ESC Environmental Ltd

Appropriate Assessment Screening
&
Remedial Natura Impact Statement Report

Substitute Consent Application

For
Retention of Development at
St. Margaret's Waste Recycling Facility,
Sandyhill, Co. Dublin
Facilitating waste intake of c.26,000 up to 42,500 tonnes per annum, and ongoing tonnage at c.21,900 tonnes from 2024.

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1 Introduction

1.1 Background

This report contains information required for the competent authority to undertake a screening for an Appropriate Assessment (AA), in the first instance and if applicable, Stage 2 Appropriate Assessment, and to this end, a remedial Natura Impact Statement (NIS) for an application for retention under the substitute consent provisions, specifically s.177E of the Planning & Development Act, 2000 as amended, for a development which may be summarised as:

> '*Retention of existing works and revised site size and boundaries (detailed hereunder) and retention and continuation of waste recycling and transfer activities from 2019 to 2023 for tonnages ranging from 26,000 tonnes to 42,500 tonnes, and from 2024 onwards for up to 21,900 tonnes per annum at waste transfer and metal recycling centre at St. Margaret's, Co. Dublin*.'

1.2 Development Description

And in detail is described as –

> *"Substitute Consent is sought by St. Margaret's Recycling & Transfer Ltd. at St. Margaret's Recycling & Transfer, Sandyhill, St. Margaret's, Co. Dublin, under substitute consent provisions, for -*
>
> *Retention of:*
>
> 1. *Enabling Ancillary Works, including, but not limited to, that subject of applications under Reg. Ref's. F13A/0409, F11A/0443, F10A/0177, F03A/1561, F03A/1682 and F97A/0109, including amendments to site access and gateway, boundary arrangements, dust mitigation measures, installation of an impermeable concrete surface over c.1.7 ha, above and below ground surface water drainage, septic tank, fire water storage and retention tanks (105m3), surface water attenuation and storage tanks (206m3), truck and vehicle parking,*
> 2. *Existing buildings, plant and machinery and their use associated with the daily operations of the waste recycling and transfer facility, and authorised facility for the treatment of 'end of life vehicles' (ATF for ELVs). Existing development comprises the weighbridge, offices, recycling and transfer/industrial buildings, hard standing, car parking, plant and machinery, detailed below:*
>
> - *Prefabricated cabins (2no.) - 177sqm. - comprising ancillary offices, staff facilities, control room;*

- *Prefabricated w/c & Steel Container (store) - 29 sqm;*
- *Recycling and transfer/Industrial buildings of 1917 sqm;*
- *Weighbridge; and*
- *Machinery comprising hammermill, shredders, bailers, tilters, forklifts, grabbers, et al.*

3. *The enlargement of the site for waste transfer and recycling purposes, including an Authorised Treatment Facility for End-of-Life Vehicles, increasing the site size to 1.75ha of which 1.6ha is associated with waste permit with additional lands comprising site access, proprietary wastewater treatment system, installation of an impermeable reinforced concrete slab surface throughout, and underground surface water drainage system.*
4. *Historic use of 1.6 ha of the site (as per Waste Permit area under WFP-FG-13-0002-03), as a waste transfer recycling centre and an Authorised Treatment Facility for End-of-Life Vehicles, during the period 2019 to 2023, where waste throughput at the facility ranged from c.26,000 to 42,500 tonnes per annum, without the benefit of planning permission, and from 2024 onwards with operations comprising waste throughput of up to 21,900 tonnes per annum.*
5. *Laying out and historic use (i.e. 2014 to 2023) of lands comprising c.1.2 ha to the east of the licenced 'waste transfer and recycling centre', surfaced with compacted hardcore and used for the temporary storage of vehicles, plant and machinery associated with the waste recycling activity, and existence as a hardstanding area to date, pending restoration*

Permission sought for -

6. *Restoration of c.1.1 ha of the above referenced compacted hardcore surfaced lands to grassland or wildflower meadow, and to include agricultural haul roads/tracks to serve adjacent agricultural lands.*
7. *On-going use of the existing metal processing and transfer facility, and Authorised Treatment Facility for End of Life Vehicles, with a proposed waste throughput at the facility to accept up to 21,900 tonnes per annum (in line with waste permit) for the bulking, transfer and recycling of metals, construction & demolition waste, bulky/skip waste, batteries, wood waste, glass, other non-biodegradable non-hazardous wastes, and an Authorised Treatment Facility for end-of-life vehicles.*

The application for substitute consent will be accompanied by a remedial Environmental Impact Assessment Report (rEIAR) in addition to the remedial Natura Impact Statement (rNIS).

The future use of the site, as a waste recycling and transfer centre for up to 21,900 tonnes per annum, is proposed in a simultaneous application and is considered and assessed in an Environmental Impact Assessment Report (EIAR), Natura Impact Statement (NIS) and associated documents and drawings. This application is submitted in tandem with the retention application, under substitute consent.

1.3 Appropriate Assessment Process

The purpose of this report is to inform the AA process. An Appropriate Assessment is an assessment of whether a plan or project, alone and/or in-combination with other plans or projects, is likely to have significant effects on a European site, collectively known as the Natura 2000 network, in view of the site's conservation objectives. This report provides information to assist the competent authority in undertaking a Screening Assessment of the subject development and was informed by a comprehensive desk-based assessment, and site visits were carried out by Serena Alexander, Peter McCormick and Martijn Leenheer at the site during March and August 2024.

The subject lands are located at Sandyhill, St. Margaret's, on the east side of the R122 (Finglas - Balbriggan Regional Road), on a site located directly south of the main settlement known as St. Margaret's. To the south are lands that support the main southern runway to Dublin Airport with the M50 located further south of the subject site. The surrounding area is comprised primarily of greenfield agricultural lands with clusters of housing and commercial developments located along the R122 road both to the north and south of the application site.

