPW 1/10 & PSSP 2/10
- *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities.* (Department of Environment, Heritage and Local Government, 2010 revision)
- *Guidelines for Good Practice, Appropriate Assessment of Plans under Article 6(3) Habitats Directive* (International Workshop on Assessment of Plans under the Habitats Directive, 2011)
- *Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC.* Clarification of the Concepts of Alternative Solutions, Imperative Reasons of Over-riding Public Interest, Compensatory Measures, Overall Coherence. Opinion of the European Commission (European Commission, January 2007) and
- *Communication from the Commission on the precautionary principle.* European Commission (2000).

1.5 Stages of Appropriate Assessment

The competent authority is required to carry out appropriate assessment, as required by Article 6(3) and 6(4) of the Habitats Directive, as follows:

- **Stage 1: Screening for Appropriate Assessment**

The first step to establishing if an appropriate assessment is required is referred to as 'screening' and its purpose is to determine, in view of best scientific knowledge, on the basis of a preliminary assessment and objective criteria if the plan or project, alone or in combination with other plans or projects, could have a significant effect on a Natura 2000 site in view of the sites conservation objectives. The process identifies any likely impacts upon a Natura 2000 Site, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant.

- **Stage 2: Appropriate Assessment**

This is required if it cannot be excluded, on the basis of objective information, that the development, individually or in combination with other plans or projects, will have a significant effect on a Natura 2000 site.

The appropriate assessment must include a final determination by the competent authority as to whether or not a proposed development would adversely affect the integrity of a Natura 2000 site. In order to reach a final determination, the consenting authority must undertake examination, analysis and evaluation, followed by findings, conclusions and a final determination. The appropriate assessment must contain complete, precise and definitive findings and conclusions, and may not have lacunae or gaps.

Additionally, where there are deemed to be adverse impacts, an assessment of the potential mitigation of those impacts is considered.

- **Stage 3: Assessment of Alternative Solutions**

This stage examines alternative means of achieving the objectives of the project or plan that aim to avoid adverse impacts on the integrity of the Natura 2000 site.

- **Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain**

This stage is the main derogation process outlined in Article 6(4) which examines whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project, which will have adverse effects on the integrity of a Natura 2000 site, to proceed.

2. SCREENING FOR APPROPRIATE ASSESSMENT

2.1 Project Description

The proposed Broomfield LRD application is described above and the proposed site layout is shown on **Figure 2.1** below.

Figure 2.1 Proposed site layout for the Broomfield LRD application, outlined in red at Broomfield, Malahide, Co. Dublin.

The site is currently greenfield in nature. The subject site has an existing 225mm diameter foul water sewer line constructed for future connections. This existing foul sewer drains by gravity in a south-westerly direction to the Kinsealy Lane sewer system, which in turn currently drains to Connolly Avenue pumping station. Connolly Avenue pumping station pumps wastewater in a north-eastwards direction to the gravity network in Malahide which ultimately drains to Malahide Wastewater Treatment Plant (WWTP).

It is noted that Connolly Avenue pumping station, the gravity foul water network in Malahide and Malahide WWTP all have had capacity issues during heavy rainfall events.

Surface water from the site discharges into a series of boundary ditches on the perimeter of the site. Part of the site's drainage ditch network on the southern boundary is a static/dry ditch which drains to the eastern side of the railway line. The remainder of the ditches drain to the Hazelbrook Stream, which is a tributary of the Sluice River that ultimately outfalls to the sea at Baldoyle Bay. Baldoyle Bay is designated as a SAC/SPA.

2.2 Desk Study

A desk study was carried out to collate the available information on the ecological environment potentially impacted by the proposed development at Broomfield and to determine the proximity of the proposed development to designated areas for conservation.

A review of existing information on European sites, their Qualifying Interests and Conservation Objectives, and other available information on the terrestrial and marine ecology in the vicinity of the proposed development was conducted.

Data sources relevant to each European site include the Site Synopsis, Conservation Objectives, the Conservation Objectives backing documents, and the Natura 2000 Standard Data Form, all of which are publicly available online at www.npws.ie were also reviewed.

The National Parks and Wildlife Service (NPWS) of the Department of Housing, Local Government and Heritage database of designated conservation areas and NPWS records of rare and protected plant species as listed under the Irish Red List - Vascular Plants (Wyse Jackson, *et al.* 2016) or Flora (Protection) Order 2022 were checked with regard to the location of the lands at Broomfield.

Information on protected species of fauna and flora listed for protection under Annex II of the EU Habitats Directive (92/43/EEC), Annex I of the Birds Directive (79/409/EEC) and the Wildlife (Amendment) Act (2000) was also sought from NPWS, the National Biodiversity Data Centre and published sources.

Further ecological information was gathered in relation to the study area by examining GIS datasets, maps and aerial photographs, and by drawing on other existing information.

2.3 Identification of European Sites

In line with the European Commission Methodological Guidance (EC (2001) and EC (2021)) and the DoEHLG Guidance (DoEHLG (2010)) a review of all European sites that could be potentially affected by the proposed project was made using the NPWS online map viewer. These included any European sites within or adjacent to the land at Broomfield and any European sites within the likely zone of impact of the proposed development (using the source – pathway – receptor criteria) including any downstream. These are summarised in **Table 2.4.1** and shown on **Figure 2.2** below.

The source-pathway-receptor model, dictates that, for an effect to occur, there must be a 'source' (such as a construction site); a 'receptor' (such as a designated site for nature conservation); and a 'pathway' between the two (such as a watercourse). If there is a possibility of ecological or environmental impacts occurring this is identified as a potential effect. The level and significance of that effect depends upon the nature and exposure to the potential effect and the characteristics of the receptor. Although there may be a risk of an effect, it may not necessarily occur, and if it does occur, it may not be significant.

There are no set recommended distances for projects to consider European Sites as being relevant for assessment. DoEHLG (2010, pp. 31 – 32) states that:

"The approach to screening is likely to differ somewhat for plans and projects, depending on scale and on the likely effects, but the following should be included:

1. *Any Natura 2000 sites within or adjacent to the plan or project area*
2. *Any Natura 2000 sites within the likely zone of impact of the plan or project. A distance of 15km is currently recommended in the case of plans, and derives from UK guidance (Scott Wilson et al., 2006). For projects, the distance could be much less than 15km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects*
3. *Natura 2000 sites that are more than 15km from the plan or project area depending on the likely impacts of the plan or project, and the sensitivities of the ecological receptors, bearing in mind the precautionary principle. In the cases of sites with water dependent habitats or species, and a plan or project that could affect water quality or quantity, for example, it may be necessary to consider the full extent of the upstream and/or downstream catchment."*

It is common practice to include all European Sites within 15 km when conducting a screening for appropriate assessment. In some situations a whole river catchment or a groundwater aquifer may need to be included if there are hydrological connections. In some situations such as where bird flight paths are involved and potential barriers such as wind turbines are proposed, there may be

the potential for impacts on SPAs more than 15 km away. In this assessment both sites within a 15km radius of the Broomfield lands and those identified using the source-pathway-receptor model have been considered.

In addition to the identified European sites consideration was also given to relevant species listed under Annexes I and II and IV of the Birds and Habitats Directives respectively.

2.4 Site Location and European Sites

The lands at Broomfield are not currently designated for any nature conservation purposes.

Nineteen European sites within the likely zone of impact of the proposed development (using the source – pathway – receptor criteria) including any downstream have been identified. These include nine Special Areas of Conservation (SACs), and ten Special Protection Areas (SPAs) as follows

- Malahide Estuary SAC (Site Code: 000205)
- Malahide Estuary SPA (Site Code: 004025)
- The North-West Irish Sea SPA (Site Code: 004236)
- Baldoyle Bay SAC (Site Code: 000199)
- Baldoyle Bay SPA (Site Code: 004016)
- North Dublin Bay SAC (Site Code: 000206)
- North Bull Island SPA (Site Code: 004006)
- Rockabill to Dalkey Islands SAC (Site Code: 003000)
- Rogerstown Estuary SAC (Site Code: 000208)
- Rogerstown Estuary SPA (Site Code: 004015)
- Ireland's Eye SAC (Site Code: 002193)
- Ireland's Eye SPA (Site Code: 004117)
- South Dublin Bay/Tolka Estuary SPA (Site Code: 004024)
- South Dublin Bay SAC (Site Code: 000210)
- Howth Head SAC (Site Code: 000202)
- Howth Head Coast SPA (Site Code: 004113)
- Lambay Island SAC (Site Code: 000204)
- Lambay Island SPA (Site Code: 004069)
- Skerries Islands SPA (Site Code: 004122)

Conservation Objectives:
Detailed site specific conservation objectives are available for the European Sites within the zone of influence of the proposed development. The conservation objectives for each of the European Sites outlined above were first examined on the 2nd April 2024 and more recently on 21st October 2024. These are summarised below in **Table 2.4.1**.

Table 2.4.1. Identification of relevant European sites within the likely zone of impact of the proposed LRD development at Broomfield (using the source – pathway – receptor criteria) including any downstream.

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
000205	Malahide Estuary SAC	1.3km N	• (1140) Mudflats and sandflats not covered by seawater at low tide • (1310) *Salicornia* and other annuals colonizing mud and sand • (1320) Spartina swards (*Spartinion maritimae*) • (1330) Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • (1410) Mediterranean salt meadows (*Juncetalia maritimi*) • (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes)* • (2120) Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)	Source: NPWS (2013) Conservation Objectives: Malahide Estuary SAC 000205. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected: • (1140) Mudflats and sandflats not covered by seawater at low tide • (1310) *Salicornia* and other annuals colonizing mud and sand • (1320) Spartina swards (*Spartinion maritimae*) • (1330) Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • (1410) Mediterranean salt meadows (*Juncetalia maritimi*) • (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes)* • (2120) Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)	Yes, Screened in. Wastewater from the development will discharge to the Malahide WWTP thereby creating a hydrological link between the site and this European Site.
004025	Malahide Estuary SPA	1.3km N	• Great Crested Grebe (*Podiceps cristatus*) [A005]	Source: NPWS (2013) Conservation Objectives: Malahide Estuary SPA 004025. Version 1. National Parks and Wildlife	Yes, Screened in.

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
			• Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] • Shelduck (*Tadorna tadorna*) [A048] • Pintail (*Anas acuta*) [A054] • Goldeneye (*Bucephala clangula*) [A067] • Red-breasted Merganser (*Mergus serrator*) [A069] • Oystercatcher (*Haematopus ostralegus*) [A130] • Golden Plover (*Pluvialis apricaria*) [A140] • Grey Plover (*Pluvialis squatarola*) [A141] • Knot (*Calidris canutus*) [A143] • Dunlin (*Calidris alpina*) [A149] • Black-tailed Godwit (*Limosa limosa*) [A156] • Bar-tailed Godwit (*Limosa lapponica*) [A157] • Redshank (*Tringa totanus*) [A162] • Wetlands & Waterbirds [A999]	Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • [wintering] *Podiceps cristatus* • [wintering] *Branta bernicla hrota* • [wintering] *Tadorna tadorna* • [wintering] *Anas acuta* • [wintering] *Bucephala clangula* • [wintering] *Mergus serrator* • [wintering] *Haematopus ostralegus* • [wintering] *Pluvialis squatarola* • [wintering] *Calidris canutus* • [wintering] *Limosa limosa* • [wintering] *Limosa lapponica* • [wintering] *Tringa tetanus* To maintain the favourable conservation condition of the wetland habitat in Malahide Estuary SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.	Wastewater from the development will discharge to the Malahide WWTP thereby creating a hydrological link between the site and this European Site. The Broomfield lands do not support ex situ wintering populations of waterbird Special Conservation Interests of Malahide Estuary SPA.
000199	Baldoyle Bay SAC	2.6km SE	• (1140) Mudflats and sandflats not covered by seawater at low tide • (1310) *Salicornia* and other annuals colonizing mud and sand • (1330) Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • (1410) Mediterranean salt meadows (*Juncetalia maritimi*)	Source: NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024.	Yes, Screened in. Surface waters from the development will discharge to the Baldoyle Bay SAC thereby creating a link

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
				To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected: • (1140) Mudflats and sandflats not covered by seawater at low tide • (1310) *Salicornia* and other annuals colonizing mud and sand • (1330) Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • (1410) Mediterranean salt meadows (*Juncetalia maritimi*)	between the site and this European Site.
004016	Baldoyle Bay SPA	2.6km SE	• Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] • Shelduck (*Tadorna tadorna*) [A048] • Ringed Plover (*Charadrius hiaticula*) [A137] • Golden Plover (*Pluvialis apricaria*) [A140] • Grey Plover (*Pluvialis squatarola*) [A141] • Bar-tailed Godwit (*Limosa lapponica*) [A157] • Wetlands & Waterbirds [A999]	Source: NPWS (2013) Conservation Objectives: Baldoyle Bay SPA 004016. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • [wintering] *Branta bernicla hrota* • [wintering] *Tadorna tadorna* • [wintering] *Charadrius hiaticula* • [wintering] *Pluvialis squatarola* • [wintering] *Limosa lapponica* To maintain the favourable conservation condition of the wetland habitat in Baldoyle Bay SPA	Yes, Screened in. Surface waters from the development will discharge to the Baldoyle Bay SPA thereby creating a link between the site and this European Site. The Broomfield lands do not support ex situ wintering populations of waterbird Special Conservation Interests of Baldoyle Bay SPA.
004236	North-West Irish Sea SPA	2.3km E	• Common Scoter (*Melanitta nigra*) [A065]	Source: NPWS (2023) Conservation Objectives: North-west Irish Sea SPA	Yes, Screened in. Wastewater from the

