FEHILY TIMONEY

CONSULTANTS IN ENGINEERING, ENVIRONMENTAL SCIENCE & PLANNING

# REPORT TO INFORM THE COMPETENT AUTHORITIES SCREENING FOR APPROPRIATE ASSESSMENT FOR THE EXPANSION OF A MATERIALS RECOVERY FACILITY AT CAPPOGUE AND DUNSINK, BALLYCOOLIN ROAD, DUBLIN 11

## Appropriate Assessment Screening Report

**Prepared for: Padraig Thornton Waste Disposal Ltd. T/A Thorntons Recycling**

Thorntons recycling

**Date: November 2022**

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**REVISION CONTROL TABLE, CLIENT, KEYWORDS AND ABSTRACT**
**User is responsible for Checking the Revision Status of This Document**

| Rev. No. | Description of Changes | Prepared by: | Checked by: | Approved by: | Date: |
|---|---|---|---|---|---|
| 0 | Draft | DD/AMW/SJ | JK/RD | | 09/11/2022 |

**Client:** Padraig Thornton Waste Disposal Ltd. T/A Thorntons Recycling

**Keywords:** Appropriate Assessment Screening Report, AA Screening, Article 6(3) of the Habitats Directive, European (Natura 2000) sites, Waste Facility, Cappogue, Dunsink, Dublin.

**Abstract:** This document comprises the Stage One: Appropriate Assessment Screening Report for the expansion of a proposed Materials Recovery Facility. Appropriate Assessment is required under Article 6 (3) of the Habitats Directive for any project or plan, either individually or in combination with other plans or projects, likely to have a significant effect on a European site in view of its conservation objectives.

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# 1 INTRODUCTION

Fehily Timoney and Company (FT) were commissioned by Padraig Thornton Waste Disposal Ltd. T/A Thorntons Recycling (The Applicant) to prepare a report to inform the competent authorities Screening for Appropriate Assessment, as required by Article 6(3) of Council Directive 92/43/EEC (Habitats Directive). The preparation of the Appropriate Assessment Screening Report (AA Screening) is for a proposed expansion of a Materials Recovery Facility to be based at Cappogue and Dunsink, Ballycoolin Road, Dublin 11 (see Figure 1-1 for location).

The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (3.38 hectares in size) encompassing the existing facility as well as lands directly south of the existing facility, falling across the townlands of Cappogue and Dunsink.

This report presents an examination of whether the proposed development is likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and is based on best available scientific knowledge. This report is to inform the competent authority in completing their statutory obligation to carry out a Screening for Appropriate Assessment.

## 1.1 Legislative Requirements

Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) provides legal protection for habitats and species of European importance.

The Directive requires that where a plan or project is likely to have a significant effect on a European Site, while not directly connected with or necessary to the nature conservation management of the site, it will be subject to 'Appropriate Assessment' to identify any implications for the European site in view of the site's Conservation Objectives. Specifically, Article 6(3) of the Habitats Directive states:

*6(3) Any plan or project not directly connected with or necessary to the management of the site (Natura 2000 sites) but likely to have significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*

The provisions of Article 6(3) do not apply where the proposed plan or project is '*connected with or necessary to the management of the site'.* In this case, the proposed development is not directly connected with or necessary to the management of any European site(s) and as such an assessment as to whether the project would be likely to have significant effects on European Sites must be carried out.

Article 6(3) of the Habitats Directive is implemented by the provisions of sections 177U and 177V of the *Planning and Development Act, 2000* (as amended). Article 177U requires that before consent is given, the competent authority must carry out a screening for appropriate assessment to assess, in view of best scientific knowledge, if the development, individually or in combination with another plan or project is likely to have a significant effect on the European site. If it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site, an appropriate assessment of its implications for the Site(s) in view of the Site's conservation objectives is required to be carried out.

Section 42, paragraph 13 of the S.I. No. 293/2021 - European Union (Birds and Natural Habitats) (Amendment) Regulations 2021, has also introduced a mandatory requirement for the public authority to undertake consultation with the public prior to the Appropriate Assessment determination being made, and that the public authority shall have regard to any submissions or observations received during the public consultation.

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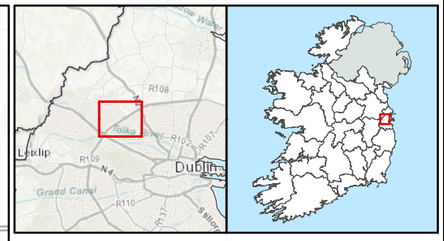


Junction 5 of M50

Stadium Business Park

Ballycoolin Road

Barn Lodge Grove Road

Premier Business Park

Coolbrook Cottages

Proposed Development Site

M50

Residences to the Southe - East

Dunsink Landfill

Junction 6 of M50

Meters
0 100 200 400

## Legend

Proposed Site Boundary

| | | | |
|---|---|---|---|
| **TITLE:** | Site Location | | |
| **PROJECT:** | SID Application, EIAR and IE Licence Application for Thorntons | | |
| **FIGURE NO:** | 1.1 | | |
| **CLIENT:** | Thorntons Recycling | | |
| **SCALE:** | 1:12500 | **REVISION:** | 0 |
| **DATE:** | 26/10/2022 | **PAGE SIZE:** | A3 |

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# 2 METHODOLOGY

## 2.1 Guidance

In the preparation of this assessment regard has been had to the relevant guidance, in particular:

- Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC'. Commission notice (2021) Brussels, 28.9.2021 C(2021) 6913 final.
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin (2010);
- European Commission, (2019). Commission notice 'Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC'. (2019/C 33/01). OJ C 33, 25.1.2019.
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission 2013.
- Office of the Planning Regulator Practice Note PN01 Appropriate Assessment Screening for Development Management (March 2021).

## 2.2 Assessment Protocol

The process in determining the likelihood of significant effects from the proposed project on European sites is as follows:

**Characteristics of the Project and Identification of Impacts**

The assessment commences with a description of the project (Section 3 of this report) and the associated likely environmental impacts. All elements of the project are presented including the project location and existing baseline environment. The type of impacts which are likely due to the project are identified having regard to the spatial and temporal scale of the project, resource requirements and likely emissions. The zone of influence (ZoI) of the project is therefore defined, and the potential source-pathway-receptor (S-P-R) connectivity to European Sites and their qualifying interests / special conservation interests (SCIs) are identified.