The subject lands comprise an existing waste transfer and recycling centre that has been in existence since 1997 (albeit in different ownership) on circa 1.6 ha of lands. The site functions as an Authorised Treatment Facility (ATF) for end-of-life vehicles (ELVs), and waste recovery and recycling facility which is permitted to accept waste metals, C & D waste material and batteries. The site comprises, concrete hardstanding entrance laneway and public parking area in the northwestern corner; hardstanding for the storage of cars awaiting depollution, covered waste processing shed, site offices, welfare facilities and a weighbridge at the entrance and secure perimeter fencing.

An objective conclusion of no potential for significant effects is presented only where there is a high degree of certainty, based on the precautionary principle, that no significant effects on the conservation objectives of these designated Natura 2000 sites are likely to arise as a result of the development.

1.3.1 Stages Involved in the Appropriate Assessment Process

There are potentially four stages in the AA process; the result of each stage determines the requirement for assessment under the next.

Stage 1: Screening / Test of Significance

This process identifies the likely significant effects upon a European site from a proposed project or plan. Its purpose is to determine, on the basis of a preliminary assessment and objective criteria, whether a plan or project which is not directly connected with or necessary to the management of the site as a European site, individually or in-combination with other plans or projects is likely to have a significant effect upon the European site, in view of its conservation objectives.

A project may be 'screened-in' if there is a possibility or uncertainty of possible effects upon the European site, requiring a Stage Two AA. If there is no evidence to suggest significant effects due to the plan or development the project is 'screened-out' from further assessment.

Stage 2: Appropriate Assessment/Natura Impact Statement

At Stage 2, the impact of a project or plan alone and in combination with other projects or plans on the integrity of the Natura 2000 site(s) is considered with respect to the conservation objectives of the site and to its structure and function. Additionally, where likely significant effects have been identified, an assessment of the potential mitigation to avoid/reduce such impacts is required. A NIS is often produced at this stage to inform the AA which is undertaken by the competent authority. This stage is required where uncertainty of effect arises, or a potential effect has been defined which requires further procedures/mitigation to remove uncertainty of a defined impact.

Stage 3: Assessment of Alternatives

This stage of the process, arises, comes about where adverse effects on the integrity of a European site cannot be excluded and Stage 3 examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European site. However, in circumstances where there will not be any adverse effects on any European site, the project promoter places no reliance upon this third stage of the process.

Stage 4: Assessment Where Adverse Effects Remain

This is the derogation process of Article 6(4), which examines whether there are imperative reasons of overriding public interest (shortened to IROPI) for allowing a project to proceed where adverse effects on the integrity of a European site have been predicted. Compensatory measures must be proposed and assessed as part of this stage and the EU Commission must

be informed of the compensatory measures. Again, the developer places no reliance upon this stage of the process in the context of the application for planning permission for the development.