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
			• Red-throated Diver (*Gavia stellata*) [A001] • Great Northern Diver (*Gavia immer*) [A003] • Fulmar (*Fulmarus glacialis*) [A009] • Manx Shearwater (*Puffinus puffinus*) [A013] • Shag (*Phalacrocorax aristotelis*) [A018] • Cormorant (*Phalacrocorax carbo*) [A017] • Little Gull (*Larus minutus*) [A177] • Kittiwake (*Rissa tridactyla*) [A188] • Black-headed Gull (*Chroicocephalus ridibundus*) [A179] • Common Gull (*Larus canus*) [A182] • Lesser Black-backed Gull (*Larus fuscus*) [A183] • Herring Gull (*Larus argentatus*) [A184] • Great Black-backed Gull (*Larus marinus*) [A187] • Little Tern (*Sterna albifrons*) [A195] • Roseate Tern (*Sterna dougallii*) [A192] • Common Tern (*Sterna hirundo*) [A193] • Arctic Tern (*Sterna paradisaea*) [A194] • Puffin (*Fratercula arctica*) [A204] • Razorbill (*Alca torda*) [A200] • Guillemot (*Uria aalge*) [A199]	004236. Version 1. National Parks and Wildlife Service, Department of Housing, Local Government and Heritage. Accessed 21st October 2024. To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA. • A001 Red-throated Diver *Gavia stellata* • A003 Great Northern Diver *Gavia immer* • A009 Fulmar *Fulmarus glacialis* • A013 Manx Shearwater *Puffinus puffinus* • A017 Cormorant *Phalacrocorax carbo* • A018 Shag *Phalacrocorax aristotelis* • A065 Common Scoter *Melanitta nigra* • A179 Black-headed Gull *Chroicocephalus ridibundus* • A182 Common Gull *Larus canus* • A183 Lesser Black-backed Gull *Larus fuscus* • A184 Herring Gull *Larus argentatus* • A187 Great Black-backed Gull *Larus marinus* • A188 Kittiwake *Rissa tridactyla* • A192 Roseate Tern *Sterna dougallii* • A193 Common Tern *Sterna hirundo* • A194 Arctic Tern *Sterna paradisaea* • A195 Little Tern *Sterna albifrons* • A199 Guillemot *Uria aalge* • A200 Razorbill *Alca torda* • A204 Puffin *Fratercula arctica*	development will discharge to the Malahide WWTP thereby creating a link between the site and this European Site. Surface waters from the site will also ultimately reach this site. The Broomfield lands do not support ex situ breeding, foraging or wintering populations of waterbird Special Conservation Interests of North-West Irish Sea SPA.

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
				• A862 Little Gull *Hydrocoloeus minutus*	
000206	North Dublin Bay SAC	9.9km SE	• (1140) Mudflats and sandflats not covered by seawater at low tide • (1210) Annual vegetation of drift lines • (1310) *Salicornia* and other annuals colonizing mud and sand • (1320) *Spartina* swards (Spartinion maritimae) • (1330) Atlantic salt meadows (Glauco-Puccinellietalia maritimae) • (1395) Petalwort (*Petalophyllum ralfsii*) • (1410) Mediterranean salt meadows (Juncetalia maritimi) • (2110) Embryonic shifting dunes • (2120) Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) • (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes) • (2190) Humid dune slacks	Source: NPWS (2013) Conservation Objectives: North Dublin Bay SAC 000206. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected: • (1140) Mudflats and sandflats not covered by seawater at low tide • (1210) Annual vegetation of drift lines • (1310) *Salicornia* and other annuals colonizing mud and sand • (1320) *Spartina* swards (Spartinion maritimae) • (1330) Atlantic salt meadows (Glauco-Puccinellietalia maritimae) • (1395) Petalwort (*Petalophyllum ralfsii)* • (1410) Mediterranean salt meadows (Juncetalia maritimi) • (2110) Embryonic shifting dunes • (2120) Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) • (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes) • (2190) Humid dune slacks	No. There is no potential pathway for likely significant effects arising from this development on this European Site. This site was screened out on account of distance.

Site Code	**Site Name and Designation**	**Approximate distance from the Broomfield LRD Lands**	**Qualifying Interest**	**General Conservation Objectives**	**Potential for Likely Significant Effects**
004006	North Bull Island SPA	9.9km SE	• Light-bellied Brent Goose (*Branta bernicla hrota*) • Shelduck (*Tadorna tadorna*) • Teal (*Anas crecca*) • Pintail (*Anas acuta*) • Shoveler (*Anas clypeata*) • Oystercatcher (*Haematopus ostralegus*) • Golden Plover (*Pluvialis apricaria*) • Grey Plover (*Pluvialis squatarola*) • Knot (*Calidris canutus*) • Sanderling (*Calidris alba*) • Dunlin (*Calidris alpina*) • Black-tailed Godwit (*Limosa limosa*) • Bar-tailed Godwit (*Limosa lapponica*) • Curlew (*Numenius arquata*) • Redshank (*Tringa totanus*) • Turnstone (*Arenaria interpres*) • Black-headed Gull (*Larus ridibundus*) • Wetlands & Waterbirds	Source: NPWS (2015) Conservation Objectives: North Bull Island SPA 004006. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • *Branta bernicla hrota* [wintering] • *Tadorna tadorna* [wintering] • *Anas crecca* [wintering] • *Anas acuta* [wintering] • *Anas clypeata* [wintering] • *Haematopus ostralegus* [wintering] • *Pluvialis apricaria* [wintering] • *Pluvialis squatarola* [wintering] • *Calidris canutus* [wintering] • *Calidris alba* [wintering] • *Calidris alpina* [wintering] • *Limosa limosa* [wintering] • *Limosa lapponica* [wintering] • *Numenius arquata* [wintering] • *Tringa totanus* [wintering] • *Arenaria interpres* [wintering] • *Chroicocephalus ridibundus* [wintering] • Wetlands	No. There is no potential pathway for likely significant effects arising from this development on this European Site. This site was screened out on account of distance. The Broomfield lands do not support ex situ wintering populations of waterbird Special Conservation Interests of North Bull Island SPA.
003000	Rockabill to Dalkey Islands SAC	5.6km E	• (1170) Reefs • (1351) Harbour Porpoise (*Phocoena phocoena*)	Source: NPWS (2013) Conservation Objectives: Rockabill to Dalkey Island SAC 003000. Version 1. National Parks and	No.

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
				Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the Annex I habitat and the Annex II species for which the SAC has been selected: • (1170) Reefs • (1351) Harbour Porpoise (*Phocoena phocoena*)	There is no potential pathway for likely significant effects arising from this development on this European Site. This site was screened out on account of distance.
004117	Ireland's Eye SPA	6.2km SE	• Cormorant (*Phalacrocorax carbo*) [A017] • Herring Gull (*Larus argentatus*) [A184] • Kittiwake (*Rissa tridactyla*) [A188] • Guillemot (*Uria aalge*) [A199] • Razorbill (*Alca torda*) [A200]	Source: NPWS (2022). Conservation objectives for Ireland's Eye SPA [004117]. First Order Site specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage. Accessed 21st October 2024. To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • [breeding]*Phalacrocorax carbo* • [breeding] *Larus argentatus* • [breeding] *Rissa tridactyla* • [breeding] *Uria aalge* • [breeding]*Alca torda*	No. There is no potential pathway for likely significant effects arising from this development on this European Site. This site was screened out on account of distance. There is no suitable habitat for breeding seabirds within the site. The Broomfield lands do not support ex situ breeding populations of the Special

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
					Conservation Interests of Ireland's Eye SPA.
002193	Ireland's Eye SAC	6.5km SE	• Perennial vegetation of stony banks [1220] • Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	Source: NPWS (2017) Conservation Objectives: Ireland's Eye SAC 002193. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Accessed 21st October 2024. To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected: • Perennial vegetation of stony banks [1220] • Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	No. There is no potential pathway for likely significant effects arising from this development on this European Site. This site was screened out on account of distance.
000208	Rogerstown Estuary SAC	6.5km N	• (1130) Estuaries • (1140) Mudflats and sandflats not covered by seawater at low tide • (1310) *Salicornia* and other annuals colonizing mud and sand • (1330) Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • (1410) Mediterranean salt meadows (*Juncetalia maritimi*) • (2120) Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) • (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes)*	Source: NPWS (2013) Conservation Objectives: Rogerstown Estuary SAC 000208. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected: • (1130) Estuaries • (1140) Mudflats and sandflats not covered by seawater at low tide	No. There is no potential pathway for likely significant effects arising from this development on this European Site. This site was screened out on account of distance.

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
				• (1310) *Salicornia* and other annuals colonizing mud and sand • (1330) Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • (1410) Mediterranean salt meadows (*Juncetalia maritimi*) • (2120) Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) • (2130) Fixed coastal dunes with herbaceous vegetation (grey dunes)*	
004015	Rogerstown Estuary SPA	6.5km N	• Greylag Goose (*Anser anser*) [A043] • Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] • Shelduck (*Tadorna tadorna*) [A048] • Shoveler (*Anas clypeata*) [A056] • Oystercatcher (*Haematopus ostralegus*) [A130] • Ringed Plover (*Charadrius hiaticula*) [A137] • Grey Plover (*Pluvialis squatarola*) [A141] • Knot (*Calidris canutus*) [A143] • Dunlin (*Calidris alpina*) [A149] • Black-tailed Godwit (*Limosa limosa*) [A156] • Redshank (*Tringa totanus*) [A162] • Wetlands & Waterbirds [A999]	Source: NPWS (2013) Conservation Objectives: Rogerstown Estuary SPA 004015. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • [wintering] *Anser anser* • [wintering] *Branta bernicla hrota* • [wintering] *Tadorna tadorna* • [wintering] *Anas clypeata* • [wintering] *Haematopus ostralegus* • [wintering] *Charadrius hiaticula* • [wintering] *Pluvialis squatarola* • [wintering] *Calidris canutus* • [wintering] *Limosa limosa* • [wintering] *Tringa totanus*	No. There is no potential pathway for likely significant effects arising from this development on this European Site. This site was screened out on account of distance. The Broomfield lands do not support ex situ wintering bird populations of the Special Conservation Interests of Rogerstown Estuary SPA.

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
				To maintain the favourable conservation condition of wetland habitat in Rogerstown Estuary SPA as a resource for the regularly occurring migratory waterbirds that utilise it.	
004024	South Dublin Bay and River Tolka Estuary SPA	12.8km S	• Brent goose (*Branta bernicla hrota*), • Sandwich Tern (*Sterna sandvicensis*), • Roseate Tern (*Sterna dougallii*), • Common Tern (*Sterna hirundo*), • Arctic Tern (*Sterna paradisaea*), • Oystercatcher (*Haematopus ostralegus*), • Ringed Plover (*Charadrius hiaticula*), • Knot (*Calidris canuta*), • Sanderling (*Calidris alba*), • Dunlin (*Calidris alpina*), • Bar-tailed Godwit (*Limosa lapponica*)	Source: NPWS (2015). Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • Brent goose (*Branta bernicla hrota*), • Sandwich Tern (*Sterna sandvicensis*), • Roseate Tern (*Sterna dougallii*), • Common Tern (*Sterna hirundo*), • Arctic Tern (*Sterna paradisaea*), • Oystercatcher (*Haematopus ostralegus*), • Ringed Plover (*Charadrius hiaticula*), • Knot (*Calidris canuta*), • Sanderling (*Calidris alba*), • Dunlin (*Calidris alpina*), • Bar-tailed Godwit (*Limosa lapponica*) To maintain the favourable conservation condition of wetland habitat in South Dublin and the River Tolka Estuary SPA as	No. There is no potential pathway for likely significant effects arising from this development on this European Site. This site was screened out on account of distance. The Broomfield lands do not support habitat for breeding populations or ex situ wintering bird populations of the Special Conservation Interests of South Dublin Bay and River Tolka Estuary SPA.

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
				a resource for the regularly occurring migratory waterbirds that utilise it.	
000202	Howth Head SAC	12km SE	• Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] • European dry heaths [4030]	Source: NPWS (2016). Conservation objectives: Howth Head SAC 000202. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. Accessed 21st October 2024. To maintain or restore the favourable conservation condition of the Annex I habitats for which the SAC has been selected: • Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] • European dry heaths [4030]	No. There is no potential pathway for likely significant effects arising from this development on this European Site.
004113	Howth Head Coast SPA	12.6km SE	• Kittiwake (*Rissa tridactyla*) [A188]	Source: NPWS (2022). Conservation objectives for Howth Head Coast SPA [004113]. First Order Site specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage. Accessed 21st October 2024. To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • [breeding] *Rissa tridactyla*	No. There is no potential pathway for likely significant effects arising from this development on this European Site. This site was screened out on account of distance. The Broomfield lands do not support breeding bird

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
					populations of the Special Conservation Interests of Howth Head Coast SPA.
000210	South Dublin Bay SAC	14.9km S	• Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • Salicornia and other annuals colonising mud and sand [1310] • Embryonic shifting dunes [2110]	Source: NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain or restore the favourable conservation condition of the Annex I habitats for which the SAC has been selected: • Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • Salicornia and other annuals colonising mud and sand [1310] • Embryonic shifting dunes [2110]	No. There is no potential pathway for likely significant effects arising from this development on this European Site. This site was screened out on account of distance.
000204	Lambay Island SAC	9.8km NE	• (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts • (1170) Reefs • (1364) *Halichoerus grypus* • (1265) *Phoca vitulina*	Source: NPWS (2013) Conservation Objectives: Lambay Island SAC 000204. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. Accessed 21st October 2024. To maintain the favourable conservation condition of the Annex I habitat and the	No. There is no potential pathway for likely significant effects arising from this development on this European Site.