The potential for in combination impacts with other plans and projects is also assessed having regard to the identified impacts of the project.

**European Site Characteristics**

The European sites which fall within the ZoI of the project impacts are identified. The conservation objectives for these European Sites are identified and the environmental conditions needed to maintain or achieve favourable conservation status is determined along with the existing threats and pressures to the Sites (Section 4).

**Likelihood of Significance of Effects**

The likelihood of significant effects on the European Sites within the ZoI is determined having regard to the sensitivity of the Site to the impacts associated with the project on its own and in combination with other plans and projects. Having regard to the European Commission Communication on the Precautionary Principle (EC, 2021) the:

> "*absence of scientific evidence on the significant negative effect of an action cannot be used as justification for approval of this action. When applied to Article 6(3) procedure, the precautionary principle implies that the absence of a negative effect on Natura 2000 sites has to be demonstrated before a plan or project can be authorised. In other words, if there is a lack of certainty as to whether there will be any negative effects, then the plan or project cannot be approved*."

## 2.3 Information Consulted in the Preparation of this Report

A desk study was carried out to collate available information on the site's natural environment. This comprised a review of the following publications, data and datasets:

- Fingal Development Plan 2017-2019
- Fingal Development Plan 2023-2029 Draft
- Fingal County Council Planning Enquiry System
- BirdWatch Ireland website
- Environmental Protection Agency (EPA) (on-line map-viewer)
- River Catchment & Sub-catchment WFD datasets
- Department of Housing, Planning, and Local Government – online land use mapping www.myplan.ie/en/index.html;
- Department of Housing, Planning, and Local Government- EIA Portal https://www.housing.gov.ie/planning/environmental-assessment/environmental-impact-assessment-eia/eia-portal
- Environmental Protection Agency (EPA) – Water Quality www.epa.ie, http://gis.epa.ie/Envision;
- The EPA Geotool for Appropriate Assessment (EPA Maps)
- Geological Survey of Ireland – Geology, soils and Hydrogeology www.gsi.ie;
- Water Framework Directive website – www.catchments.ie;
- National Parks and Wildlife Service – online European site network information, including site conservation objectives www.npws.ie;
- National Parks and Wildlife Service – Information on the status of EU protected habitats in Ireland (Article 17 Reports and Article 12 Reports)
- National Biodiversity Data Centre – www.biodiversityireland.ie;
- Ordnance Survey of Ireland – Mapping and Aerial photography www.osi.ie;
- Inland Fisheries Ireland (online map-viewer) - https://www.fisheriesireland.ie/; and
- Water Framework Directive website – www.catchments.ie.

## 2.4 Field Study

An ecological site walkover was carried out over the 12th May and 17th June 2022 by FT Project Ecologist David Daly. The objective of the visits was to gain an overview of the proposed development site in regard to the presence of invasive plant species; and habitats or species that are protected and/or are qualifying interests of the European sites relevant to this report. Weather conditions were favourable for surveying.

# 3 BASELINE ENVIRONMENT

The development site encompasses the Applicant's existing waste facility situated at Cappogue Industrial Park, Dublin 11, together with lands to the south of this facility situated in the townlands of Cappogue and Dunsink. The surrounding landscape is peri-urban in nature, with industrial, commercial, and residential lands surrounding the site. The M50 also passes along the sites southern boundary. There are agricultural lands in the surrounding area, as well as a disused landfill and golf course. The land use classifications for the surrounding area as defined by the 2018 CORINE landcover dataset are: 243 Land principally occupied by agriculture with significant areas of natural vegetation. Within the wider landscape are: 121 Industrial and commercial units, 211 Non-irrigated arable land, 122 Road and rail network, 231 Pastures, 142 Sport and leisure facilities and 112 Discontinuous urban fabric.

The site is underlain by the Tober Colleen Formation, which comprises dark-grey, calcareous, commonly bioturbated mudstones and subordinate thin micritic limestones.

The site walkover indicates that the main habitat types (Fossitt, 2000) present in the immediate vicinity of the proposed works site are: improved agricultural grassland/ dry meadows & grassy verges mosaic (GA1/GS2), recolonising bare ground (ED3), scrub (WS1), buildings and artificial surfaces (BL3). treelines (WL2), and a drainage ditch (FW4) run through the centre of the site and spoil and bare ground (ED2) form some of the boundaries of these fields within the site.

No Third Schedule listed species under Regulations 49 & 50 in the European Communities Birds and Natural Habitats Regulations 2011) were recorded within the site. *Buddleja davidii* was recorded onsite in two locations – ITM 710215 739529 and ITM 710172 739550. A row of cherry laurel *Prunus laurocerasus* hedge runs offsite along the northern site boundary, with a single young rhododendron *Rhododendron ponticum* sapling located within, also offsite, ITM 710357 739637.

No botanical species protected under the Flora (Protection) Order (1999; and as amended 2022), listed in Annex II or IV of the EU Habitats Directive (92/43/EEC), or listed in the Irish Red Data Books were recorded during the site walkover. All flora and fauna species recorded during the walkover are considered common for similar habitats in the general area. No qualifying species of any Natura 2000 sites within 15 km of the proposed development were recorded during the site visit.

The EPA mapviewer indicates that the:

- Site is located within the Tolka_SC_020 Sub-catchment within the Liffey and Dublin Bay Catchment.
- A drainage ditch within the boundary of the proposed development site flows overground in a south eastern until it reaches a point adjacent to the M50 where it is culverted once again. It then passes under the M50 before rising to the surface again where it flows in an eastward direction a short distance and enters the Dunsink Landfill. Drainage from this ditch is then directed by a stormwater drain to the attenuation pond serving Dunsink landfill. This attenuation pond drains to a northern tributary of the Scribblestown stream traversing the landfill site in a north western to south eastern direction, which in turn drains to the Scribblestown stream south east of the landfill site. The Scribblestown stream then enters the River Tolka which in turn drains to the River Tolka Estuary, before entering Dublin Bay. There is an instream distance of c10km between the proposed development and the closest hydrologically linked European site, South Dublin Bay and River Tolka Estuary. North Bull Island SPA and North Dublin Bay SAC are an additional 3km, direct distance, beyond the River Tolka Estuary within Dublin Bay.