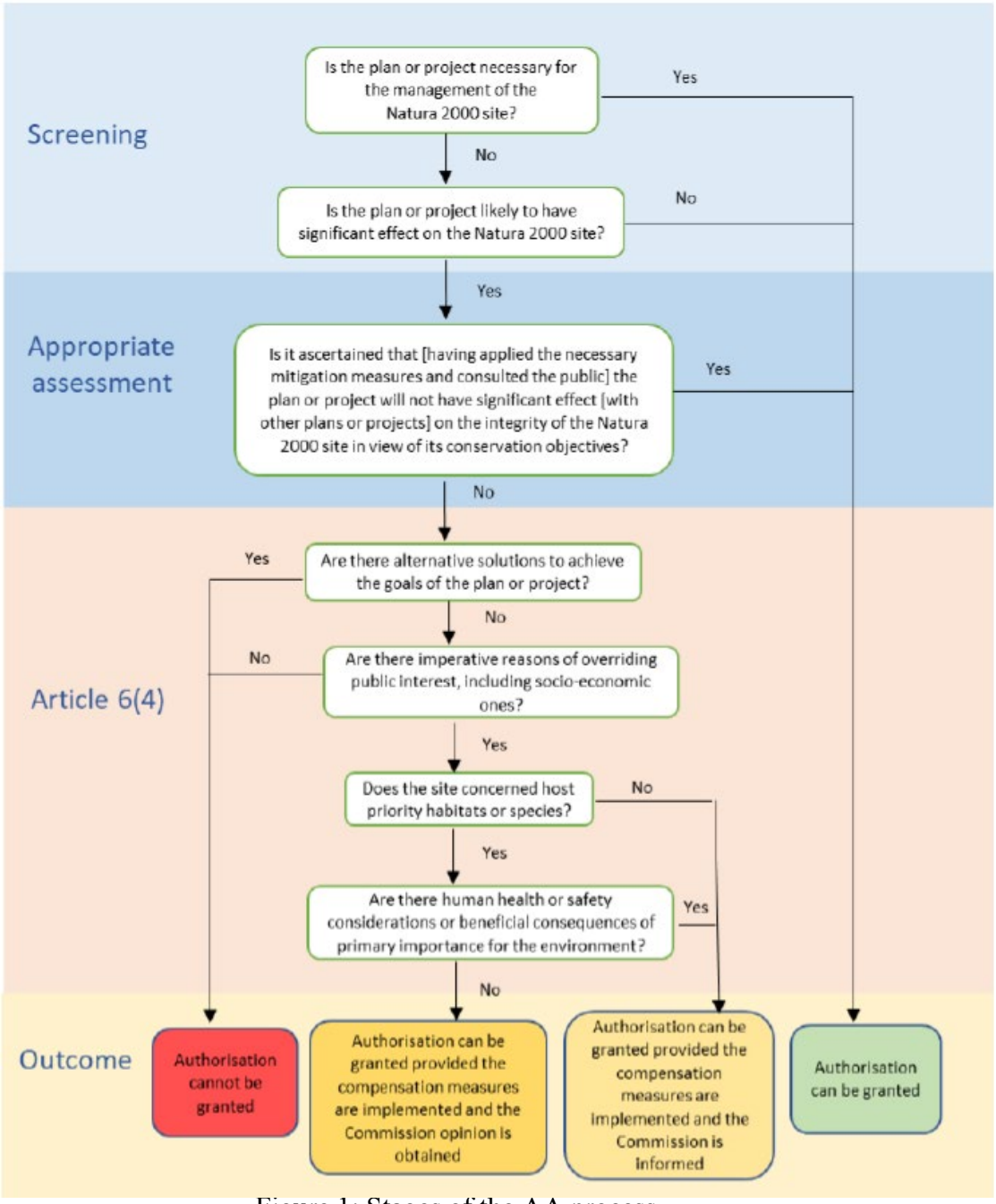


Figure 1: Stages of the AA process

1.4 Competency of Authors

Martijn Leenheer

Martijn Leenheer holds a 1st Class BSc (Hons) degree in Environmental Science from Atlantic Technological University (previously IT Sligo) and has 11 years' experience in Ireland in soil remediation, invasive species commercial Wastewater Treatment, Discharge Licences, Waste Permits and Licences has been involved in Risk Assessments, NIS and EIAR reports for various commercial projects. Before moving to Ireland Martijn worked in the Netherlands as an Environmental Field Technician in soil research. He has been an Operations Director of Environmental Services Consultancy for 11 Years and a Founding Director of ESC Environmental LTD since 2021.

Peter McCormick

Peter McCormick is a Senior Consultant with ESC Environmental Ltd., and has 7 years' experience in the Environmental Sector, working with both the public and private sector. He holds a degree in Level 8 BSc (Hons) degree in Environmental Science from Atlantic Technological University (previously IT Sligo). He has experience in many aspects of environmental works including wastewater treatment system design, environmental permitting, water management, and specialises in ecological assessments (EcIAs), Appropriate Assessments and Natura Impact Statements.

Serena Alexander

Serena graduated from University College Dublin with a 1st Class Hons BSc degree, in Zoology in 2023, and works as a graduate ecologist with ESC Environmental Ltd. She has experience working in commercial and research-based labs, as well as familiarity with general genetics, phylogenetics and ecology. She specialises in data analysis. microbial/biological techniques, and has strong IT skills incl. R & Rstudio, Mega Software, and LinRegPCR.

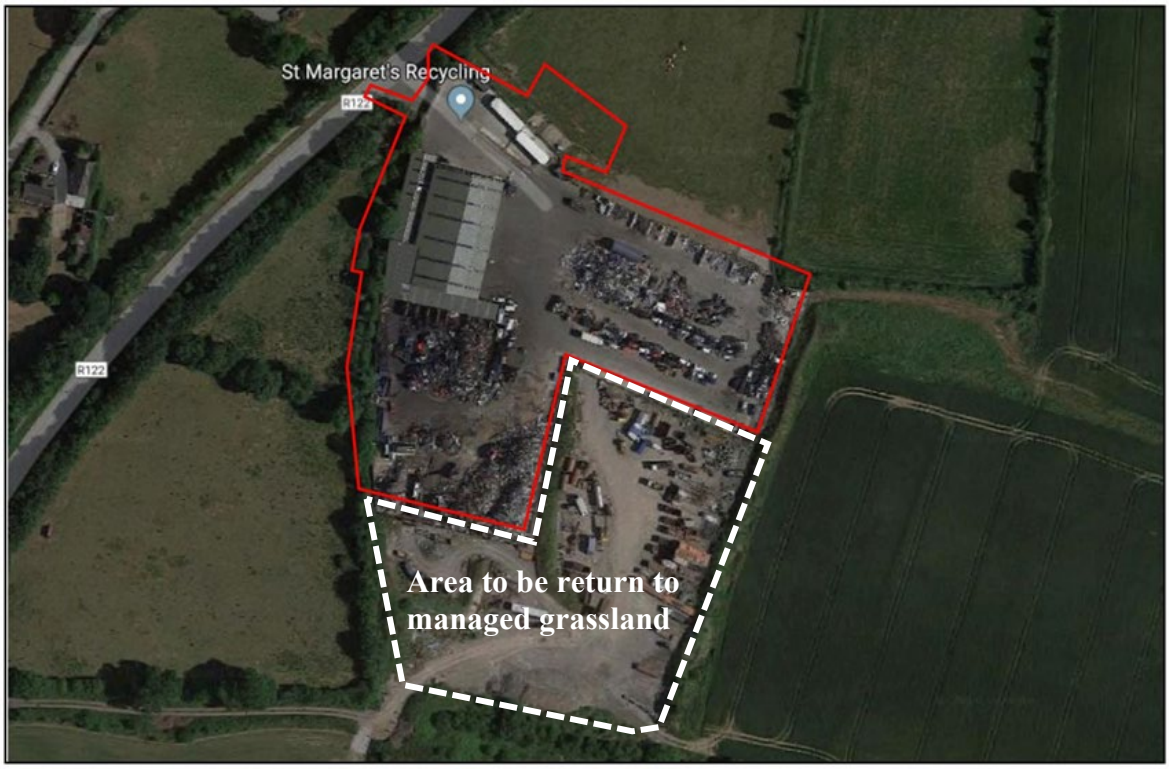
2 Project Description

2.1 Site Description

The application site comprises approx. 2.93 hectares of which c1.6 hectares comprising the waste recycling and transfer facility. The site is located to the southeast of St. Margaret's village and is accessed off the R122 which runs to the west and northwest of the site. The R108 lies to the south which runs to the south of the site and Dublin Airport is located immediately to the west within the southern runway lying to the southeast.

The site is an existing brownfield site that is relatively isolated, bounded to its southern, western and eastern boundaries by agricultural lands, much of which is in family ownership. The site entrance, on to the R122, is formed by a high block concrete wall with metal panel gate. A concrete splayed area is situated between the entrance and roadside boundary. On entering the premises, a car parking area is provided to the left. The vast majority of the site is hard surfaced, c.1.7ha. A number of galvanised steel sheds are located to the western boundary of the site. These sheds access onto a concrete yard area. A weighbridge and several prefabricated cabins which function as office space, canteen and toilets is situated within the core waste recycling & transfer centre operational area of the site. An area of c.1.2ha of compacted hardcore is located to the south of the Recycling Centre Operations. While once used for parking and storage associated with activities on site, it is currently not in use.