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
				Annex II species for which the SAC has been selected: • (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts • (1170) Reefs • (1364) *Halichoerus grypus* • (1265) *Phoca vitulina*	
004069	Lambay Island SPA	9.8km NE	• Fulmar (*Fulmarus glacialis*) [A009] • Cormorant (*Phalacrocorax carbo*) [A017] • Shag (*Phalacrocorax aristotelis*) [A018] • Greylag Goose (*Anser anser*) [A043] • Lesser Black-backed Gull (*Larus fuscus*) [A183] ^ • Herring Gull (*Larus argentatus*) [A184] ^ • Kittiwake (*Rissa tridactyla*) [A188] • Guillemot (*Uria aalge*) [A199] • Razorbill (*Alca torda*) [A200] • Puffin (*Fratercula arctica*) [A204]	Source: NPWS (2022). Conservation objectives for Lambay Island SPA [004069]. First Order Site specific Conservation Objectives Version 1.0. Department of Housing, Local Government and Heritage. Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • Fulmar (*Fulmarus glacialis*) [A009] • Cormorant (*Phalacrocorax carbo*) [A017] • Shag (*Phalacrocorax aristotelis*) [A018] • Greylag Goose (*Anser anser*) [A043] • Lesser Black-backed Gull (*Larus fuscus*) [A183] ^ • Herring Gull (*Larus argentatus*) [A184] ^ • Kittiwake (*Rissa tridactyla*) [A188] • Guillemot (*Uria aalge*) [A199] • Razorbill (*Alca torda*) [A200] • Puffin (*Fratercula arctica*) [A204]	No. There is no potential pathway for likely significant effects arising from this development on this European Site on account of distance. The Broomfield lands do not support breeding bird populations of the Special Conservation Interests of Lambay Island SPA.
004122	Skerries Islands SPA	14.8km north	• Cormorant (*Phalacrocorax carbo*) [A017] • Shag (*Phalacrocorax aristotelis*) [A018]	Source: NPWS (2022). Conservation objectives for Skerries Islands SPA [004122]. First Order Site specific Conservation	No. There is no potential pathway for likely significant effects arising from this

Site Code	Site Name and Designation	Approximate distance from the Broomfield LRD Lands	Qualifying Interest	General Conservation Objectives	Potential for Likely Significant Effects
			• Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] • Purple Sandpiper (*Calidris maritima*) [A148] • Turnstone (*Arenaria interpres*) [A169] • Herring Gull (*Larus argentatus*) [A184]	Objectives Version 1.0. Department of Housing, Local Government and Heritage. Accessed 21st October 2024. To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: • Cormorant (*Phalacrocorax carbo*) [A017] • Shag (*Phalacrocorax aristotelis*) [A018] • Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] • Purple Sandpiper (*Calidris maritima*) [A148] • Turnstone (*Arenaria interpres*) [A169] • Herring Gull (*Larus argentatus*) [A184]	development on this European Site on account of distance. The Broomfield lands do not support breeding or ex situ wintering bird populations of the Special Conservation Interests of Skerries Islands SPA.

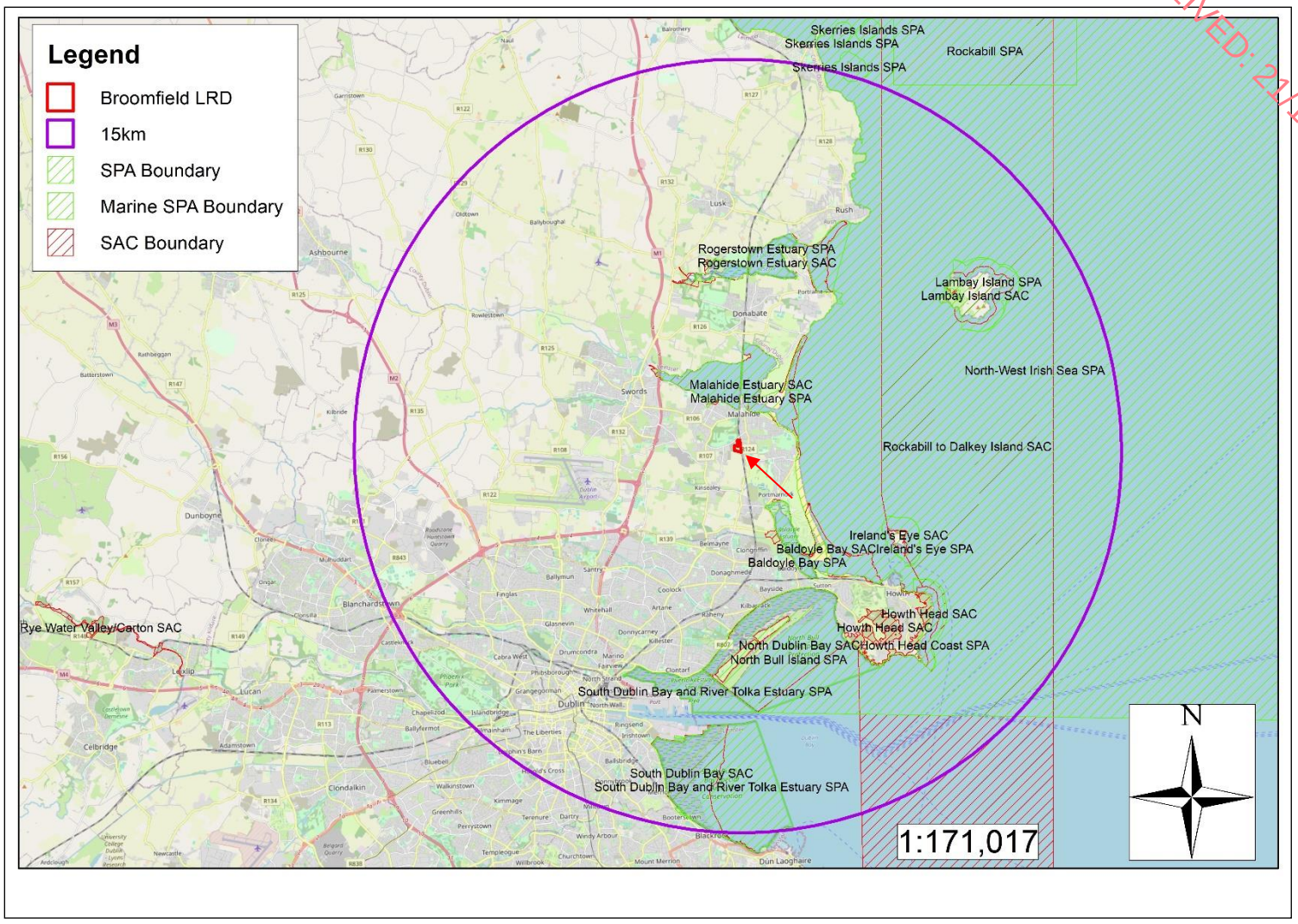


Figure 2.2. Identification of relevant European sites within the likely zone of impact of the proposed development at Broomfield (indicated by the red arrow), using the source – pathway – receptor criteria, including any downstream.

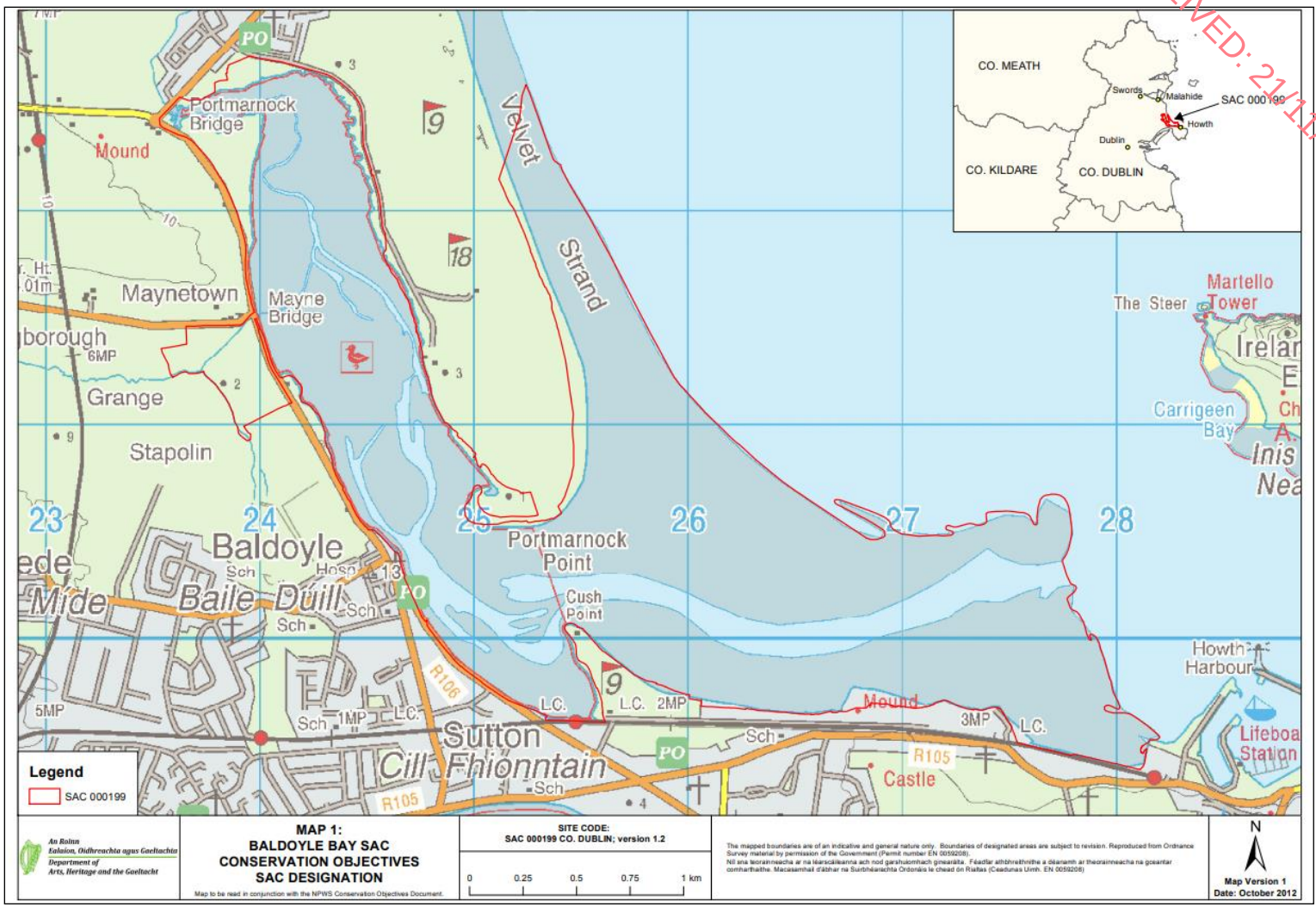


Figure 2.3. Baldoyle Bay SAC (Site Code: 000199). (Source: NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.).

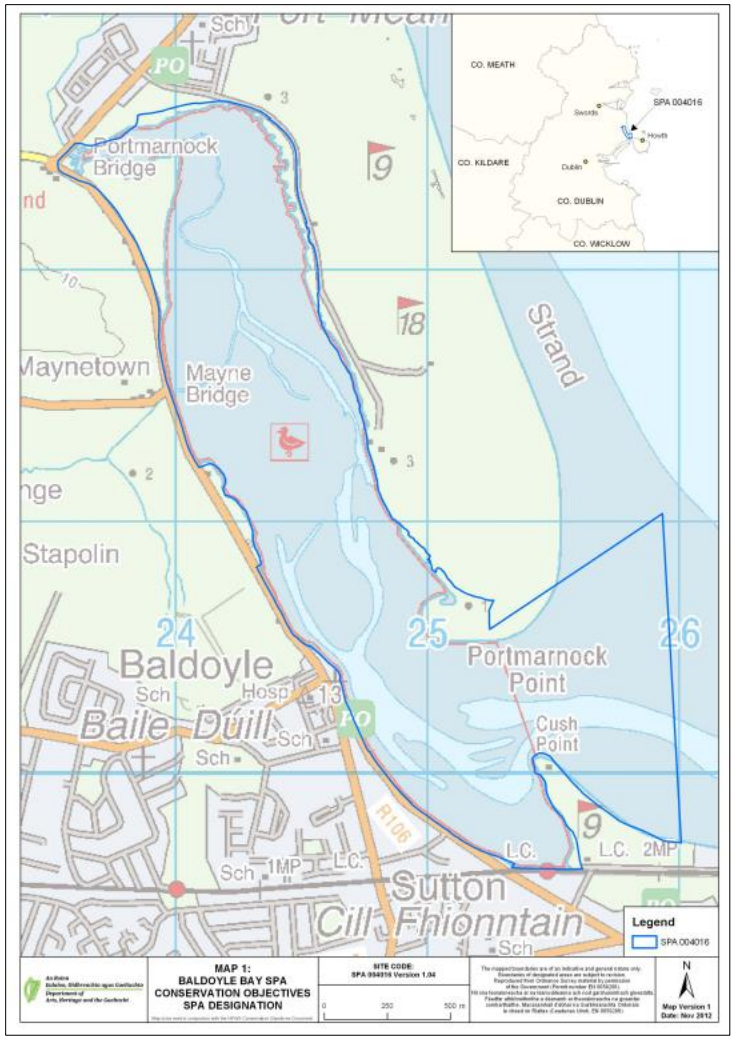


Figure 2.4. Baldoyle Bay SPA (Site Code: 004016). (Source: NPWS (2013) Conservation Objectives: Baldoyle Bay SPA 004016. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht).