- There are three EPA water monitoring stations along the River Tolka, downstream of the proposed development between the development site and the SPA. Two of these have a Q value of 3, while the remaining station has a Q value of 2-3. All stations had a water quality status of 'Poor'. The receiving surface waters are not classed as protected under the EU Freshwater Fish Directive (2006/44/EC).
- Site is located within the Groundwater Subcatchment 09, within Extreme and High Vulnerability areas.

# 4 PROJECT DESCRIPTION

## 4.1 Overview

Padraig Thornton Waste Disposal Ltd. T/A Thorntons Recycling intends to apply for planning permission to expand an existing Materials Recovery Facility (MRF). The existing MRF is situated at Unit 1, Cappogue Industrial Park, Ballycoolin Road, Cappogue, Dublin 11. The proposed development will involve the construction and operation of an expanded Materials Recovery Facility at a development site (3.38 ha in size) which falls across the townlands of Cappogue and Dunsink, south of the Ballycoolin Road, Dublin 11.

The proposed expanded facility will accept and process up to 300,000 tonnes per annum (tpa) of waste material, to include:

- 100,000 tpa of residual municipal solid waste (rMSW).
- 50,000 tpa food waste.
- 100,000 tpa construction and demolition (C&D) Waste
- 50,000 tpa mixed dry recyclable (MDR) waste.

### 4.1.1 Construction Phase

The proposed development will consist of the following:

1. Demolition of one annex of the existing building on-site (226 $m^2$, 9.46 m in height) and the removal of an existing weighbridge.
2. Clearance of lands to the south of the existing waste facility.
3. Culverting of an existing surface water drain traversing the site.
4. Development of a new second entrance ca. 35 m south of the existing site entrance to accommodate vehicles accessing and egressing the proposed facility.
5. Upgrade and expansion of the existing building on-site, to be referred to MRF 1 (2,659 $m^2$, to a maximum height of 12.48 m).
6. Development of a new building on-site, to be referred to as MRF 2 (1,735 $m^2$, to a maximum height of 13.65 m).
7. Development of a new building on-site, to be referred to as MRF 3 (4,320 $m^2$, to a maximum height of 13.85 m).
8. Development of ancillary infrastructure including:
    a. advertising signage (8 m x 2 m) on the southern and western façades of the MRF 3 building and on the southern façade of the southern façade of the MRF 1 building,
    b. internal site roads, parking and skip storage,
    c. an administration building (272 $m^2$, to a maximum height of 6.96 m),
    d. 2 no. at-grade weighbridges and a weighbridge office (18.5 $m^2$, 3.3 m in height),
    e. an electrical sub-station (23 $m^2$, 2.98 m in height),
    f. a vehicle workshop (519 $m^2$, to a maximum height of 8.44 m),

g. a vehicle refuelling facility adjoining the vehicle workshop, with an internal 45 $m^3$ bunded diesel storage tank,

h. a vehicle wash (176 $m^2$, 5.24 m in height),

i. perimeter fencing (2.4 m in height), gate access and perimeter landscaping (ca. 6 - 8 m in height),

j. site services,

k. surface water management infrastructure, including an overground rainwater harvesting tank (with a floor area of 86.6 $m^2$ and a capacity of 470 $m^3$),

l. fire pumps and a fire-fighting and control system,

m. a traffic management system,

n. an odour abatement system, with a 20 m high stack

The proposed development will also consist of the following exempted development:

- Development of rooftop photovoltaic solar panels (with a cumulative area of 2,476 $m^2$).

### *Culverting of Existing Surface Water Drain*

An existing open surface water drainage ditch traverses the development site in a north west to south east direction. This drain collects surface water generated at the existing development site and discharges it into a culvert to the south east of the site which travels below the M50 southward. As part of the proposed development, it is proposed to culvert the open surface water drainage ditch currently traversing the site. This underground drain will consist of a reinforced concrete culvert.

### *Culverting of Existing Surface Water Drain*

An overhead power line which provides power to the existing facility currently traverses the development site, namely the existing scrublands situated to the south of the existing facility. This line will need to be re-located to accommodate the proposed development, and in particular to accommodate the development of the MRF 3 building.

To facilitate the continued operation of the existing waste facility during the construction phase of the proposed development, this overhead line will be temporarily routed underground to the point it enters the existing facility.

It is then proposed to permanently route this electrical powerline underground at the point it enters the development site boundary to the west. This line will be routed underground across the site in a west to east direction to the point where it meets the foul sewer pumping station situated to the south east of the development site.

### 4.1.2 Operational Phase

The following waste activities will be carried out at the proposed facility:

- The acceptance, processing and onward transfer of 100,000 tpa of rMSW;
- The acceptance, bulking and onward transfer of 50,000 tpa of food waste;
- The acceptance, processing and onward transfer of 100,000 tpa of C&D waste;
- The acceptance, bulking and onward transfer of 50,000 tpa of MDR waste.

All waste acceptance, storage and processing activities will be carried out inside the proposed buildings. No waste storage or processing will be carried out externally.

In addition to the planning permission application being made for the proposed development, a separate application is being made to the EPA by the applicant for the required Industrial Emissions (IE) licence for the facility.

While the facility is proposed to operate on a 24/7 basis, it is expected that the vast majority of vehicle movements and processing operations will occur during daytime and evening hours (i.e., 07:00 to 23:00).

### 4.1.3 Decommissioning Phase

In the event that the facility is no longer to be used for waste processing, it will be decommissioned in accordance with a Decommissioning Plan for the facility (which will be prepared as a condition of the IE Licence).

In accordance with the plan, on cessation of waste activities, the following broad steps will occur:

a. All materials and wastes will be wound down gradually prior to closure and removed for disposal or recycling at an appropriately authorized waste treatment facility.
b. All waters collected on-site will be collected and removed for disposal or recycling at an appropriately authorized waste treatment facility.
c. All hard-standing areas and drainage systems including interceptors and underground tanks will be cleaned and washed down.
d. Plant, equipment and tanks will be safely decontaminated/cleaned using standard procedures and competent contractors/staff.
e. Environmental monitoring and assessment will be undertaken to confirm that the ground and groundwater underlying the site and receiving surface bodies are in satisfactory condition.
f. All plant and equipment present on-site will be decommissioned and either resold, reutilized at a separate site operated by the applicant, or scrapped.
g. Office and staff facilities will be cleaned and emptied of all documents and IT equipment previously associated with the operation of the waste facility.
h. The buildings, concrete hardstanding, drainage systems, and fencing will be left in-situ.
i. All ancillary equipment such as the vehicles, skips and monitoring equipment will be removed off site.
j. Records relating to waste management, material management, and environmental management, monitoring and assessment will be retained by the applicant.