Figure 2: Waste Facility Site Arial Photo



The site is an established waste facility and has been in operation for the past 29 years (c. 1995) and operates as an authorised treatment for end-of-life vehicles (ELVs) from other under Waste Facility Permit from Fingal County Council (WFP-FG-13-0002-02).

All input material is weighed and recorded at the facility weighbridge. Input tonnages are monitored on a monthly and quarterly basis by the applicant. The waste types accepted on site comprise the following:

- Metals
- Construction and demolition waste
- Wood waste
- Bulky skips
- Glass
- End-of-Life Vehicles (ELVs)
- Batteries

The above waste types, including that from members of the public were recycled on site at the time of the 1997 permission.

2.1.1 Planning History

There is a complex development and planning history associated with the subject development, with the development first established in c.1995, and subject of an application for retention in 1997 (under F97A/0109). Permission was granted under F97A/0109 for a facility comprising c.0.6ha, 'industrial' buildings of c. 1083 sqm and offices of c.58sq, weighbridge, proprietary waste treatment system, etc. and tonnage of up to 10,000 tonnes per annum. F97A/0109, did not restrict or preclude the processing of ELVs (which prior to ELV Regulations, 2003 were considered to be 'metals') and nor did it place any restriction on outdoor processing of waste, or the type of plant and machinery required or used on site to enable the processing of the waste types on site.

It would appear that from c.1998 onwards, notwithstanding that permission was granted for an annual tonnage of up to 10,000 tonnes, that this tonnage was immediately exceeded, and initially operated at c.22,000 tonnes per annum. In 2001 a waste licence for up to 60,000 tonnes per annum was granted by the EPA. The site was not operated by the applicant at the time, however, tonnages on site were recorded by the EPA, and are noted as follows –

Year	Tonnage
2002	59,259.23
2003	93,970
2004	83,510.4
2005	95,035.8
2006	49,006.61 (up to July)

A notable proportion of the physical works were originally permitted under the parent permission in 1997, and thereafter extended under temporary permissions from 2003 to 2014 (under F13A/0409, F11A/0443, F10A/0177, F03A/1561, F03A/1682 and F97A/0109). Under F10A/0177, regularisation of the enlarged site size, was sought, however operations on the site had been taking place on this larger site prior to 2003. Under F10/0177, permission was granted for an annual tonnage of 25,000 tonnes per annum. Under F13A/0409 permission was granted for 21,900 tonnes per annum on a site of c.1.6ha.

From a review of the above noted planning history, it would appear that the site has developed and operated outside of the various planning permissions, being first established in c.1995. It operated at levels well in excess of 21,900 tonnes per annum since c.1998 and did so without the benefit of planning permission. From 2019 to 2023, i.e. post the expiration of the last temporary permission on site, the site operated at tonnages ranging from c.26,000 to 45,000 tonnes per annum.

During the above noted period, i.e. from 2019 to date, various environmental management measures were introduced, and these included –

- Change in operating regime from 1997 permission, to introduce a permanent restriction on acceptance of raw material to licensed waste collectors and trade/construction companies, with associated ban on acceptance of material from members of the public, ban on sale of material to members of the public.
- Enhancement of access arrangements and maintenance of sightlines at gateway onto the R122 St Margarets Road in compliance with the appropriate design standards.
- Enhancement of boundary treatments, replacing stacked steel containers with steel post and concrete panel walls.
- Installation of impermeable concrete surface, enhancement of surface water drainage systems with oil traps and increased surface water attenuation, fire prevention, water supply and fire water retention measures, dust suppression, etc.
- Upgrade of septic tank to proprietary wastewater treatment system