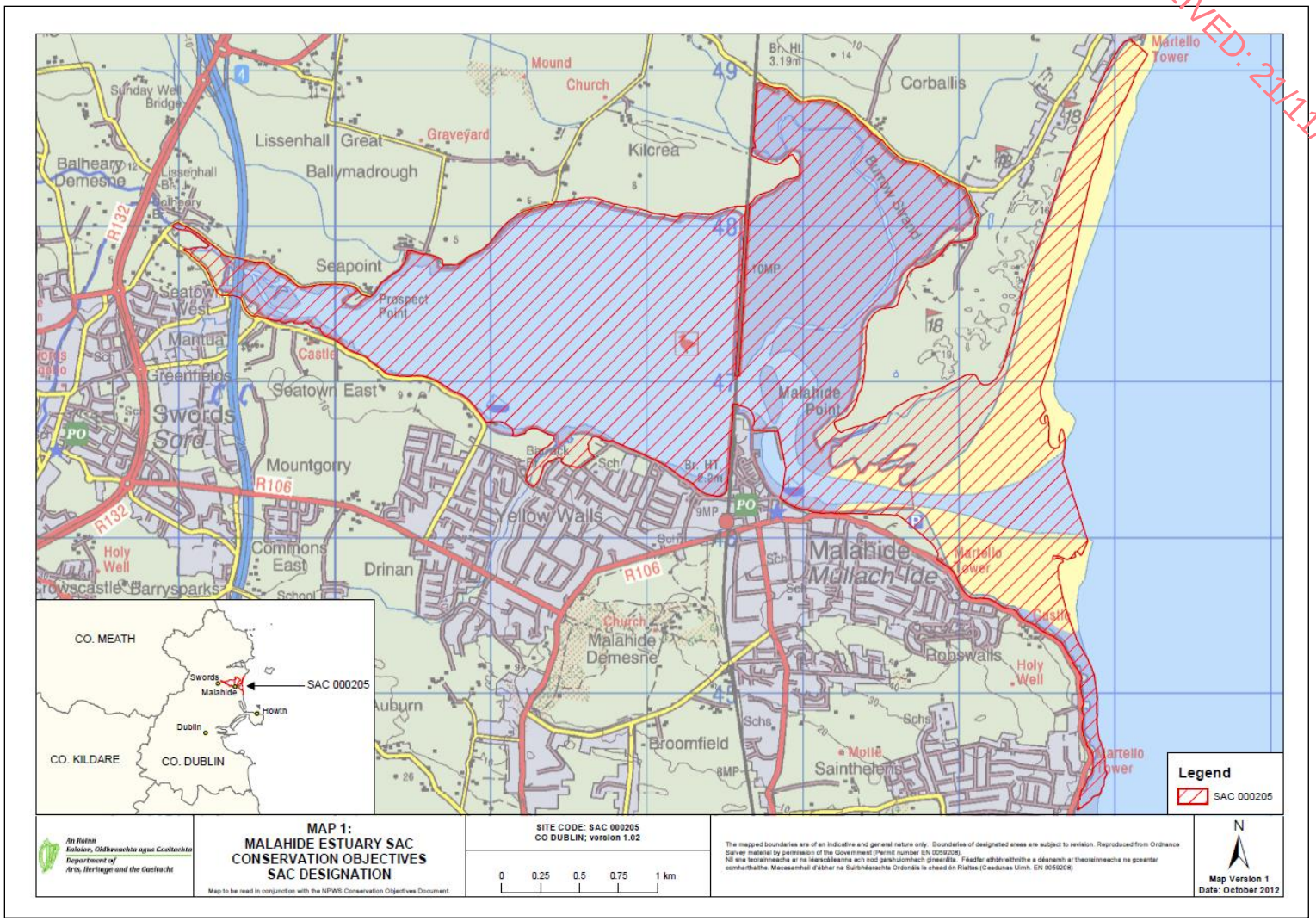


Figure 2.5. Malahide Estuary SAC (Site Code: 000205). (Source: NPWS (2013) Conservation Objectives: Malahide Estuary SAC 000205).

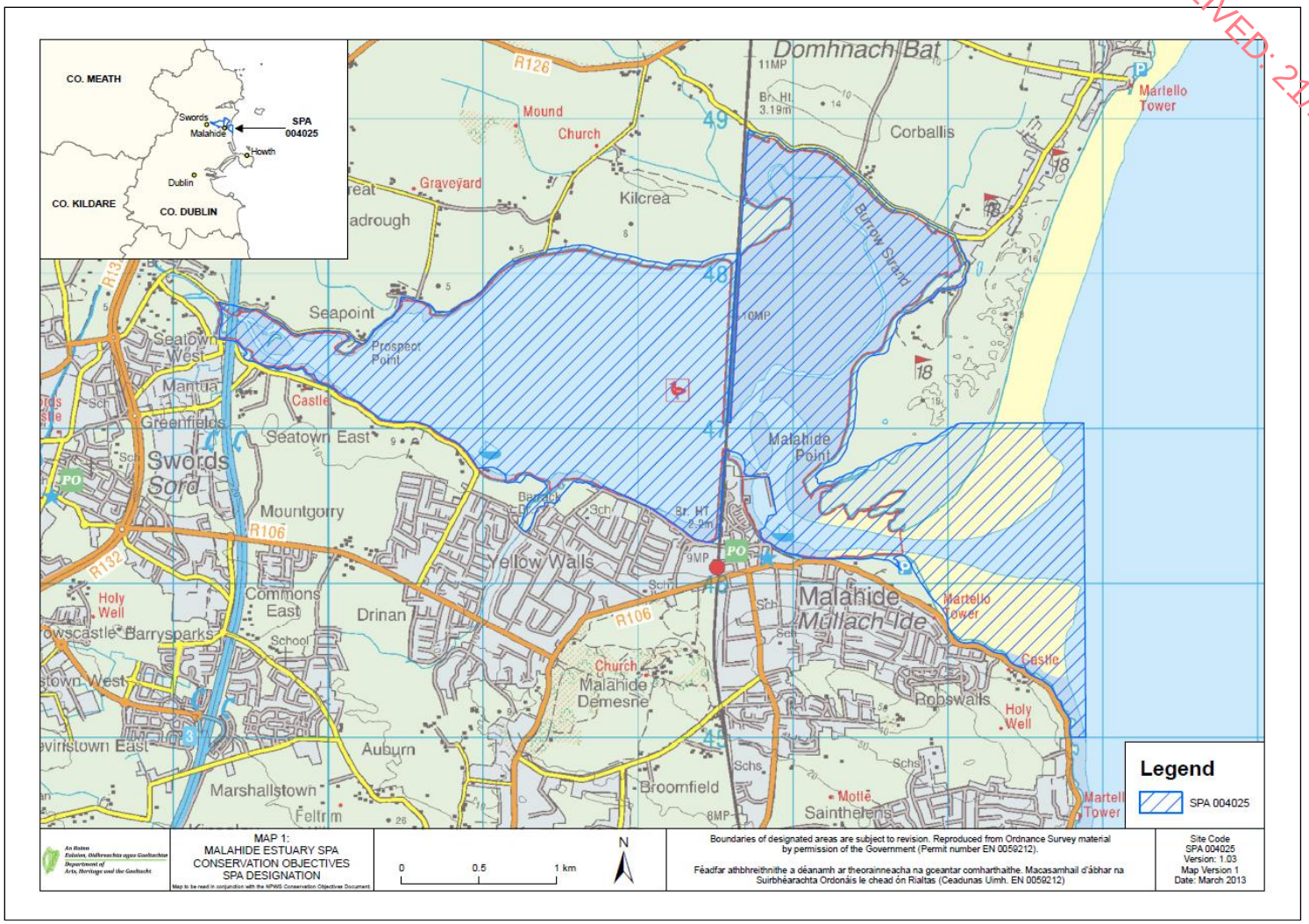


Figure 2.6. Malahide Estuary SPA (Site Code: 004025). (Source: NPWS (2013) Conservation Objectives: Malahide Estuary SPA 004025).

Figure 2.7. North-West Irish Sea SPA (Source: NPWS (2023) Conservation Objectives: North-west Irish Sea SPA 004236).

2.5 Assessment of Significance

This section considers the list of Natura 2000 sites detailed in **Table 2.4.1** and their qualifying habitats and species under the EU Habitats and Birds Directives.

Hydrological Links to Natura 2000 sites:

There are no Natura 2000 sites located either within or directly adjacent to the lands at Broomfield.

Wastewater from the site will be treated in the Malahide WWTP, thereby creating a link between the Broomfield lands and the Malahide Estuary SAC/SPA and the North West Irish Sea SPA.

Surface waters from the site drain to the Baldoyle Estuary, thereby creating a link between the Broomfield lands and the Baldoyle Estuary SAC/SPA and the North West Irish Sea SPA.

All of the sites (with the exception of Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016), The North-West Irish Sea SPA (Site Code: 004236), Malahide Estuary SAC (Site Code: 000205), and Malahide Estuary SPA (Site Code: 004025)) were therefore excluded from further assessment on the basis that potential impacts from the LRD development at Broomfield will have no significant adverse effects on the integrity of these sites as defined by their status and conservation objectives.

2.6 Identification of Potential Impacts

Construction Phase
The construction phase of the development, will require the removal of existing vegetation and the excavation of soil and the permanent loss of habitat on site. These works will result in typical environmental effects, including elevated levels of noise, potential for emission of surface waters from the site to the existing surface water infrastructure, emissions of dust, direct and indirect greenhouse gas emissions, localised impacts on public amenity, etc.

There will also be environmental risks associated with the presence of potential pollutants associated with the construction industry, plant and machinery (hydrocarbon, solvents, cementitious materials, etc.).

Operation Phase
During the operational phase, typical environmental effects associated with the presence and operation of a housing development are also predicted, however

these are limited to the emission of attenuated surface waters and foul waters discharging from the site.

Surface waters will be attenuated on site and a series of SuDS measures have been designed for same. The methodology involved in developing a Storm Water Management Plan for the subject site is based on recommendations set out in the Greater Dublin Strategic Drainage Study (GDSDS) and in the CIRIA SuDS Manual.

In relation to foul water it is noted that Connolly Avenue pumping station, the gravity foul water network in Malahide and Malahide WWTP all have had capacity issues during heavy rainfall events. This can result in uncontrolled discharges from the WWTP.

2.7 Screening Assessment Conclusion

In order to determine the potential impacts, if any, of the proposed development at Broomfield on nearby European sites a screening process was completed. This identified nineteen European sites within the likely zone of impact of the proposed development at Broomfield (using the source – pathway – receptor criteria) including any downstream, which are designated as either an SAC or an SPA.

A drainage ditch is found along the southern boundary of the site. This and other ditches and watercourses in the area drain to the Sluice River which discharges into Baldoyle Bay thereby providing a hydrological link to the European sites here and beyond (Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016), and The North-West Irish Sea SPA (Site Code: 004236)).

Wastewater from the site will be treated in the Malahide WWTP thereby creating a hydrological link between the site and the Malahide Estuary SAC (Site Code: 000205), Malahide Estuary SPA (Site Code: 004025) and The North-West Irish Sea SPA (Site Code: 004236).

All of the sites, with the exception of the Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016), North-West Irish Sea SPA (Site Code: 004236), Malahide Estuary SAC (Site Code: 000205), and Malahide Estuary SPA (Site Code: 004025), were therefore excluded from further assessment on the basis that potential impacts from the development at Broomfield will have no adverse effects on the integrity of these sites as defined by their status and conservation objectives.

It has been determined that five of these sites (Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016), the North-West Irish Sea SPA (Site Code: 004236), Malahide Estuary SAC (Site Code: 000205), and Malahide Estuary SPA (Site Code: 004025)) are potentially impacted by the proposed development.

These sites are hydrologically connected to the development lands either via surface water flows via drainage ditches and the Sluice River or via the foul water connections to the Malahide WWTP.

An Appropriate Assessment has therefore been prepared.

3. APPROPRIATE ASSESSMENT

Given that a potential risk to water quality within the Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016) and the North-West Irish Sea SPA (Site Code: 004236) via surface water flows and to Malahide Estuary SAC (Site Code: 000205), Malahide Estuary SPA (Site Code: 004025) and North-West Irish Sea SPA (Site Code: 004236) via foul water connections to the Malahide WWTP have been identified a full appropriate assessment has been conducted.