# 5 STAGE ONE – SCREENING REPORT

## 5.1 Brief Description of the European Sites within 15km of the Development

There are nine European sites within the zone of influence (15 km) of the development (see Figure 5-1). There are five SACs and four SPAs. Table 5-1 lists these European sites, including their qualifying interests, special conservation interests, and pathways to the proposed development (according to information provided by the NPWS (www.npws.ie). The 9 No. sites are as follows:

- South Dublin Bay and River Tolka Estuary SPA (Site Code 004024) (8.4km Southeast)
- Rye Water Valley/ Carton SAC (Site Code 001398) (10.1km West)
- South Dublin Bay SAC (Site Code 00210) (10.7km Southeast)
- North Bull Island SPA (Site Code 004006) (11.2km East)
- North Dublin Bay SAC (Site Code 000206) (11.2km East)
- Malahide Estuary SPA (Site Code 004025) (11.9km Northeast)
- Malahide Estuary SAC (Site Code 000205) (11.9km Northeast)
- Baldoyle Bay SAC (Site Code 000199) (13.2km East)
- Balydoyle Bay SPA (Site Code 004016) (13.4km East)

### *No Hydrological Link*

The following have no hydrological link with the proposed development:

- Rye Water Valley/ Carton SAC (Site Code 001398)
- South Dublin Bay SAC (Site Code 00210)
- Malahide Estuary SPA (Site Code 004025)
- Malahide Estuary SAC (Site Code 000205)
- Baldoyle Bay SAC (Site Code 000199)
- Balydoyle Bay SPA (Site Code 004016)

### *Indirect Hydrological Link*

The following site has an indirect hydrological link with the proposed development:

- South Dublin Bay and River Tolka Estuary SPA (Site Code 004024)
- North Bull Island SPA (Site Code 004006)
- North Dublin Bay SAC (Site Code 000206)

A drainage ditch within the boundary of the proposed development site flows overground in a south-eastern direction until it reaches a point adjacent to the M50 where it is culverted once again. It then passes under the M50 before rising to the surface again where it flows in an eastward direction a short distance and enters the Dunsink Landfill. Drainage from this ditch is then directed by a stormwater drain to the attenuation pond serving this landfill. This attenuation pond drains to a northern tributary of the Scribblestown stream traversing the landfill site in a north-western to south-eastern direction, which in turn drains to the Scribblestown stream south east of the landfill site. The Scribblestown stream then enters the River Tolka which in turn drains to the River Tolka Estuary, before entering Dublin Bay. There is an instream distance of c10km between the proposed development and the closest hydrologically linked European site, South Dublin Bay and River Tolka Estuary. North Bull Island SPA and North Dublin Bay SAC are an additional 3km, direct distance, beyond the River Tolka Estuary within Dublin Bay.

There are no European sites located within the same ground water body as the proposed development.

### 5.1.1 Zone of Influence

Projects have the potential to effect European Sites beyond the footprint of the project itself. National Guidance (Refer to Section 2.1) states that screening for Appropriate Assessment should be carried out for any European Site within the likely 'Zone of Influence' (ZoI) of a plan or project. The OPR (2021) Practice Note PN01 recommends that the Zone of Influence of a project should be considered using the Source-Pathway-Receptor model.

European sites which may potentially be significantly affected by the proposed junction upgrade are identified using the 'source-pathway-receptor' (S-P-R) conceptual model. The S-P-R model is a standard tool in environmental assessment to determine links between sensitive features and sources of impacts. In order for an effect to occur, all three elements of this mechanism must be in place. The absence of one of the elements of the mechanism means there is no likelihood for the effect to occur e.g., if there is no ecological pathway or functional link between the proposed development and the European site, there is no potential for impact and as such no potential for significant effects.

It is important to note that an impact may occur without having a significant effect. An impact is essentially the 'source' in the S-P-R assessment. It is the biophysical change caused to the environment by the project e.g., increase in sediment runoff due to ground disturbance. For the effect to be significant, the Qualifying Interests / Special Conservation Interests of the European site must be sensitive to the biophysical change.

CIEEM (2018) defines the ZoI as "… the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities." The likely biophysical changes associated with the proposed development are set out in Table 5-1 having regard to the impacts identified above. The zones of influence associated with these project impacts have been derived from relevant published literature and guidance documents.

All European sites within the defined zones of influence were identified using Geographic Information System (ArcGIS).

**Table 5-1: European Sites within the zone of influence**

| Designated Site (Code) and Conservation Objectives (accessed 23rd August 2022) | Qualifying Interest/ Special Conservation Interest | Distance from Proposed Project (km) | Pathway | Considered further in screening Y/N |
|---|---|---|---|---|
| South Dublin Bay and River Tolka Estuary SPA<br>(004024)<br>https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004024.pdf | • Light-bellied Brent Goose *Branta bernicla hrota* [A046]<br>• Oystercatcher *Haematopus ostralegus* [A130]<br>• Ringed Plover *Charadrius hiaticula* [A137]<br>• Grey Plover *Pluvialis squatarola* [A141]<br>• Knot *Calidris canutus* [A143]<br>• Sanderling *Calidris alba* [A144]<br>• Dunlin *Calidris alpina* [A149]<br>• Bar-tailed Godwit *Limosa lapponica* [A157]<br>• Redshank *Tringa totanus* [A162]<br>• Black-headed Gull *Chroicocephalus ridibundus* [A179]<br>• Roseate Tern *Sterna dougallii* [A192]<br>• Common Tern *Sterna hirundo* [A193]<br>• Arctic Tern *Sterna paradisaea* [A194]<br>• Wetland and Waterbirds [A999] | 8.4 SE | In-stream distance of c. 10km between the proposed development and where the River Tolka enters the SPA at River Tolka Estuary. There is no suitable habitat onsite for SCI species. | Y |