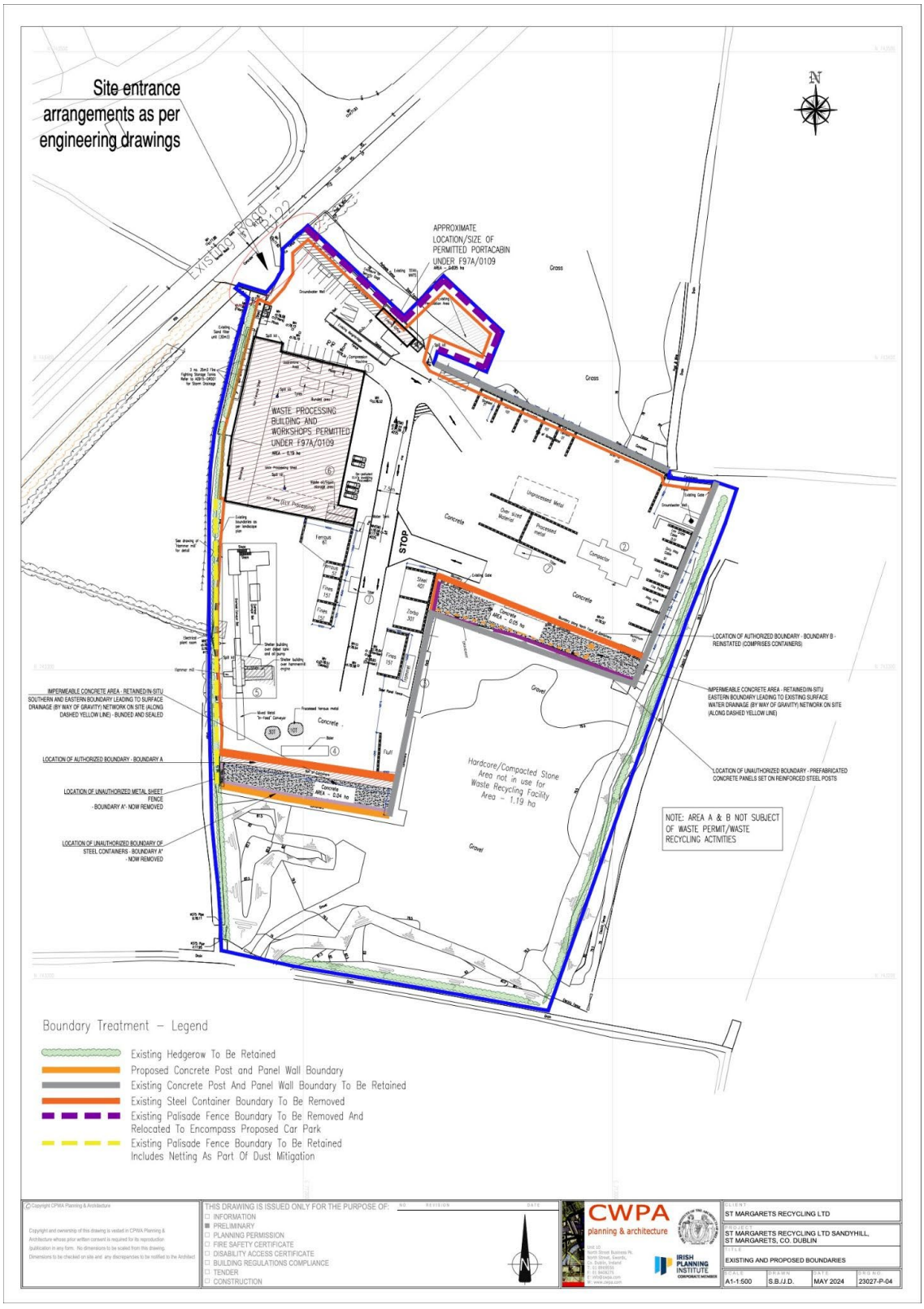


Fig 3: Existing and proposed boundaries of the proposed development site at St. Margaret's Recycling & Transfer Centre Ltd.

2.2 Description of Development

The development is described as:

> "Substitute Consent is sought by St. Margaret's Recycling & Transfer Centre Ltd. at St. Margaret's Metal Recycling, Sandyhill, St. Margaret's, Co. Dublin, for -

Retention of -

1. Enabling Ancillary Works, including, but not limited to, that constructed and permitted in accordance with Reg. Ref's. F13A/0409, F11A/0443, F10A/0177, F03A/1561, F03A/1682 and F97A/0109, e.g. ancillary and enabling works/infrastructure, comprising amendments to site access and boundary arrangements including dust mitigation measures, access and gateway, above and below ground surface water drainage, proprietary wastewater treatment system, fire water storage and retention (105m3), attenuation and storage tanks (206m3), truck and vehicle parking,

2. Existing buildings, plant and machinery and their use associated with the daily operations of the waste recycling and transfer facility, and authorised facility for the treatment of 'end of life vehicles' (ATF for ELVs). Existing development comprises the weighbridge, offices, recycling and transfer/industrial buildings, hard standing, car parking, plant and machinery, detailed below:
    a. Prefabricated cabins (2no.) - 177sqm. - comprising ancillary offices, staff facilities, control room;
    b. Prefabricated w/c & Steel Container (store) - 29 sqm;
    c. Recycling and transfer/Industrial buildings 1917 sqm;
    d. Weighbridge; and
    e. Machinery comprising hammermill, shredders, bailers, tilters, forklifts, grabbers, et al.

3. The enlargement of the site for waste transfer and recycling purposes, including an Authorised Treatment Facility for End-of-Life Vehicles, increasing the site size to 1.75ha of which 1.6ha is associated with waste permit, and additionally lands comprising site access, proprietary wastewater treatment system, installation of an impermeable reinforced concrete slab surface throughout, and underground surface water drainage system.
4. Historic use of 1.6 ha of the site (as per Waste Permit area under WFP-FG-13-0002-03), as a waste transfer recycling centre and an Authorised Treatment Facility for End-of-Life Vehicles, during the period 2019 to 2023, where waste throughput at the facility rose from 26,000 to 42,500 tonnes per annum, without the benefit of planning permission, and from 2024 onwards operations comprising waste throughput of 21,900 tonnes per annum.

5. Historic use (i.e. 2009 to 2023) of lands comprising c.1.2 ha to the east of the licenced 'waste transfer and recycling centre', surfaced with compacted hardcore and used for the temporary storage of vehicles, plant and machinery associated with the waste recycling activity,

Permission is sought for -

6. Restoration of c.1.1 ha of compacted hardcore surfaced lands, referenced above, to grassland or wildflower meadow, and to include agricultural haul roads/tracks to serve adjacent agricultural lands,
7. On-going use of the existing metal processing and transfer facility, and Authorised Treatment Facility for End of Life Vehicles, with an increase in waste throughput at the facility to accept up to 21,900 tonnes per annum (in line with waste permit) for the bulking, transfer and recycling of metals, construction & demolition waste, bulky/skip waste, batteries, wood waste, glass, other non-biodegradable non-hazardous wastes, and an Authorised Treatment Facility for end-of-life vehicles.

2.3 Existing Environment

The site is located in the townland of Sandyhills, approximately 100 m south of St. Margaret's village and 6 km southwest of Swords, County Dublin. The R122 passes in a north-south direction close to the western edge of the site, adjoining the boundary only at the northwestern corner, where the site entrance is located. The R108 lies to the south which runs to the south of the site and Dublin Airport is located immediately to the west within the southern runway lying to the southeast. With the exception of the site entrance the site is bounded on all sides by agricultural fields which support a mixture of medium to high intensity grassland and tillage production. The boundary of Dublin Airport lands comes to within 240 m of the southern site boundary. This part of the airport contains the western end of the east-west runway. The nearest buildings directly connected to airport activity are 2.3 km to the east.

The adjacent lands to the south, where restoration to managed grassland/wildflower meadow is proposed, currently comprise of compacted hard core. No recycling activities have taken place on these lands. Ad hoc temporary storage of unused or obsolete plant and machinery has occurred on these lands on occasion during the period 2014- 2023.