3.1 Description of the Site, its Environs, Habitats and Fauna

The lands proposed for development under the Broomfield LRD application adjoin Phase 1 of the development of these lands (Brookfield and Ashwood Hall). These lands are not the subject of any nature conservation designations.

Some of the European Sites and a number of other sites in the area are designated as proposed Natural Heritage Areas:

- Lambay Island pNHA (Site Code: 000204),
- Rogerstown Estuary pNHA (Site Code: 000208)
- Portraine Shore pNHA (Site Code: 001215),
- Malahide Estuary pNHA (Site Code: 000205),
- Feltrim Hill pNHA (Site Code: 001218),
- Sluice River Marsh pNHA (Site Code: 001763),
- Santry Demesne pNHA (Site Code: 000178),
- Ireland's Eye pNHA (Site Code: 000203),
- Howth Head pNHA (Site Code: 000202),
- Baldoyle Bay pNHA (Site Code: 000199).

The lands are located to the south of Back Road and Malahide Castle demesne, and are bounded to the north by private residences and a small development site, to the east by the Dublin Belfast railway line, to the south by arable fields, and to the west by the residential developments of Ashwood Hall and Brookfield. These lands drain ultimately to the Hazelbrook Stream. The location of the Hazelbrook Stream is shown on **Figure 2.8** below.

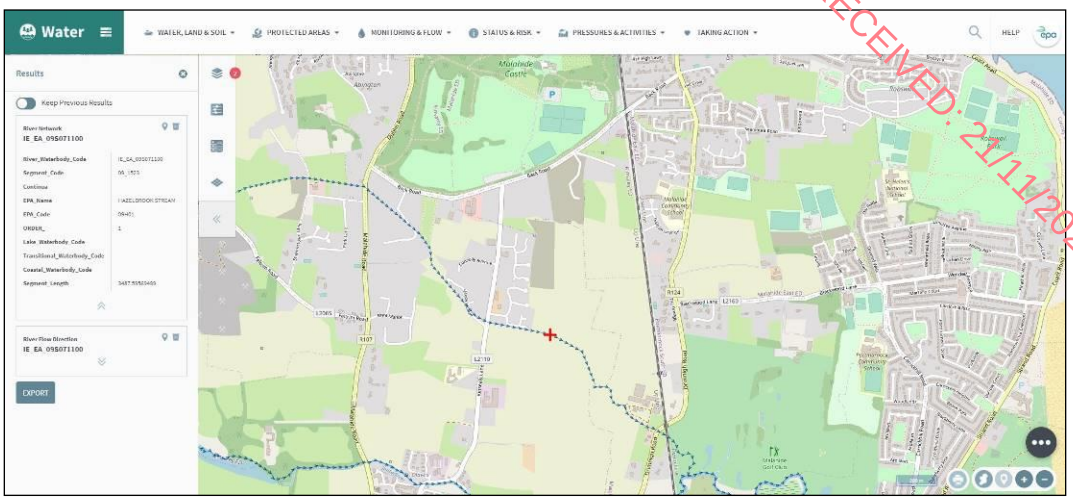


Figure 2.8. The Hazelbrook Stream is found to the south of the site.

The 10km square in which the site is located (O24) contains a number of historical and more recent records of rare and scare botanical species – namely Hairy Violet (*Viola hirta*), Meadow Saxifrage (*Saxifraga granulata*), Red Hemp Nettle (*Galeopsis angustifolia*), Round Prickly Headed Poppy (*Papaver hybridum*), Annual knawel (*Scleranthus annuus*), Lesser Centaury (*Centaurium pulchellum*), Basil Thyme (*Acinos arvensis*), Meadow Barley (*Hordeum secalinum*) and Oyster Plant (*Mertensia maritima*).

None of these species were recorded from the lands at Broomfield, Back Road or are likely to occur within the proposed development given the nature of the habitats present.

The majority of the Broomfield LRD lands include the former Rugby Club lands and clubhouse (BL3). These lands were developed on infilled land adjacent to the railway line and would originally have been managed as amenity grassland but are now dominated by rank grassland (GS2) and scrub (WS1) in the southern parts following years of abandonment.

The former Rugby Club lands are bounded to the east by the Dublin – Belfast railway line. Inside the palisade fence of the railway line and extending for the length of the site to the south is a bank of ash (*Fraxinus excelsior*) oak (*Quercus robur*), hawthorn (*Crataegus monogyna*), elm (Ulmus procera), and sycamore (*Acer pseudoplatanus*). These trees are located offsite and provide an important visual and acoustic screen between the site and the railway line. They are described as G227 in the tree survey report. To the east of the clubhouse are a number of mature trees of oak, ash. elm and sycamore with Lawson's cypress and Viburnum sp. (described as G189 and G192) in the tree survey report).

Plate 1. Eastern boundary of the rugby club lands adjoining the railway line.

The southern portion of the former Rugby Club lands are dominated by scrub (WS1) consisting of dense tangles of bramble (*Rubus fruticosus* agg.), the non-native invasive butterfly bush (*Buddleia davidii*), and scattered immature ash (*Fraxinus excelsior*). This area is described as G226 in the tree survey report and is well used by Rabbits. Colonising species such as thistles (*Cirsium arvense*) and rosebay willowherb (*Epilobium angustifolium*) are common here as is the invasive non-native species Canadian fleabane (*Conyza canadensis*).

Along the drainage ditch at the southern boundary of the lands are Sycamore, Hawthorn and Bramble (described as G225 in the tree survey report).

The grassland (GS2) on the former playing area is dominated by Yorkshire fog (*Holcus lanatus*), false oat-grass (*Arrhenatherum elatius*), cock's-foot grass (*Dactyls glomerata*), red fescue (*Festuca rubra*), with occasional dandelion (*Taraxacum* agg.), ribwort plantain (*Plantago lanceolata*), creeping buttercup (*Ranunculus repens*),

meadow buttercup (*Ranunculus acris*) and germander speedwell (*Veronica chamaedrys*). This is becoming colonised by willows (*Salix cinerea*).

Plate 2. Looking south over the rugby club lands. Treeline G222/G223 is shown by the red arrow.

Plate 3. Scrub at the southern end of the rugby club lands.

Plate 4. Looking south west over the drainage ditch and adjoining agricultural lands from the southern end of the site towards Brookfield.

Plate 5. Looking north east towards the rugby club from the southern end of the site.

The treeline (WL2) extending to the west of the rugby club building has cherry laurel (*Prunus laurocerasus*), silver birch (*Betula pendula*) and false cypress (*Chamaecyparis* sp.) with frequent bramble. This area is described as G186 in the tree survey report. Dense bramble tangles and several ornamental shrubs are also found around the building forming an area of scrub (WS1).

A double treeline (WL2) of Leyland cypress (*Cupressocyparis x leylandii*) (G198) separates the rugby club building from a small field to the north. A deep drainage ditch (FW4) which was dry at the time of survey is found at the base of this treeline and an old disused badger (*Meles meles*) sett, which is currently used by fox (*Vulpes vulpes*) is located here. Three rows of mixed plantings of whitebeam (*Sorbus aria*), apple (*Malus* sp.), cherry (*Prunus* sp.), sycamore, beech (*Fagus sylvatica*), hawthorn (*Crataegus monogyna*), Lombardy poplar (*Populus nigra 'italica'*) and white poplar (*Populus alba*) are found on the north side of this treeline forming an area of immature woodland (WS2) described as G200, G201 and G202 in the tree survey report. Elder, bramble and hawthorn are also present.

Plate 6. Treeline to the north of the rugby club.

The northern field is abandoned pasture which has become invaded by large patches of hogweed (*Heracleum sphondylium*), nettle (*Urtica dioica*), bramble, creeping thistle (*Cirsium arvense*), and docks (*Rumex* sp.) and grasses. This area is heavily grazed by rabbits. There are three scattered hawthorn bushes in this field.

A deep ditch adjoins an earthen bank (BL2) on the eastern boundary and a double hedgerow (WL1) of hawthorn, ash, sycamore and bramble (G206 in the tree survey report) is found here. Numerous rabbit burrows are found on the earthen banks (BL2). An old laneway (possibly a way leave for the railway) is located between it and the fence of the railway line beyond which is a treeline (WL2) of ash, sycamore and hawthorn (G207 in the tree survey report). This is vegetated with hogweed, ivy (*Hedera helix*), bramble, bush vetch (*Vicia sepium*), nettle, false-brome (*Brachypodium sylvaticum*), sycamore seedlings, greater plantain (*Plantago major*), ragwort (*Senecio jacobaea*), docks, Yorkshire fog and lesser burdock (*Arctium minus*).

Some areas of very dense bramble could not be adequately surveyed for fauna in this area and these will need to be supervised during site clearance.

The northern boundary of the northern field is demarcated by a hedgerow (WL1) of ash, elder (*Sambuccus nigra*), bramble and sycamore with occasional mature ash and sycamore (G211 and G213 in the tree survey report). An ESB substation is located here.

The western boundary of the northern field consists of a treeline (WL2) of mature and semi-mature ash and sycamore located on an earthen bank with cherry laurel (*Prunus laurocerasus*), dog rose (*Rosa canina*), Wych elm (*Ulmus glabra*), beech and hawthorn (G217, 218 and 219 in the tree survey report). A drainage ditch (FW4) which was dry at the time of survey is located at the base of this treeline.

Between the former Rugby Club lands and the Ashwood Hall development (to the south of the former residences) is a field which over time has had a variety of uses which has resulted in various habitats occurring – these included ploughed ground (BC3), land planted with arable crops (BC1), and recolonising set aside (ED2). This area is now dominated by GS2 dry meadow and grassy verge vegetation and is becoming colonised by scattered willows.

A large volume of topsoil was previously stored here from the Ashwood Hall development and this has been colonised with a variety of species including the non–native invasives Butterfly bush, Large bindweed (Calystegia sylvatica) and Canadian fleabane as well as bramble and thistles. A small depression at the base of the soil storage area now supports wetland plants such as reed mace (*Typha latifolia*) and hoary willowherb (*Epilobium hirsutum*). Within the grassland areas curled dock (*Rumex crispus*), white clover, creeping buttercup (*Ranunculus repens*), ribwort plantain (*Plantago lanceolata*), creeping cinquefoil (*Potentilla reptans*), weld (*Reseda luteola*), broad leaved plantain, hoary willowherb, broad-leaved willowherb (*Epilobium montanum*), ragwort (*Senecio jacobaea*), knotgrass (*Polygonum aviculare*), and wild radish (*Brassica rapa*) were frequently recorded as were willows and young oak saplings which have developed through natural succession.

Plate 7. The trees between the rugby club and the northern field.

Plate 8. Northern field.

Plate 9. Looking south west over the western field to the areas of stored topsoil.

Plate 10. A small wetland has formed at the base of the soil storage area.

Plate 11. Looking north west over the western field to the shared treeline boundary with Ashwood Hall and the southern boundary of the former residences.

This field is bounded to the west by the shared treeline (WL2) of Ashwood Hall (described as G6, G243, G244, and G245 in the tree survey) which is dominated by mature and semi-mature ash (*Fraxinus excelsior*), oak (*Quercus robur*), wild cherry (*Prunus avium*), sweet chestnut (*Castanea sativa*), sycamore (*Acer pseudoplatanus*), and beech (*Fagus sylvatica*) with an understorey of hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), Wych elm (*Ulmus glabra*), bramble (*Rubus fruticosus* agg.), elder (*Sambuccus nigra*) and dog rose (*Rosa canina*). This treeline is located on a shallow earthen bank (BL2) with an associated deep drainage ditch (FW4) which was dry at the time of survey.

The field boundaries of the former hedgerows associated with the now demolished houses form the northern boundary of this field (described as G170 and G171 in the tree report). Species recorded here include field maple (*Acer campestre*), aspen (*Populus tremula*), hawthorn, beech, ash, goat willow (*Salix caprea*), and English elm with bramble. The non-native invasive snowberry bush (*Symphoricarpos alba*) was also recorded here in the south western corner of the central house.

The three private residences, which were located along the entrance to the former rugby club, have been demolished. These works were completed under a bat derogation licence issued by National Parks and Wildlife Service and supervised

by Faith Wilson as they previously contained bat roosts. Surrounding the residences are remnant hedgerows (WL1), which have been retained to date. These are dominated mostly by non-native species such as red osier dogwood, leylandii, beech and other ornamental shrubs. Large areas of ground here are dominated by the non-native invasive species Canadian fleabane (*Conyza canadensis*).

The garden of the former western house contained oak, English elm, ash and hawthorn with ivy and bramble in the western boundary (described as G6 in the tree report) with field maple, and sweet chestnut. Along the northern boundary adjoining the road was beech, English elm and Viburnum.

The garden of the former central house contained ash, copper beech, sycamore, Italian alder and oak in the western boundary, cherry and back hybrid poplar in the eastern boundary and Ash and whitebeam in the northern boundary adjoining the road.

The garden of the former eastern house contained ash in the garden, with Himalayan birch, eucalyptus, cherry, apple and Griselinia planted in a group along with a Leyland cypress and ash along the field boundary with the former rugby club lands to the east.