| Designated Site (Code) and Conservation Objectives (accessed 23rd August 2022) | Qualifying Interest/ Special Conservation Interest | Distance from Proposed Project (km) | Pathway | Considered further in screening Y/N |
|---|---|---|---|---|
| Rye Water Valley/ Carton SAC<br>(001398)<br>https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001398.pdf | • Narrow-mouthed Whorl Snail *Vertigo angustior* [1014]<br>• Desmoulin's Whorl Snail *Vertigo moulinsiana* [1016]<br>• Petrifying springs with tufa formation (Cratoneurion) [7220] | 10.1 W | No hydrological connectivity between the proposed development and the SAC. | N |
| South Dublin Bay SAC (000210)<br>https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000210.pdf | • Mudflats and sandflats not covered by seawater at low tide [1140]<br>• Annual vegetation of drift lines [1210]<br>• Salicornia and other annuals colonising mud and sand [1310]<br>• Embryonic shifting dunes [2110] | 10.7 SE | In-stream distance of c10km before River Tolka enters River Tolka Estuary.<br>There is an additional c3km (direct distance) between where the Tolka River reaches the estuary and the SAC. Furthermore, the SAC is separated from the source-pathway by the Great South Wall. | N |
| North Bull Island SPA (004006)<br>https://www.npws.ie/protected-sites/spa/004006 | • Light-bellied Brent Goose *Branta bernicla hrota* [A046]<br>• Shelduck *Tadorna tadorna* [A048]<br>• Teal *Anas crecca* [A052]<br>• Pintail *Anas acuta* [A054]<br>• Shoveler *Anas clypeata* [A056] | 11.2 E | In-stream distance of c.10km, with an additional c.3km (direct distance) between where the Tolka River enters the estuary and the SPA. | N |

| Designated Site (Code) and Conservation Objectives (accessed 23rd August 2022) | Qualifying Interest/ Special Conservation Interest | Distance from Proposed Project (km) | Pathway | Considered further in screening Y/N |
|---|---|---|---|---|
| | • Oystercatcher *Haematopus ostralegus* [A130]<br>• Golden Plover *Pluvialis apricaria* [A140]<br>• Grey Plover *Pluvialis squatarola* [A141]<br>• Knot *Calidris canutus* [A143]<br>• Sanderling *Calidris alba* [A144]<br>• Dunlin *Calidris alpina* [A149]<br>• Black-tailed Godwit *Limosa limosa* [A156]<br>• Bar-tailed Godwit *Limosa lapponica* [A157]<br>• Curlew *Numenius arquata* [A160]<br>• Redshank *Tringa totanus* [A162]<br>• Turnstone *Arenaria interpres* [A169]<br>• Black-headed Gull *Chroicocephalus ridibundus* [A179]<br>• Wetland and Waterbirds [A999] | | Wetland habitat degradation due to water quality reduction caused by the proposed development is unlikely due to the dilution factor of the estuary, which is between the Tolka River and the SPA.<br>Additionally, there is no suitable habitat onsite for SCI species. | |
| North Dublin Bay SAC (000206)<br>https://www.npws.ie/protected-sites/sac/000206 | • Mudflats and sandflats not covered by seawater at low tide [1140]<br>• Annual vegetation of drift lines [1210]<br>• Salicornia and other annuals colonising mud and sand [1310] | 11.2 E | In-stream distance of c10km. There is an additional c3km (direct distance) between where the Tolka River enters the estuary and the SAC. | N |

| Designated Site (Code) and Conservation Objectives (accessed 23rd August 2022) | Qualifying Interest/ Special Conservation Interest | Distance from Proposed Project (km) | Pathway | Considered further in screening Y/N |
|---|---|---|---|---|
| | • Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]<br>• Mediterranean salt meadows (Juncetalia maritimi) [1410]<br>• Embryonic shifting dunes [2110]<br>• Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120]<br>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]<br>• Humid dune slacks [2190]<br>• Petalwort *Petalophyllum ralfsii* [1395] | | QI habitat degradation due to water quality reduction caused by the proposed development is unlikely due to the dilution factor of the estuary, which is between the Tolka River and the SPA. | |
| Malahide Estuary SPA (004025)<br>https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004025.pdf | • Great Crested Grebe *Podiceps cristatus* [A005]<br>• Light-bellied Brent Goose *Branta bernicla hrota* [A046]<br>• Shelduck *Tadorna tadorna* [A048]<br>• Pintail *Anas acuta* [A054]<br>• Goldeneye *Bucephala clangula* [A067]<br>• Red-breasted Merganser *Mergus serrator* [A069]<br>• Oystercatcher *Haematopus ostralegus* [A130]<br>• Golden Plover *Pluvialis apricaria* [A140] | 11.9 NE | No hydrological connectivity between the proposed development and the SPA. No suitable habitat onsite for SCI species. | N |

| Designated Site (Code) and Conservation Objectives (accessed 23rd August 2022) | Qualifying Interest/ Special Conservation Interest | Distance from Proposed Project (km) | Pathway | Considered further in screening Y/N |
|---|---|---|---|---|
| | • Grey Plover *Pluvialis squatarola* [A141]<br>• Knot *Calidris canutus* [A143]<br>• Dunlin *Calidris alpina* [A149]<br>• Black-tailed Godwit *Limosa limosa* [A156]<br>• Bar-tailed Godwit *Limosa lapponica* [A157]<br>• Redshank *Tringa 18etanus* [A162]<br>• Wetland and Waterbirds [A999] | | | |
| Malahide Estuary SAC (000205)<br>https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000205.pdf | • Mudflats and sandflats not covered by seawater at low tide [1140]<br>• Salicornia and other annuals colonising mud and sand [1310]<br>• Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]<br>• Mediterranean salt meadows (Juncetalia maritimi) [1410]<br>• Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120]<br>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] | 11.9 NE | No hydrological connectivity between the proposed development and the SAC. | N |

| Designated Site (Code) and Conservation Objectives (accessed 23rd August 2022) | Qualifying Interest/ Special Conservation Interest | Distance from Proposed Project (km) | Pathway | Considered further in screening Y/N |
|---|---|---|---|---|
| Baldoyle Bay SAC (000199)<br>https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000199.pdf | • Mudflats and sandflats not covered by seawater at low tide [1140]<br>• Salicornia and other annuals colonising mud and sand [1310]<br>• Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]<br>• Mediterranean salt meadows (Juncetalia maritimi) [1410] | 13.2 E | No hydrological connectivity between the proposed development and the SAC. | N |
| Baldoyle Bay SPA (004016)<br>https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004016.pdf | • Light-bellied Brent Goose (Branta bernicla hrota) [A046]<br>• Shelduck (Tadorna tadorna) [A048]<br>• Ringed Plover (Charadrius hiaticula) [A137]<br>• Golden Plover (Pluvialis apricaria) [A140]<br>• Grey Plover (Pluvialis squatarola) [A141]<br>• Bar-tailed Godwit (Limosa lapponica) [A157]<br>• Wetland and Waterbirds [A999] | 13.4 E | No hydrological connectivity between the proposed development and the SPA. No suitable habitat onsite for SCI species. | N |