2.3.1 Hydrological Linkages

There is no prescribed radius around a site for determining what Natura 2000 sites should be studied. This is determined by the zone of influence of the project, although a preliminary radius of 15km is usually examined (having regard to "Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities" (EPA, 2010)).

A nearby watercourse drains to Malahide Estuary, which is both an SPA and SAC. In addition to its Natura 2000 designations, it is also a Ramsar site (Broadmeadow estuary no. 833) and a Marine Protected Area under the OSPAR Convention (site code: O-IE-0002967).

EPA mapping shows that the Huntstown Stream flows to the north of the site boundary and this discharges into the River Ward further to the north-east. This watercourse discharges to the Malahide Estuary which has the aforementioned designations.

2.3.2 Geology and Groundwater

The site is situated in the Swords Groundwater Body (IE_EA_G_011). This groundwater body is monitored by the EPA and is considered "Not at Risk" in terms of the Water Framework Directive risk. The groundwater body has "Good quality" in the period of 2016-2021, the most recent available monitoring results from the EPA.

The GSI groundwater well database shows that bedrock was recorded at 4 m below surface in an area west of the site. The GSI geotechnical database reports bedrock at 6.5 m below ground level 260 m west of the site in a 128 m deep borehole. The aquifer around the facility is classed as "Moderately Productive" (LI) only in Local Zones.

In accordance with the NRA Guidelines (2009) (as included in 'Guidelines for the Preparation of Soils, Geology and Hydrogeology Chapters of Environmental Impact Statements' (IGI, 2013)), the site is deemed to be an attribute of low importance as a function of it being of low quality and significance or value on a local scale, and its current use as a waste facility.

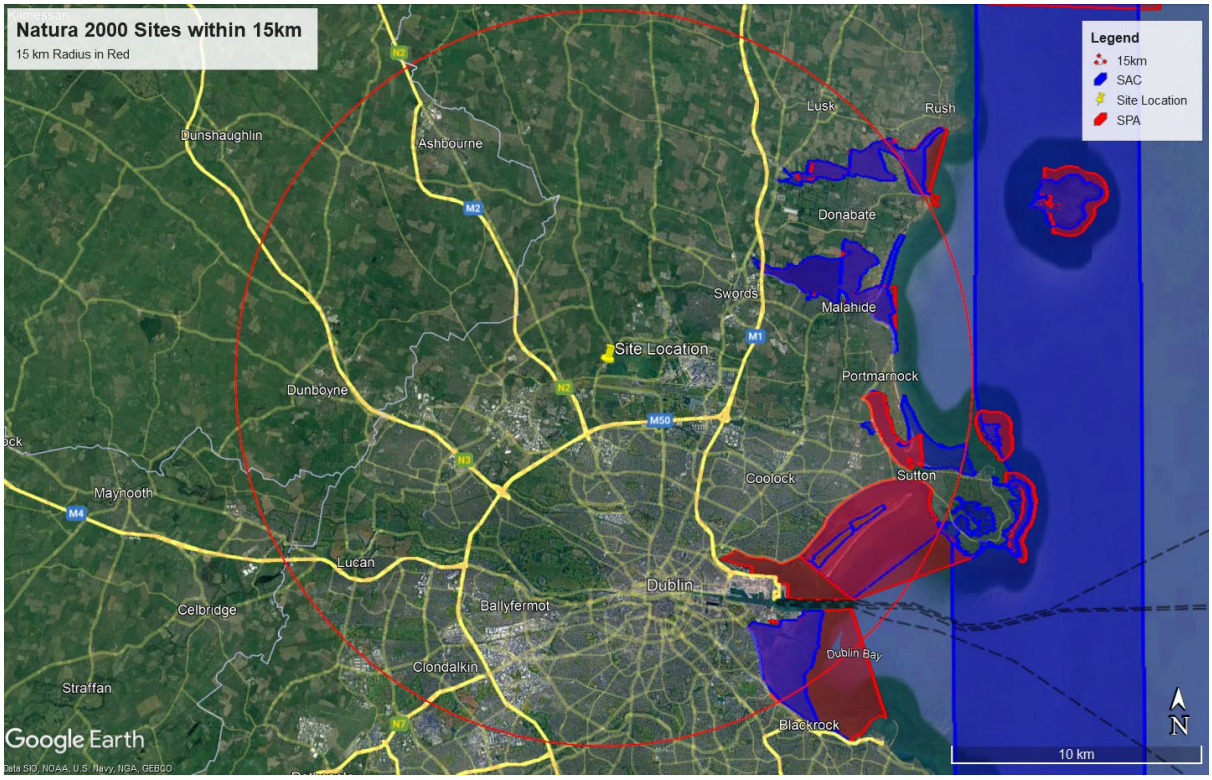


Figure 4: Natura 2000 sites within a 15km pathway consideration zone of the proposed development area (North-west Irish Sea SPA is not shown at website, see Appendix 1 for conservation objectives map)

3 Methodology

3.1 Guidelines

This Appropriate Assessment Screening Report has been prepared with regard to the following guidance documents, as relevant:

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

3.2 Desk Study

Information on the site and the area of the subject development was studied prior to the completion of this statement. The following data sources were accessed in order to complete a thorough examination of potential impacts:

- National Parks and Wildlife Service - aerial photographs and maps of designated sites, information on habitats and species within these sites and information on protected plant or animal species; conservation objectives, site synopses and standard data forms for relevant designated sites;
- Environmental Protection Agency (EPA)- Information pertaining to water quality, geology and licensed facilities within the area;
- Ordinance Survey of Ireland (GeoHive) - access to spatial mapping data and metadata, including historical layers.
- National Biodiversity Data Centre (NBDC) – Information pertaining to protected plant and animal species within the study area;

- Fingal County Council – Information on planning and planning history in the area, landscape characterisation;
- Water Matters – Catchment based information;
- HeritageMaps.ie – general background information relating to the study area
- GSI.ie- Information on water sources, geology, and mapping

3.3 Field Survey

A number of site visits were carried out by the study team, comprising Serena Alexander, Peter McCormick and Martijn Leenheer, between March & August 2024. The site was surveyed in accordance with the Heritage Council's Best Practice Guidance for Habitat Survey and Mapping (Smith et al., 2011). All habitats were identified to Fossitt level 3 (Fossitt, 2000). The survey included a search of all potentially suitable habitat for protected species that are likely to occur in the vicinity of the project area. Habitats were identified in accordance with the Heritage Council's "Guide to Habitats in Ireland" (Fossitt, 2000).