A younger treeline (WL2) of horse chestnut (*Aesculus hippocastanum*) and field maple (*Acer campestre*) is found along the northern boundary of these properties adjoining the road.

Invasive Species

The main invasive species noted in the general vicinity include stands of Japanese knotweed (*Fallopia japonica*), Canadian fleabane and butterfly bush (*Buddleia davidii*) which were found within the rugby club lands. Of these the Japanese knotweed is the only species listed under the Third Schedule of the Communities Birds and Natural Habitats Regulations 2011. The location of the Japanese knotweed stand is shown on **Figure 2.9** below.

Birchwell Developments engaged a trained horticulturalist (Graeme Cahill) to begin treating the Japanese knotweed in 2017. The first treatment of the knotweed at Broomfield was on May 19th 2018. An application rate of 100ml Glyphosate:5 litres water was used. A total of 3 litres of spray was applied via a knapsack sprayer. Follow up treatment has since been conducted over many years. A detailed Japanese knotweed management plan was developed to ensure that this species is not and has not inadvertently been spread during development of the site.

Plate 12. Japanese knotweed on the former rugby club lands following treatment in 2018.

Figure 2.9. Japanese knotweed was recorded here in 2017 and has been treated on site since then by Birchwell.

The Japanese knotweed has been the subject of ongoing treatment in situ and has not spread or become established elsewhere within the site in the intervening period.

Plate 13. Japanese knotweed areas clearly demarcated and treated in January 2021.

Faunal Interest

A Badger and Biodiversity Management Plan was prepared as part of a request for further information from Fingal County Council Planning (Reg Ref: F13A/0459 (Item 4)) and An Bord Pleanála Reference Number: PL 06F.243863 Planning Condition 6 for the development of Ashwood Hall and Broomfield Phase 1. This has been implemented during the construction of the neighbouring developments of Ashwood Hall and Broomfield Phase 1. The results of that initial survey and subsequent surveys are detailed below.

Badger

A potential badger (*Meles meles*) sett, was first documented on the Broomfield lands in 2014. This sett was located at the southern end of the shared treeline with Ashwood Hall, which forms the western boundary of the Broomfield LRD lands.

This potential badger sett consisted of a single entrance sett, which was not active at the time of the initial or subsequent surveys. This and a number of other holes and burrows in the area are well used by rabbits but there has been no evidence

of any subsequent or current use by badger in further surveys conducted since 2014. At the initial time of identification in 2014 there were feeding signs of badger noted along the southern boundary of the Broomfield Phase 1 lands and a dead badger was noted on the Back Road to the west of the entrance to Malahide Castle which triggered the suggestion that this sett was potentially used by badger.

Surveys conducted in 2019/2020 recorded a possible second disused sett within the treeline north of the rugby club building. This was in use by fox at that time. The locations of these inactive potential setts are shown on **Figure 2.10** below. It was considered possible that the potential setts within the Broomfield LRD lands were used by badgers as outlier setts to a main territory, which is located within Malahide Castle Demesne.

Figure 2.10. Potential badger setts within the Broomfield LRD lands.

The potential setts within the Broomfield LRD lands were the subject of detailed monitoring using a camera trap over the winter months during 2020/2021. A camera trap was deployed on this sett between 1st December 2020 and 8th January

2021. No evidence of badger was recorded on the trap. Further monitoring was completed in 2022 and the area was re-examined for badger activity on the 9th and 17th July 2024.

The results of these surveys are presented below.

1st December 2020
No badger activity at northern or southern setts – numerous tracks through undergrowth – attributed to rabbit and fox.

8th January 2021
No badger activity at northern or southern setts – numerous tracks through undergrowth – attributed to rabbit and fox.

5th October 2021
No badger activity at northern or southern setts – numerous tracks through undergrowth – attributed to rabbit and fox.

24th February 2022
No badger activity at northern or southern setts – numerous tracks through undergrowth – attributed to rabbit and fox. Large fox scat at northern sett.

29th March 2022
No badger activity at northern or southern setts – numerous tracks through undergrowth – attributed to rabbit.

27th November 2023
No badger activity at northern or southern setts – numerous tracks through undergrowth – attributed to rabbit.

9th and 17th July 2024
No badger activity at northern or southern setts – numerous tracks through undergrowth – attributed to rabbit – population seems to have exploded judging by the activity in the western fields and in the southern portion of the rugby club lands

The burrows previously identified as potential badger setts within the Broomfield lands do not appear to be currently used by badger. There has been no evidence of badger using these lands in recent years. No badger tracks or signs have been seen during any of the surveys.

Bats
Bats on the Broomfield lands have been the subject of a number of bat surveys to date as detailed above.

Four species of bats have been recorded using the wider Broomfield LRD lands over several years of survey. These included the following species:

- Leisler's bat (*Nyctalus leisleri*)
- Common Pipistrelle (*Pipistrellus pipistrellus*)
- Soprano Pipistrelle (*Pipistrellus pygmaeus*)
- Brown long-eared bat (*Plecotus auritus*)

Surveys in 2018 confirmed that Brown long-eared bat, common pipistrelle and soprano pipistrelle had availed of the former residential buildings and the rugby clubhouse building on the Broomfield lands for roosting purposes. The three residential properties were demolished under a bat derogation licence issued by National Parks and Wildlife Service between the 8th and 15th October 2018 under the supervision of Faith Wilson as reported in the 2022 SHD ecological impact assessment report (Wilson, 2022). A bat derogation licence had also been issued for the proposed demolition of the rugby club building as bats had been recorded there in 2018.

This building and the wider LRD lands have been the subject of various surveys since then as detailed below.

2019 Survey

The former rugby club building and the lands proposed for development under the Broomfield LRD application were surveyed on the 16th October 2019 during clear, calm conditions.

Leisler's bat was recorded foraging over the lands and over the area of scrub south of the rugby club building. The rugby club building had been the subject of arson and no longer has an intact roof/attic space. No bats were recorded emerging from this property.

Soprano pipistrelle bat and common pipistrelle bat were recorded foraging along the laneway leading from the rugby club west towards Ashwood Hall, over the northern field and in the shelter of the laneway adjoining the railway line and along the central treeline between Ashwood Hall and the eastern Broomfield LRD lands.

Plate 14. Rugby club building destroyed by arson in 2019.

2022 Survey

The former rugby club and the lands proposed for development under the Broomfield LRD application were resurveyed on the 29th March 2022 during clear, calm conditions. Initial temperatures were 9.5°C dropping to 8°C at the end of the survey.

The first bat species recorded was observed at 20:20 when a Leisler's bat was recorded foraging along the edge of the railway line and over the area of scrub south of the rugby club building.

Plate 15. Rugby club building in 2022.

The rugby club building had deteriorated further in condition with fascia removed and the soffits exposed. No bats were recorded emerging from this property.

Common pipistrelle and soprano pipistrelle bats were recorded foraging in the shelter of the treelines/vegetation adjoining the railway line, along the treeline at the northern side of the access road to the site and along the treeline which forms the western boundary of the northern lands with Ashwood Hall.

2024

The bat survey conducted on the 9th July 2024 recorded similar activity to that in 2022. No bats were recorded emerging from the arson damaged rugby club building. The condition of this building has deteriorated further since it was last surveyed as can be seen on **Plate 16** below.

Three species of bats were recorded foraging and commuting in the LRD lands and sonograms of the echolocation calls of common pipistrelle and soprano pipistrelle can be seen below on **Figures 2.11** and **2.12**. The treelines to the east and north of the rugby club were favoured by bats with approximately 15 common pipistrelle recorded foraging there along with occasional Leisler's and soprano pipistrelle.

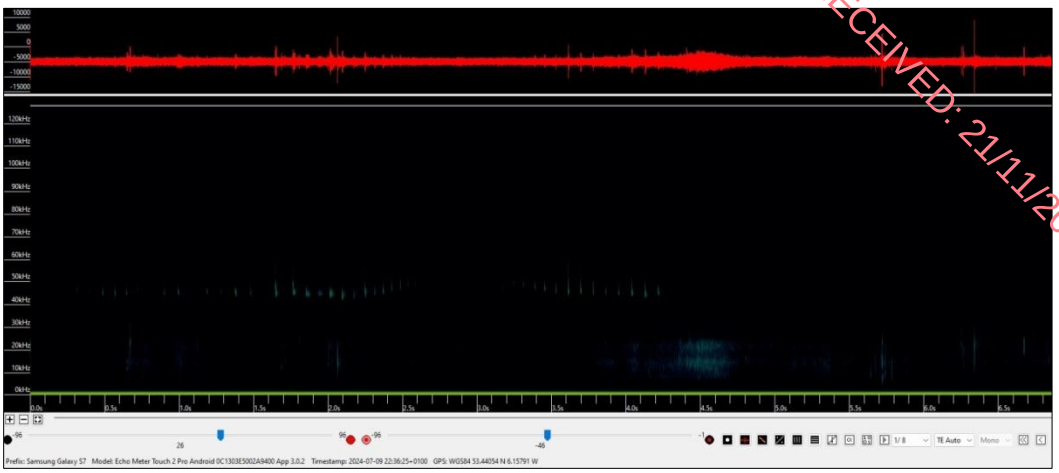


Figure 2.10. Sonogram of common pipistrelle bat on the LRD lands.

Plate 16. Former rugby club building in 2024.

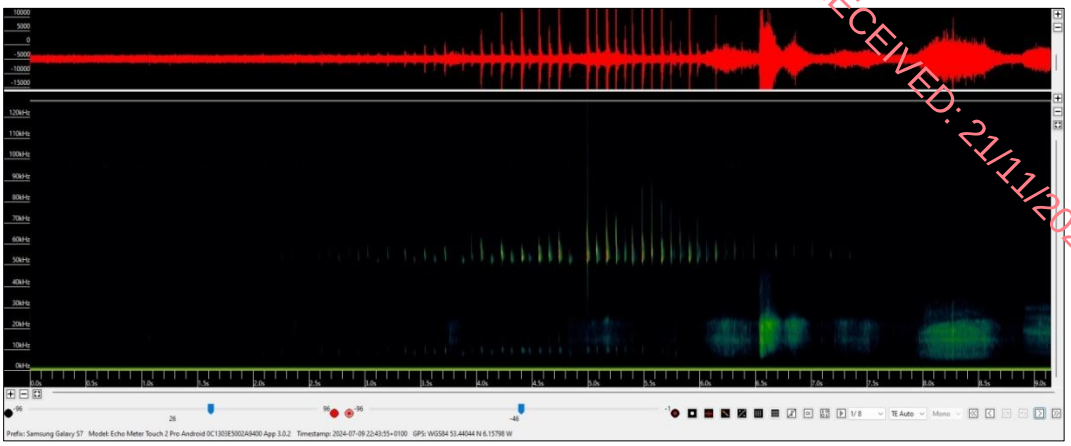


Figure 2.11. Sonogram of soprano pipistrelle bat on the LRD lands.

Plate 17. Former rugby club building in 2024.

Other Mammals

The terrestrial fauna consists of species typical of the open countryside of North Dublin. There are many rabbits (*Oryctolagus cuniculus*) present and a fox (*Vulpes vulpes*) has been both seen and heard during many site visits. A foxes den was noted on grounds within the railway cutting along the eastern boundary of the LRD lands.

Other common fauna that would be expected include brown rat (*Rattus norvegicus*), long tailed field mouse (*Apodemus sylvaticus*), house mouse (*Mus musculus*), hedgehog (*Erinaceus europaeus*), and pygmy shrew (*Sorex minutus*). Irish stoat (*Mustela erminea hibernica*) may also occur but have not been observed – they have been recorded from Malahide Demesne to the north of the lands, where grey squirrels (*Sciurus carolinensis*) are also frequent.

Otters have been recorded on the Hazelbrook Stream which is located outside the LRD lands to the south west of the site (F. Wilson, pers. obs.). Drainage ditches in the Broomfield lands drain to this watercourse.

Birds

The bird fauna recorded was rich and a good variety of breeding species were recorded. Species recorded from hedgerows and treelines within the site over the years include blackbird, yellowhammer, robin, willow warbler, goldfinch, wren, blue tit, song thrush, bullfinch, chaffinch, starling, woodpigeon, starling, dunnock, jackdaw, and greenfinch.

Corvid species recorded on site include; rook, magpie, hooded crow and jackdaw.

Pied wagtails were recorded in the vicinity of the new housing at Ashwood Hall. Birds of prey such as buzzard and sparrowhawk were confirmed using the area and summer visitors, such as swallow were regularly observed.

Species such as redwing and fieldfare may visit during the winter months.

The lands are not suitable for wintering birds but the wider agricultural lands are used on occasion by gulls following ploughs and other agricultural machinery during soil preparation.

The Hazelbrook Stream which is located to the south of the site supports Mallard ducks and Grey heron have been seen flying over the LRD lands on several occasions.

Amphibians

There are no ponds or other water features within the red line boundary of the site that could support breeding frogs and newts – however these species may on occasion utilise the areas of standing water in drainage ditches and slow flowing sections of the Hazelbrook Stream in the wider landscape.

Chapter 5 of the EIAR which accompanies this NIS provides further details on the baseline ecological environment and sets out mitigation measures to ensure impacts on same are avoided where possible, minimised and mitigated for.