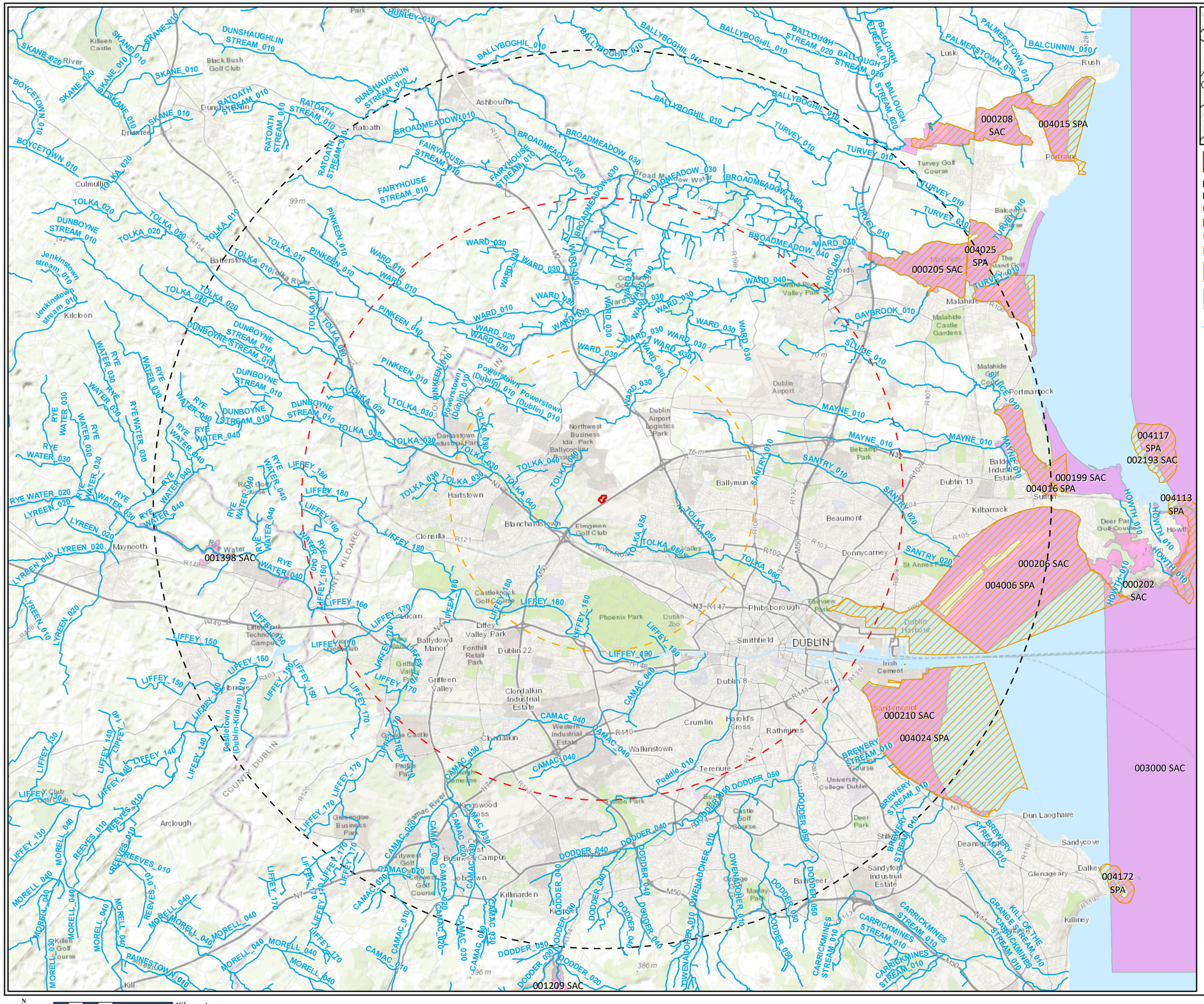
Having further examined the likely spatial and temporal biophysical changes associated with the project impacts, it was determined that the following European Sites are within the ZoI of the project:

- South Dublin Bay and River Tolka Estuary SPA (Site Code 004024)

Once the ZoI is defined, an assessment must be made of the sensitivity of the qualifying interests to such impacts and as such the potential for likely significant effects.

Path: R:\Map Production\2021\P21-150\Workspaces\AA Screening\P21-150_GIS_AA_Fig5-1_EuropeanSiteswithinZOI_A3.mxd






| | |
|---|---|
| **TITLE:** | European Sites within Zone of Interest |
| **PROJECT:** | SID Application, EIAR and IE Licence Application for Thorntons |
| **FIGURE NO:** | 5.1 |
| **CLIENT:** | Thorntons Recycling |
| **SCALE:** | 1:125000 |
| **REVISION:** | 0 |
| **DATE:** | 29/08/2022 |
| **PAGE SIZE:** | A3 |

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## 5.2 Potential Cumulative Effects

Article 6(3) of the Habitats Directive requires that:

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

It is therefore required that the potential significant effects of the proposed project are considered in-combination with any other plans or projects within the zone of influence.

The following sources were referred:

- Fingal County Council and Dublin City Council Planning Enquiry System https://mapzone.dublincity.ie/MapZonePlanning/MapZone/, & https://fingalcoco.maps.arcgis.com/apps/webappviewer/
- Geohive datasets – Planning Application Sites (Planning Registers of participating Irish Local Authorities
- and includes Planning Applications received since 2012) https://www.geohive.ie/datasets/d78667c678d543b3b82c424c11ac24cc_1/about
- An Bord Pleanála (Strategic infrastructure development (SID) applications and Strategic Housing Development (SHD) applications) (https://www.pleanala.ie/en-ie/home);
- Department of Department of Housing, Local Government and Heritage's EIA Portal (https://www.gov.ie/en/publication/9f9e7-eia-portal/).