The site can be described as nearly entirely composed of buildings and artificial surfaces (BL3). The external boundary to the south and west is composed of a native hedgerow (WL1) with Hawthorne *Crataegus monogyna*, Elder *Sambucus nigra*, Ash *Fraxinus excelsior*, Brambles *Rubus fruticosus agg.* And Ivy *Hedera helix*. A drainage ditch (FW4) along the western boundary had no flowing water but was partly wet. Using methodology from the Heritage Council these hedgerows can be assessed as of "higher significance" due to their age, structure and species diversity. Elsewhere, semi-natural boundaries - where present - are composed of earth banks (BL2) which are grassy, with Docks *Rumex sp.*, Vetches *Vicia sp.*, Thistles *Cirsium sp.* and Ragwort *Senecio jacobaea*.

There are no alien invasive species (as listed on SI No 477 of 2011) or plants which are rare or protected. Overall, hedgerows on the site of local biodiversity value but are not associated with habitats listed on Annex I of the Habitats Directive or for which SACs/SPAs are typically designated. Other habitats are of low or negligible biodiversity value.

The site survey heeded incidental sightings or proxy signs (prints, scats etc.) of faunal activity, while the presence of certain species can be concluded where there is suitable habitat within the known range of that species. Footprints of Irish Hare were noted from the main portion of the site. No other direct evidence of mammals was recorded. Features on the site are considered to be of low value to roosting bats with no suitable buildings or veteran trees with holes, cracks etc. For this reason, a detector survey was not carried out. This is consistent with the findings of previous ecological surveys and assessments carried out on site.

Hedgerow features do, however, provide foraging opportunities and it can be presumed that bats are present for this purpose. As these hedgerows are not disturbed as part of the subject development, with no likelihood of loss to these habitats or disturbance to feeding therein, no further analysis was deemed necessary. No evidence of badger (*Meles meles*) activity was found in any area of the site.

In summary, it is evident that the application site is not within, or adjacent to, any area that has been designated for nature conservation at a national or international level.

There were no examples of habitats listed on Annex I of the Habitats Directive or records of rare or protected plants. No non-native invasive plant species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011, have been recorded from the subject development site.

The groundwater from the site may form tenuous links via surface water run-off to the Huntstown Stream which runs adjacent to the site and – via the Ward and subsequently the Broadmeadow river - eventually empties in the Malahide Estuary.

4 Identification of Natura 2000 Sites

4.1 Determination of the Likely Zone of Influence

The Zone of Influence (ZoI) of a project may be defined as area(s) over which ecological features may be affected by the biophysical changes caused by the project and associated activities (CIEEM 2016). Guidance in AA of plans and projects in Ireland notes that a distance of 15km is recommended for the identification of relevant European sites in the case of plans. For some 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.

Using the source-receptor-pathway model, an examination of the potential effects of the proposed development was undertaken (alone and/or in-combination) to identify what European sites, and which of their qualifying interests or special conservation interest species were potentially at risk. This was required to determine the Zone of Influence for the development.

It is vital that an assessment of potential source-pathway-receptor links is undertaken to assess potential impact links between the receptor (European sites) and source (development) to establish the risk of any likely significant effects.

With regards to potential habitat degradation effects associated with the release of sediment and other pollutants to surface water, the ZoI of the development is considered to include receiving water bodies adjacent to or downstream of the site. The distance downstream is associated with the current biological condition of the accepting waterbody and its capacity to accept and assimilate sediment and other pollutants.

4.2 Source-Pathway-Receptor Approach

In establishing which European sites are potentially at risk from the development (sans mitigation measures), a source-pathway-receptor approach was applied. In order for an impact to occur, there must be a risk enabled by having a *source* (e.g. water abstraction or construction works), a *receptor* (e.g. a European site or its Qualifying Interest(s) (QIs) or Special Conservation Interest(s) (SCIs) species), and a pathway between the source and the receptor (e.g. pathway by air for airborne pollution, pathway by a watercourse for mobilisation of pollution). For an impact to occur, all three elements must exist; the absence or removal of one of the elements means there is no possibility for the impact to occur.

The identification of source-pathway-receptor connection(s) between the development and European sites essentially is the process of identifying which European sites are within the Zone of Influence (ZoI) of the development, and therefore potentially at risk of significant effects. The ZoI is defined as the area within which the development could affect the receiving environment such that it could potentially have significant effects on the QI habitats or QI/SCI species of a European site, or on the achievement of their conservation objectives (as defined in CIEEM, 2018).

4.3 Description of relevant Receptor-Source-Pathway connections

In terms of the information necessary to carry out an AA, a description of relevant Receptor-Source-Pathway connections between the subject development site and Natura sites identified has been provided. In accordance with the European Commission Methodological Guidance (EC2001), a list of Natura 2000 Sites that can be potentially affected by the works has been compiled. Adopting the precautionary principle in identifying these sites, it has been decided to include all SACs (Special Areas of Conservation), SPAs (Special Protection Areas) within a 15km radius of the site.

There are no Natura 2000 sites in the immediate vicinity of the development site. Hydrological pathways lead to the Malahide Estuary, which is subject to both SAC and SPA designations. There are no direct or indirect pathways to any other Natura 2000 sites.

Table 1: SACs within c.15km radius of the site.