3.2 Description of the Proposed Development

Planning permission is sought for the following:

"The proposed development subject to this LRD application provides for the demolition of the former rugby clubhouse structure on site and the proposed construction of 297 no. residential units comprising 211 no. houses (14 no. 2 beds, 156 no. 3 beds, 39 no. 4 beds, and 2 no. 5 beds), 46 no. duplex units (9 no. 1 beds, 14 no. 2 beds, and 23 no. 3 beds), 40 no. apartments (23 no. 1 beds, 14 no. 2 beds, and 3 no. 3 beds); 1 no. childcare facility; 1 no. café/restaurant; 1 no. retail unit; 1 no. yoga studio; and all associated site infrastructure and engineering works necessary to facilitate the development including a temporary foul water pumping station."

3.3 Identification of Potential Significant Impacts

The potential impacts of the proposed housing development on the Broomfield lands on the identified European Sites were assessed using the following factors:

- size and scale
- land-take
- distance from the Natura 2000 site or key features of the site
- resource requirements (water abstraction etc.)
- emissions (disposal to land, water or air)
- excavation requirements
- transportation requirements
- duration of construction, operation, decommissioning, etc.
- reduction of habitat area
- disturbance to key species
- habitat or species fragmentation
- reduction in species density
- changes in key indicators of conservation value (water quality etc.)
- climate change
- key relationships that define the structure of the sites
- key relationships that define the function of the site

These potential impacts on the identified European Sites are further considered and summarised below in **Table 3.3.1.**

Table 3.3.1. Likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on identified European Sites by virtue of:

Size and scale	None. There are no works
Land-take	None
Distance from Natura 2000 sites	There are nineteen identified European sites within the zone of influence of the lands at Broomfield as presented in **Table 2.4.1** above. All of the identified European sites, with the exception of Malahide Estuary SAC/SPA, the North West Irish Sea SPA and Baldoyle Estuary SAC/SPA, were excluded from further assessment on the basis that potential impacts from the proposed application on the lands at Broomfield will have no adverse effects on the integrity of these sites as defined by their status and conservation objectives as: • either there is no pathway for likely significant effects on these sites, • the Broomfield lands do not support ex-situ populations of wintering birds which form part of the conservation interest of any identified European site, or • they are at such a distance from the proposed development that any discharges from the site via foul or surface waters would be diluted and have no significant impact. Drainage ditches on the surrounding lands drain to the Sluice River which discharges into Baldoyle Bay hence forming a direct hydrological connection and a pathway for potential significant effects to Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016) and the North-West Irish Sea SPA (Site Code: 004236) during both the construction and operation phases of the development. Wastewater from the site will be treated in the Malahide WWTP and thereby a hydrological link and a pathway for

	potential significant effects between the site and Malahide Estuary SAC (Site Code: 000205), Malahide Estuary SPA (Site Code: 004025) and the North-West Irish Sea SPA (Site Code: 004236). These potential effects are further examined below.
Resource requirements (water abstraction, etc.)	There will be no additional extraction from natural surface or ground water sources required to supply the proposed development. All water requirements for this project will be provided from the mains water supply in the area. **Please refer to the Engineering Assessment Report prepared by Waterman Moylan Consulting Engineers Limited.** **Water Supply** There is an existing 300mm Ø watermain located along Back Road with 100mm Ø watermain spur provided at the subject site. Two number 100mm Ø HDPE spurs have been strategically provided in the sites to the west, Ashwood Hall adjacent to the site. These spurs have been constructed in anticipation of servicing this application. It is proposed to upsize the existing 100mm Ø watermain spur to 200mm Ø watermain to connect the proposed development to 300mm Ø watermain at Back Road. It is also proposed to provide another 2 no. connections from the adjacent Ashwood Hall residential development to the west. Water requirements for the proposed development will therefore not impact on the water levels or the hydrology of any European site.
Emissions (disposal to land, water or air)	Please refer to the information provided in the report and associated drawings prepared by Waterman Moylan Consulting Engineers Limited which is summarised below. **<u>Construction Phase:</u>**

	During the construction phase of the project there is a risk of silt laden runoff leaving the site via surface waters. **<u>Operational Phase</u>** ***Surface Water*** It is proposed to construct a surface water drainage network that will service and attenuate the development internally before discharging at the current greenfield (or allowable) rates to the local natural ditch systems. The surface water drainage layout and attenuation strategy can be reviewed on Waterman Moylan drawing numbers 18-091-P3200, P3210 and P3211. These SuDS measures have been designed in line with best practice and there are therefore no likely significant effects on any European Site arising from surface waters at the operational stage from the proposed development. **Foul Water** It is noted that Connolly Avenue pumping station, the gravity foul water network in Malahide and Malahide WWTP all have had capacity issues during heavy rainfall events with subsequent risk to the adjoining Natura 2000 sites. The applicant has been in conversation with Uisce Éireann to agree a solution. Uisce Éireann are progressing with a new regional pumping station on Kinsealy Lane that will replace Connolly Avenue Pumping Station. This new pumping station is due to be operational in Q1 2029. In the interim, it was agreed with Uisce Éireann that this subject development may be accommodated by providing a temporary pumping station with 24Hr. storage in the development. This temporary pumping station will be fully decommissioned by the

	developer after the Connolly Avenue Pumping Station upgrade is completed. The proposed internal foul drainage network has been designed and sized in accordance with the Uisce Éireann Water code of Practice for Wastewater Infrastructure and Standard Details. Please refer to Waterman Moylan drawing numbers 18-091-P3200, P3210 and P3211. The foul water will be discharged by raising mains from the proposed temporary pumping station to the existing manhole EXF2-10A at Ashwood Hall. This temporary pumping station will be decommissioned once the upgrade works by Irish Water have been completed. This temporary pumping station will overcome the capacity issues at Malahide WWTP during heavy rainfall events and ameliorate any untreated discharges (associated with this development) from the WWTP to the adjoining European Sites. Therefore notwithstanding the hydrological connection between the proposed development and European Sites identified above via the foul water network, there is no possibility of significant effects on any European sites arising from the proposed development from additional foul water loading associated with the proposed development as it will be serviced appropriately by the temporary pumping station.
Excavation requirements	There will be no emissions or excavation requirements arising from the construction of the development that could impact on any European site. There will be cut and fill within the development but these excavation works do not extend beyond the red line boundary of the site. Any excess topsoil or subsoil arising from the site will be disposed of to a licensed landfill facility.

	Standard site management procedures during construction will be implemented to reduce impacts from dust, noise and vibration. There are no excavation requirements within any European site. The excavation within the boundaries of the development site, but will be localised and will not have any likely significant effect on any European Site.
Transportation requirements, duration of construction, operation, decommissioning, etc.	There are no significant impacts to any European site expected from transportation, duration of construction, operation, or decommissioning of any element of the proposed development.
Reduction of habitat area	None within any European site

Changes to any identified European site arising as a result of disturbance, fragmentation, etc. are summarised below in **Table 3.3.2.**

Table 3.3.2. Description of likely changes to the site arising as a result of:

Disturbance to key species	There will be no disturbance to key species within any European site arising from the proposed development on the Broomfield lands. The Broomfield lands do not support ex situ wintering populations of waterbird Special Conservation Interests from any of the European Sites.
Habitat or species fragmentation	There will be no fragmentation of habitat or species associated with any European site arising from the proposed development on the Broomfield lands.
Reduction in species density	There will be no reduction in species density of any species associated with any European site arising from the proposed development on the Broomfield lands.
Changes in key indicators of conservation value (water quality etc.)	A potential risk has been identified to surface water quality during construction.

Climate change	There are no changes expected to any European site or to climate change as a result of the proposed development on the Broomfield lands. The new buildings will be constructed to the highest energy conservation standards.

Likely impacts on any identified European site as a whole in terms of structure and functions are described below in **Table 3.3.3.**

Table 3.3.3. Describe any likely impacts on any European site as a whole in terms of:

Key relationships that define the structure of the sites	There are no likely changes to any European Site(s) as a result of the proposed development on the Broomfield lands with respect to the key relationships that define the structure of the European Site.
Key relationships that define the function of the site	There are no likely changes to any European Site(s) as a result of the proposed development on the Broomfield lands with respect to the key relationships that define the function of the European Site.

The main potential impacts from the proposed development at Broomfield are therefore a risk of decline in water quality in local drains and the Hazelbrook Stream, which ultimately drain to the Baldoyle SAC/SPA via the Sluice River, arising from harmful discharges and runoff from site during construction and occupation. These are further discussed below in **Section 4**.

3.4 Cumulative/Potential/In-Combination Impacts

Cumulative impacts of this and other developments in the Malahide area (as set out below) were considered in combination with the following plans and projects which were relevant to the subject lands:

- **Reg. Ref. F24A/0988E** permission sought for 9 residential units on sites in Ashwood Hall and Brookfield previously intended for a neighbourhood centre and a crèche.
- Retail anchor development proposal on lands adjoining Ashwood Hall and the LRD lands (planning application in process).
- Residential development proposal on lands on Back Road known as Lamorlaye (F24A/1010E).
- **Reg. Ref. F24A/0842E** permission sought for development of a proposed temporary construction road off Kinsealy Lane to facilitate the

implementation of the approved development under ABP 313361-22 on the southern portion of the lands at Back Road & Kinsealy Lane, Kinsaley, Broomfield, Malahide, Co. Dublin (grant decision 12th November 2024).

- **Reg. Ref. F23A/0586** permission granted for construction of 71 no. residential units on the southern portion of the lands at Back Road & Kinsealy Lane, Kinsaley, Broomfield, Malahide, Co. Dublin. This permission also includes a temporary construction road off Kinsealy Lane on the site covered by this application. Additionally, permission has been granted for 87 residential units on the same southern portion of the lands at Back Road & Kinsealy Lane.
- **Reg. Ref. F21A/0451** permission granted for proposed upgrade of the existing foul water storage tank to provide for a pumping station with increased storage capacity, new sewer and rising main along Kinsealy Lane with associated interceptions and manholes, boundary treatments, and all associated engineering and site works necessary to facilitate the development.
- The Broomfield SHD (**ABP-313361-22**) comprising the construction of 415 no. residential units & a creche on the lands at Back Road & Kinsealy Lane, Kinsaley, Broomfield, Malahide, Co. Dublin. By the Order dated 4th July 2024, An Bord Pleanála issued a split decision on the case to include a granted permission for construction of 87 no. residential units on the southern portion of the lands and a refusal on the northern portion of the lands.
- The Auburn House SHD (**ABP-313360-22**) comprising 368 no. residential units and a crèche on lands at Auburn House (Protected Structure), Little Auburn and Streamstown, Off Malahide Road and Carey's Lane, Back Road, and Kinsealy Lane, Malahide, Co. Dublin. With a decision date due 8th August 2022, the case is still under review by the Board. This delayed decision triggered concurrent lodgement of three planning applications on the lands, including 69 no. dwellings under F22A/0579 - ABP-316444-23; 98 no. dwellings under F22A/0580 - ABP-316498-23; 92 no. dwellings under F22A/0581 - ABP-316504-23. By 29th March 2023, Fingal County Council granted planning permission for these applications; subsequently third-party appeals were lodged against the Council decisions and by Order dated 13th May 2024, An Bord Pleanála granted planning permission with revised conditions for all.
- **Reg. Ref. F18A/0168** (ABP-303370-19) permission granted for alterations to previously approved development under Reg. Ref. F13A/0443 for construction of 32 no. residential units at Streamstown Wood, Streamstown Lane, Malahide, Co. Dublin. A third-party appeal was lodged against the Council's decision which was then withdrawn.

- Brookfield and Ashwood Hall Developments (**Reg. Ref. F13A/0459 - PL06F.243863 - Reg. Ref. F13A/0459/E1 & Reg. Ref. F13A/0460 - PLO6F.243821 - Reg. Ref. F13A/0460/E1**); all located to the west of the subject site.

Other plans and projects of relevance include:

- *Ireland's 4th National Biodiversity Action Plan 2023 - 2030.* (Department of Housing, Local Government and Heritage, 2023);
- *Ireland's 3rd National Biodiversity Action Plan 2017 - 2021* (Department of Culture, Heritage and the Gaeltacht, 2017);
- *Fingal Biodiversity Action Plan 2022 – 2030* (Fingal County Council, 2022);
- *Fingal Biodiversity Action Plan 2010 – 2015* (Fingal County Council, 2010);
- *Fingal Development Plan 2023 – 2029* (Fingal County Council, 2023);
- *Fingal Development Plan 2017 – 2023* (Fingal County Council, 2017);
- *Broomfield Local Area Plan 2010 - 2015 (Fingal County Council, 2010).*

As neither the proposed Broomfield LRD development, other LRD developments or any of the above developments in the locality, or other plans or projects are expected to have a significant impact on the identified European sites listed in **Table 2.4.1**, the risk of in-combination effects can be ruled out.

4. POTENTIAL IMPACTS ON NATURA 2000 SITES

Potential impacts on the water features within the site (principally the local field drains and Hazelbrook Stream) which flow to the Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016) and the North-West Irish Sea SPA (Site Code: 004236) could arise during both the Construction and Operational Phases of the proposed development and hence impact on the Natura 2000 sites downstream.