### 5.2.1 Projects

To identify other committed development in the area, a planning search was carried out using the online planning enquiry system.[1]

A small number of records for residential-scale development applications such as a new dwelling house, detached garage, and single storey extension were returned. Due to the scale and/or type of these developments they will not act cumulatively with the proposed development

Permission was granted on 07th July 2022 for development comprising: (i) construction of 5 no. industrial / warehouse / logistics units contained within 3 no. blocks and creation of vehicular access point (Planning reference: FW22A/0061), c.150m east of the proposed development.

Permission was granted on 26th May 2022 for the construction of a security hit, 2 no. warehouse/ light industrial units, warehouse/ logistic unit and associated site works (Planning reference: FW21A/0149), c.200m northeast of the proposed development.

Permission was granted on 01st June 2022 for the construction of 4 no. industrial units consisting of offices, workshops and accessories (Planning reference: FW21A/0190), c.400m northeast of the proposed development.

[1] https://mapzone.dublincity.ie/MapZonePlanning/MapZone/,https://fingalcoco.maps.arcgis.com/apps/webappviewer/

There may be limited potential for cumulative impacts in conjunction with these developments; these would be likely to be limited to small increases in sediment and dust creation during construction activities. While these developments are within 500m of the proposed development, there is no hydrological link between these sites and the proposed development or to any European site.

### 5.2.2 Existing practices in the surrounding area

The proposed development is predominantly located within a peri-urban setting, surrounded by residential, industrial lands and roads. Potential impacts include an increase in nutrient levels of local watercourses; habitat loss due development; as well as the direct and indirect disturbance to mobile QIs and SCIs. Due to the weak indirect hydrological link, increased nutrients to watercourses will be localised and will not have a significant effect on the downstream SPA, see Table 5-2. Disturbance levels to mobile QIs outside the SPA will not differ significantly from the current industrial land-use onsite, therefore no cumulative impact is envisaged.

Agriculture is widespread within the greater area. Arable farming is the dominant agricultural practice in the surrounding area, followed by pastureland. Potential impacts include an increase in nutrient levels of local watercourses; as well as habitat loss due to land reclamation and drainage. Due to the weak indirect hydrological link, increased nutrients to watercourses will be localised and will not have a significant effect on the downstream SPA, see Table 5-2, therefore no cumulative impact is envisaged.

### 5.2.3 Plans

**The National Biodiversity Action Plan 2017-2021**

Ireland's National Biodiversity Action Plan sets out actions through which a range of government, civil and private sectors will undertake to achieve Ireland's 'Vision for Biodiversity', and follows on from the work of the first and second National Biodiversity Action Plans.

A total of 119 targeted actions are contained in the Plan, underpinned by seven strategic objectives. The objectives lay out a clear framework for Ireland's national approach to biodiversity, ensuring that efforts and achievements of the past are built upon, while looking ahead to what can be achieved over the next five years and beyond.

They include:

1. Mainstreaming biodiversity across the decision making process in the State;
2. Strengthening the knowledge base underpinning work on biodiversity issues;
3. Increasing public awareness and participation;
4. Ensuring conservation of biodiversity in the wider countryside;
5. Ensuring conservation of biodiversity in the marine environment;
6. Expanding and improving on the management of protected areas and protected species;
7. Enhancing the contribution to international biodiversity issues.

The proposed development will not be contrary to the above objectives.

**Fingal County Development Plan 2023-2029 (Draft)**

The Fingal County Development Plan 2023-2029 outlines several objectives relevant to this assessment:

- GINHP17: Strictly protect areas designated or proposed to be designated as Natura 2000 sites (i.e. Special Areas of Conservation (SACs) and Special Protection Areas (SPAs); also known as European sites) including any areas that may be proposed for designation or designated during the lifetime of this Plan.
- GINHO28: Ensure that development does not have a significant adverse impact on proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, Refuges for Fauna, Habitat Directive Annex I sites and Annex II species contained therein, and on rare and threatened species including those protected by law and their habitats.
- GINH034: In accordance with Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities (2010), any plans or projects that are likely to have a significant effect on a Natura 2000 site, either individually or in combination with other plans or projects, are subject to a screening for Appropriate Assessment unless they are directly connected with or necessary to the management of a Natura 2000 site.
- IUP15: Support initiatives to improve water quality and to achieve "good ecological" status in compliance with the Water Framework Directive and associated River Basin Management Plans, particularly those which employ nature-based management measures, and explore opportunities for targeted watercourse improvement interventions which are designed to deliver a wider range of environmental benefits.

The proposed development will not be contrary to the above objectives.

## 5.3 Assessment of Likely Significant Effects

The OPR (2021) Practice Note PN01 recommends that the zone of influence of a project should be considered using the Source-Pathway-Receptor model. European sites which may potentially be significantly affected by the proposed project are identified using the 'source-pathway-receptor' (S-P-R) conceptual model. The S-P-R model is a standard tool in environmental assessment to determine links between sensitive features and sources of impacts. In order for an effect to occur, all three elements of this mechanism must be in place. The absence of one of the elements of the mechanism means there is no likelihood for the effect to occur e.g. if there is no ecological pathway or functional link between the proposed development and the European site, there is no potential for impact and as such no potential for significant effects.

It is important to note that an impact may occur without having a significant effect. An impact is essentially the 'source' in the S-P-R assessment. It is the biophysical change caused to the environment by the project e.g. increase in sediment runoff due to ground disturbance. For the effect to be significant, the Qualifying Interests / Special Conservation Interests of the European site must be sensitive to the biophysical change.

Having regard to the examples of elements of the plan or project to be considered during screening set out in the guidance document 'Assessment of plans and projects in relation to Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC', (European Commission, 2021), the likely impacts are set out relative to the project or plan under consideration including:

- Size (e.g. in relation to direct land-take);
- Overall affected area including the area affected by indirect impacts (e.g. noise, turbidity, vibrations);
- Physical changes in the environment (e.g. modification of riverbeds or morphology of other water bodies, changes in the density of forest cover);
- Changes in the intensity of an existing pressure (e.g. increase in noise, pollution or traffic);
- Resource requirements (e.g. water abstraction, mineral extraction);
- Emissions (e.g. nitrogen deposition) and waste (and whether they are disposed of on land, water or in the air);
- Transportation requirements (e.g. access roads);
- Duration of construction, operation, decommissioning, etc.;
- Temporal aspects (timing of the different stages of a plan or project);
- Distance from Natura 2000 sites and in particular from their designating features;
- Cumulative impacts with other projects and plans.