4.1 Construction Phase:

The main potential impacts during this phase arise from the physical disturbance of the soil within the site during construction. There is some potential for run-off from soil and machinery on the site to the adjoining land drains and Hazelbrook Stream (and ultimately the Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016) and the North-West Irish Sea SPA (Site Code: 004236)) unless some remedial measures are put in place. There is also some potential for leaks of oil and petrol from machinery and equipment used on site to enter the Natura 2000 site.

4.2 Operational Phase:

The main potential impacts of this phase relate to potential contamination of local drains, watercourses and ultimately the Baldoyle Bay SAC (Site Code: 000199),

Baldoyle Bay SPA (Site Code: 004016) and the North-West Irish Sea SPA (Site Code: 004236) from surface water run off from the site.

5. PROPOSED MITIGATION MEASURES

5.1 Sediment Control

Sediment control will be required during the construction phase to prevent silt, cement, hydro-carbons and other building materials from entering the Hazelbrook Stream and ultimately Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016) and the North-West Irish Sea SPA (Site Code: 004236).

Sediment control practices are used on building sites to prevent sand, soil, cement and other building materials from reaching waterways and water dependent habitats. Even a small amount of pollution from a site can cause significant environmental damage by killing aquatic life, silting up streams and blocking storm water pipes. Storm water can contain many pollutants which can enter our local drainage ditches, streams, rivers and marine systems, causing harm to native animals, plants, fish breeding habitats and recreational areas.

Soil erosion, sediment and litter from building sites can be major sources of storm water pollution, and can cause:

- significant harm to the environment e.g. loss of valuable foraging areas in adjoining mudflats for wintering birds
- weed infestation of waterways caused by sediment settling on the creek beds and transporting nutrients
- loss of valuable topsoil
- significant public safety problems when washed onto roads and intersections
- blocked drains creating flooding and increased maintenance costs
- damage to recreational and commercial fishing.

Sediment control usually requires little effort and results in:

* Cleaner waterways and healthier aquatic life.
* Improved site conditions.
* Improved wet weather working conditions.
* Reduced wet weather construction delays.
* Reduced losses from material stockpiles.
* Fewer mud and dust problems.

Good site management in relation to sediment control during the construction phase should prevent this from occurring and possible mitigation measures for consideration are outlined below.

Minimising site disturbance:
Prevention is better than cure. Careful design and an efficient construction sequence will minimise disturbance to the site. This will save money and reduce environmental impact.

Design to avoid excessive cut and fill, unnecessary clearing of vegetation and to preserve existing site drainage patterns. Clear only those areas necessary for building work to occur. Preserve grassed areas and vegetation where possible. This helps filter sediment from storm water run off before it reaches the drainage system and stops rain turning exposed soil into mud. Delay removing vegetation or commencing earthworks until just before building activities start. Avoid building activities that involve soil disturbance during periods of expected heavy or lengthy rainfall.

Implement sediment control:
Install sediment control measures before commencing any excavation or earth moving. Regularly maintain them until construction is complete and the site is stabilised.

Firstly divert uncontaminated storm water away from the work area.
Avoid contamination of local drainage ditches with sediment. Use diversion devices to reduce the volume of storm water reaching the disturbed area. Consideration may need to be given to the creation of a diversion channel to divert uncontaminated storm water around the disturbed area. Construct the channel uphill of the disturbed area with a bank on the lower side. Regularly remove sediment from the channel. Line the channel with erosion control mats or turf to prevent soil erosion or use check dams constructed from sand or gravel filled bags.

Minimise the potential for erosion
Construct a single vehicle entry/exit pad to minimise tracking of sediment onto roadways. Use a 150mm (minimum) layer of 40mm recycled aggregate or crushed rock. A raised hump across the entry/exit pad can be used to direct storm water run-off into a sediment trap to the side of the pad. Protect materials that may erode, particularly sand and soil stockpiles, with waterproof coverings. Contain waste in covered bins or traps made from geotextile fabric. Locate stockpiles of building materials away from drainage paths and uphill of sediment barriers. Divert run-off around stockpiles unavoidably located in drainage paths using a perimeter bank uphill. Use biodegradable erosion control mats to protect exposed earth.

Prevent sediment-contaminated water leaving the site
Use barriers to trap coarse sediment at all points where storm water leaves the site, before it can wash into the local ditches. Relocate sediment on site or dispose of it suitably. Remove accidental spills of soil or other material immediately.

Maintain vegetation elsewhere on the site in a healthy state as it can function as an additional filter for sediment. Cut brick, tile or masonry on a pervious surface such as grass or loosened soil within the property boundary. The same applies when cleaning equipment. Waste concrete, paint and other solutions used on site should be properly disposed of so they do not contaminate storm water.

These measures have been included in the Construction Environmental Management Plan prepared by Waterman Moylan.

They are widely implemented on construction sites, have been shown to be effective and there is widespread practical experience of their use. There are therefore no likely significant effects on any European Site arising from emissions during the construction phase of the development.

5.2 Surface Water

Potential negative impacts could arise should untreated surface waters from the site once constructed enter local land drains, the Hazelbrook Stream or ground water from the proposed development.

These impacts have been addressed through careful consideration of the ground conditions within the site and the SUDS design for the site as outlined in the Engineering Assessment Report and accompanying drawings prepared by Waterman Moylan Consulting Engineers Limited, which will ensure that all surface water leaving the site is treated. This will protect the European sites downstream (Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016) and the North-West Irish Sea SPA (Site Code: 004236)).

6. OVERALL CONCLUSIONS

Faith Wilson Ecological Consultant was commissioned by Birchwell Developments Ltd. to prepare a Natura Impact Statement in relation to an LRD application for the development of lands for residential purposes at Broomfield, Back Road & Kinsealy Lane, Malahide, Co. Dublin.

The proposed project identified nineteen European sites as occurring within the Zone of Influence of the development;

- Baldoyle Bay SAC (Site Code: 000199),
- Baldoyle Bay SPA (Site Code: 004016),
- the North-West Irish Sea SPA (Site Code: 004236),
- Malahide Estuary SAC (Site Code: 000205),
- Malahide Estuary SPA (Site Code: 004025),
- North Dublin Bay SAC (Site Code: 000206),
- North Bull Island SPA (Site Code: 004006),
- South Dublin Bay/Tolka Estuary SPA (Site Code: 004024),
- South Dublin Bay SAC (Site Code: 000210),
- Rockabill to Dalkey Islands SAC (Site Code: 003000),
- Rogerstown Estuary SAC (Site Code: 000208),
- Rogerstown Estuary SPA (Site Code: 004015),
- Ireland's Eye SAC (Site Code: 002193),
- Ireland's Eye SPA (Site Code: 004117),
- Howth Head SAC (Site Code: 000202), and
- Skerries Islands SPA (Site Code: 004122).

The screening for appropriate assessment determined possible significant effects in relation to the above sites. This screening exercise followed a methodology which examined three source > pathway > receptor chains; surface water, land and air, and groundwater pathways.

The NIS considered the potential adverse effects on the qualifying interests of European sites arising from the proposed development of the lands for housing at Broomfield, Malahide.

The assessment considers whether the works, alone or in combination with other projects or plans, will have adverse effects on the integrity of a European Site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects.

Where potentially significant adverse impacts were identified, a range of mitigation and avoidance measures have been suggested to ameliorate and mitigate them.

A temporary pumping station with 24hr. storage will be provided to service the proposed development. This will overcome the current capacity issues in the Malahide area and the Malahide WWTP thereby ameliorating any potential significant for potential significant effects posed by this pathway between the site and Malahide Estuary SAC (Site Code: 000205), Malahide Estuary SPA (Site Code: 004025) and the North-West Irish Sea SPA (Site Code: 004236).

There will be site specific measures implemented during the construction and operational phases of the project to ensure that no negative impacts arise from surface water runoff or other potential pollutants from entering the Hazelbrook Stream and ultimately Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016) and the North-West Irish Sea SPA (Site Code: 004236).

This report has concluded that provided the mitigation measures as detailed in Section 5 are implemented in full, it can be objectively concluded that the proposed development, individually or in combination with other plans or projects, will not adversely affect the integrity of Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016), Malahide Estuary SAC (Site Code: 000205), Malahide Estuary SPA (Site Code: 004025) and the North-West Irish Sea SPA (Site Code: 004236) in view of the sites conservation objectives, and that no reasonable scientific doubt remains as to the absence of such adverse effects.

Based on the information provided above, and by applying the precautionary principle, it was determined that it was possible to rule out likely significant impacts on any European site and therefore it was not deemed necessary to undertake any further stage of the Appropriate Assessment process.

It is concluded that provided the mitigation measures outlined are upheld, no adverse effects are likely from the development of lands at Back Road & Kinsealy Lane, Broomfield, Malahide, Co. Dublin, in combination with other project and plans on Baldoyle Bay SAC (Site Code: 000199), Baldoyle Bay SPA (Site Code: 004016), Malahide Estuary SAC (Site Code: 000205), Malahide Estuary SPA (Site Code: 004025) and the North-West Irish Sea SPA (Site Code: 004236). All other identified European sites were screened out.

A Stage 3 or Stage 4 assessment is therefore not required.

7. REFERENCES

Anon. (1996). *Interpretation Manual of European Union Habitats.* Version EUR 15, European Commission, Brussels.

Anon. (2010). *Appropriate Assessment of plans and projects in Ireland: Guidance for planning authorities.* National Parks and Wildlife Service, Dept Environment, Heritage and Local Government.

Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) 1982.

Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1979.

Council of the European Communities (1992). *Council Directive of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (92/43/EEC).* O.J. L 206/35, 22 July 1992.

Council of the European Communities (1979). *Council Directive of 02 April 1979 on the conservation of wild birds (79/409/EEC).* O.J.L. 103, 25 April 1979.

European Commission (2001). *Assessment of plans and projects significantly affecting Natura 200 sites- methodological guidance on the provisions of Article 6(3) and 6 (4) of the Habitats Directive 92/43/EEC.*

European Commission (2002). *Managing Natura 2000 sites - the provisions of Article 6 of the Habitats Directive 92/43/EEC.*

European Commission (2018). *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC (Commission Notice C(2018) 7621 final, Brussels, 21.11.2018).*

European Commission (2021). *Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC 2021/C 437/01.* (Commission notice C/2021/6913. Dated 28.10.2021).

Flora (Protection) Order (2022). Government of Ireland.

Fossitt, J. (2000). ***A Guide to Habitats in Ireland.*** Heritage Council, Kilkenny.

Gilbert G, Stanbury A and Lewis L.J. 2021. Birds of Conservation Concern in Ireland 2020 –2026. *Irish Birds* 43, 1-22.

Hayden, T. & R. Harrington (2000). *Exploring Irish mammals*. Dúchas. Town House, Dublin.

Inland Fisheries Ireland (2020). *Planning For Watercourses In The Urban Environment. A Guide to the Protection of Watercourses through the use of Buffer Zones, Sustainable Drainage Systems, Instream Rehabilitation, Climate / Flood Risk and Recreational Planning *Including one-off developments.* A Guideline Developed by Inland Fisheries Ireland.

King, J.L., Marnell, F., Kingston, N., Rosell, R., Boylan, P., Caffrey, J.M., FitzPatrick, Ú., Gargan, P.G., Kelly, F.L., O'Grady, M.F., Poole, R., Roche, W.K. & Cassidy, D. (2011). *Ireland Red List No. 5: Amphibians, Reptiles & Freshwater Fish.* National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.

Marnell, F., Looney, D. & Lawton, C. (2019). *Ireland Red List No. 12: Terrestrial Mammals*. National Parks and Wildlife Service, Department of the Culture, Heritage and the Gaeltacht, Dublin, Ireland.

National Parks and Wildlife Service Online Database. Available online at www.npws.ie

Natura 2000 Sites - Site Synopsis. Available online at www.npws.ie

OPR, (2021). Office of the Planning Regulator Practice Note PN01 - Appropriate Assessment Screening for Development Management.

Parnell, J. and T.G. Curtis. (1996). *Webb's An Irish Flora.* Cork University Press.

Ramao, C. (2003). **Interpretation Manual of the European Union Habitats Version Eur 25.** European Commission DG Environment Nature and Biodiversity. Brussels.

Regan, E.C., Nelson, B., Aldwell, B., Bertrand, C., Bond, K., Harding, J., Nash, D., Nixon, D., & Wilson, C.J. (2010). *Ireland Red List No. 4 Butterflies.* National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Ireland.

Scannell, M.J.P. and Synnott, D.M. (1987). **Census Catalogue of the Flora of Ireland – Clár de Phlandaí na hÉireann.** The Stationary Office, Dublin.

S.I. No. 477 of 2011. *The European Communities (Birds and Natural Habitats) Regulations 2011.* Irish Government, Government Publications Office, Molesworth Street, Dublin 2.

S.I. No. 293 of 2021. *The European Communities (Birds and Natural Habitats) Regulations 2011-2021.* Irish Government, Government Publications Office, Molesworth Street, Dublin 2.

Wildlife Act, 1976 including all other amendments 1976–2010 Number 39 of 1976 and Number 38 of 2000. Dublin: Office of the Attorney General. Wildlife (Amendment) Act (2000). Government of Ireland.

Wyse Jackson, M., FitzPatrick, Ú., Cole, E., Jebb, M., McFerran, D., Sheehy Skeffington, M. & Wright, M. (2016) *Ireland Red List No. 10: Vascular Plants.* National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Dublin, Ireland.