**Table 5-2: Potential for likely significant effects on the South Dublin Bay and River Tolka Estuary SPA from the proposed development**

| Source | Pathway | Receptor | Likely Significant Effects |
|---|---|---|---|
| **Size/ overall affected area including the area affected by indirect impacts**<br><br>Land-take from the SPA.<br><br>Displacement of birds due to on-site activities coupled with potential loss of feeding habitat due to development.<br><br>Potential for indirect impacts to water quality and aquatic species within the Tolka River.<br><br>The construction works could result in the spread of invasive plant species both insitu and ex-situ. | The SPA does not overlap with the proposed development, with a direct distance of 8.4km, and there will be no land-take from the SPA.<br><br>The distance of 8.4km between the proposed development and the SPA is considerable, reducing any potential for disturbance effects to occur. Additionally, the levels of disturbance due to onsite activity is not likely to differ significantly from the baseline environment, with the site located between residential land, industrial units, and a motorway, with an operating waste management building onsite involving the movement of people and plant. There is no suitable habitat onsite for the SCI species this SPA is designated for.<br><br>With an instream distance of c.10km, passing through Dublin City, it is unlikely that any sedimentation or run-off event caused by this development would lead to a reduction of habitat or water quality in the SPA.<br><br>There are three EPA water monitoring stations along the River Tolka, downstream of the proposed development and between the proposed development and the SPA. Two of these have a Q value of 3, while the remaining station has a Q value of 2-3. All stations had a water quality status of 'Poor'. | No Receptor | No Likely Significant Effects |

| Source | Pathway | Receptor | Likely Significant Effects |
|---|---|---|---|
| | No Third Schedule invasive plant species were recorded within the site boundary. Buddleja is present onsite, however due to the weak indirect hydrological link between the proposed development and the SPA, it is unlikely that Buddleja would spread to the estuary habitats of the SPA as a result of the proposed development. | | |
| **Resource Requirements**<br><br>There will be no resources sourced from the SPA. | No Pathway | No Receptor | No Likely Significant Effects |
| **Physical Changes - Emissions to Air (dust)**<br><br>The proposed project would be considered a large site, as such the impacts from dust emissions expected are 'High' up to 20m from the source, reducing to 'Medium' over 50m from the source. | The SPA is c. 8.4km southeast of the development. Although there is indirect hydrological connectivity, with an instream distance of c.10km, the low levels of dust would likely be localised. As result, along with the dilution factor of the bay area, it is unlikely that any dust created by this development would lead to a reduction of habitat or water quality in the SPA. | No Receptor | No Likely Significant Effects |
| **Changes in Intensity - Noise/ Vibration Emissions**<br><br>The remediation works have potential for localized noise/ vibration disturbance to terrestrial, aquatic and bird species. | The SAC is c. 8.4km southeast of the development with no suitable habitat for the SPA's SCIs. Additionally, given the development sites location in an existing peri-urban urban and industrial setting, any mobile SCIs within the surroundings is likely habituated to such levels of disturbance. | No Receptor | No Likely Significant Effects |

| Source | Pathway | Receptor | Likely Significant Effects |
|---|---|---|---|
| **Emissions to Water/ Transportation Requirements**<br><br>Sediment, nutrients, cement-based products and hydrocarbons have the potential to degrade the quality of a watercourse and as such reduce the carrying capacity for aquatic species/ habitats.<br><br>There is a risk that machinery and surface water could also act as vectors for dispersal of the invasive non-native flora species within and without the site. | With an instream distance of c.10km, it is unlikely that any sedimentation or run-off event caused by this development would lead to a reduction of habitat or water quality in the SPA.<br>There are three EPA water monitoring stations along the River Tolka, downstream of the proposed development and between the proposed development and the SPA. Two of these have a Q value of 3, while the remaining station has a Q value of 2-3. All stations had a water quality status of 'Poor'.<br>No Third Schedule invasive plant species were recorded within the site boundary. Buddleja is present onsite, however due to the weak indirect hydrological link between the proposed development and the SPA, it is unlikely that Buddleja would spread to the estuary habitats of the SPA as a result of the proposed development. | No Receptor | No Likely Significant Effects |
| **Duration of Project and Temporal Aspects**<br><br>Potential for seasonal displacement of species. | The SAC is c. 8.4km southeast of the development with no suitable habitat for the SPA's SCIs. Additionally, given the developments sites location in an existing urban and industrial setting, any mobile SCIs within the surroundings is likely habituated to such levels of disturbance<br>. | No Receptor | No Likely Significant Effects |

| Source | Pathway | Receptor | Likely Significant Effects |
|---|---|---|---|
| **Operational Phase**<br>The operational phase of proposed development will involve the movement of people and plant onsite.<br><br>Displacement of birds due to on-site activities.<br><br>Potential for indirect impacts to water quality and aquatic species within the Tolka River. | The levels of disturbance due to onsite activity is not likely to differ significantly from the baseline environment, with the site located between residential land, industrial units, and a motorway, with an operating waste management building onsite involving the movement of people and plant. There is no suitable habitat onsite for the SCI species this SPA is designated for.<br>With an instream distance of c.10km, it is unlikely that any sedimentation or run-off event caused by this development would lead to a reduction of habitat or water quality in the SPA.<br>There are three EPA water monitoring stations along the River Tolka, downstream of the proposed development and between the proposed development and the SPA. Two of these have a Q value of 3, while the remaining station has a Q value of 2-3. All stations had a water quality status of 'Poor'. | No Receptor | No Likely Significant Effects |
| **Cumulative impacts with other projects and plans**<br>Cumulative effects could occur if construction works are undertaken in parallel with off-site agricultural activities and other industrial developments within the same catchment, ultimately adding potential nutrients/ sediment and spreading of invasive species to the Tolka Estuary. | With an instream distance of c.10km, it is unlikely that any sedimentation or run-off event caused by this development would lead to a reduction of habitat or water quality in the SPA. | No Receptor | No Likely Significant Effects |

# 6 SCREENING CONCLUSION

No pathways for likely significant effects on any European sites were identified. Thus, it can be concluded beyond reasonable scientific doubt, in view of best scientific knowledge and on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the proposed project individually or in combination with other plans and projects, would not be likely to have significant effect on any European sites.

Mitigation measures to reduce or avoid a significant effect where not considered within this screening for appropriate assessment to reach this conclusion.

# 7 REFERENCES

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

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