Special Area of Conservation (SAC)	Proximity	Potential Pathway	Potential Impact
Malahide Estuary SAC (000205)	10.37km NE	A Stream/River within the vicinity of the site, albeit not proximate to the site flows into this Natura site. As it may be connected to the site via a field ditch, there is a potential indirect hydrological link to be assessed.	Low
North Dublin Bay SAC (0000206)	12.82km SE	No hydrological/geographical pathways or connections, other than indirect marine pathway	None
Rogerstown Estuary SAC (0000208)	14.01km NE	No hydrological/geographical pathways or connections, other than indirect marine pathway	None
Baldoyle Bay SAC (0000199)	12.88km SE	No hydrological/geographical pathways or connections	None
South Dublin Bay SAC (0000210)	13.91km SE	No hydrological/geographical pathways or connections	None
Rye Water Valley/Carton SAC (0001398)	16.54km SW	No hydrological/geographical pathways or connections	None

The identification of a source-pathway-receptor risk does not automatically mean that significant effects will arise. The likelihood for significant effects will depend upon the characteristics of the source (e.g. extent and duration of construction works), the characteristics of the pathway (e.g. direction and strength of prevailing winds for airborne pollution) and the characteristics of the receptor (e.g. the sensitivities of the European site and its QIs/SCIs). However, identification of the risk does mean that there is a possibility of ecological or environmental damage occurring, with the significance of the effect depending upon the nature and exposure to the risk and the characteristics of the receptor. In this case, where uncertainty existed, the precautionary principle was applied.

Table 2: SPAs within c.15km radius of the site.

Special Protection Areas (SPA)	Proximity	Evaluation	Potential Impact
Malahide Estuary SPA (004025)	10.42km NE	A Stream/River within the vicinity of the site, albeit not proximate to the site flows into this Natura site. As it may be connected to the site via a field ditch, there is a potential indirect hydrological link to be assessed.	Low
North-West Irish Sea SPA (004236)	11.82 E	No hydrological/geographical pathways or connections, other than indirect marine pathway through Malahide Estuary SPA (004025)	None
Sandymount Strand/Tolka Estuary SPA (0004024)	14.19km SE	No hydrological/geographical pathways or connections	None
North Bull Island SPA (0004006)	13.18km SE	No hydrological/geographical pathways or connections	None
Baldoyle Bay SPA	12.88km SE	No hydrological/geographical pathways or connections	None
Rogerstown Estuary SPA (0004015)	14.01km NE	No hydrological/geographical pathways or connections	None

All six SACs and six SPAs within the 15km range of the site are greater than 10km away. All except the Malahide Estuary SAC and the Malahide Estuary SPA (also sometimes referred to as the Broadmeadow/Swords Estuary SPA) have no hydrological/geographical pathways or connections and are therefore beyond the ZoI. Thus, there is no potential for likely significant effects on these sites where there is no hydrological or other link and having regard to their distance from the subject site, as a result of the subject development. None of the qualifying interests of the SAC or SPA occur within the development site.

5 In-Combination Assessment

5.1 Analysis of Potential In-Combination Effects

This section of the report presents the assessment carried out to examine whether any other plans or projects have the potential to act in-combination with the proposed development to adversely affect the integrity of the two European site within its ZoI: Malahide Estuary SAC [000205] and Malahide Estuary SPA [004026] (also known as the Broadmeadow/Swords SPA). All other European sites fall beyond the ZoI of the development and therefore there is no potential for impact on any sites apart from Malahide Estuary SAC and Malahide Estuary SPA.

The potential impact pathways connecting the proposed development to these European sites are potentially via the existing surface water network which drains to Malahide Estuary via existing intermittent watercourses.

The QI of Malahide Estuary SAC could potentially affected by the development as it is hydrologically linked to the project and situated near an estuarine habitat therefore, any national, regional or local land use plans, or any existing or proposed projects, further upstream and downstream have the potential to affect the receiving ecological environment (particularly the aquatic environment) and have the potential to act in-combination with the proposed development to affect Malahide Estuary SAC [000205] Malahide Estuary [004026].

Any plan or existing/proposed project that could potentially affect Malahide Estuary SAC [000205] and Malahide Estuary [004026]. in-combination with the development must adhere to the overarching environmental protective policies and objectives of the relevant land use plan, as dependent on the location of the specific plan or project.

These policies and objectives will ensure the protection of European sites across all identified potential impact pathways and will include the requirement for any future project to undergo Screening for Appropriate Assessment and/or Appropriate Assessment.

5.2 Conclusion of In-Combination Assessment

Without the implementation of mitigation measures, there is a potential for in-combination impact on the Malahide Estuary SAC [000205] and Malahide Estuary [004026] as an indirect impact could not be ruled out due to the hydrological link between the project and the aforementioned Natura 2000 sites.

6. Appropriate Assessment Screening Conclusion

The potential for impact on the Malahide Estuary SAC and the Malahide Estuary SPA cannot be ruled out at Screening Stage due to the possibility, albeit remote, hydrological links.

Therefore, due to the potential for indirect hydrological links between the project site and the SAC/SPA under consideration, the remedial AA Screening report concludes that indirect impacts on the European sites **could not be ruled out**, and as such the development requires a remedial Natura Impact Statement, to enable the competent authority to have all available information.

It may be noted that in respect of the subject development, which is one for substitute consent in respect of 'retention' of an existing facility, which for the most part comprises a long established (c.30 years) non-conforming development. At various stages in its history the works on site have been previously permitted development. While development may have only been subject to temporary permissions, the infrastructure and activities are similar to that on site today, and at the time of granting permission by the Planning Authority were subject to appropriate assessment screening and were deemed not to require a Natura Impact Assessment, due to the scale of the development and limited and distant connection to the Natura sites. In terms of making the decision to carry out a remedial NIS, the precautionary principles have been applied in reflecting the Board's decision on FW20A/0029/ ABP-310169-21. Reason 1 of their 'Reasons and Considerations' states "*Insufficient Information has been submitted regarding the activities and processes carried out, on the volume of waste produced, the nature and quantity of emissions, mitigation or monitoring proposed, and measures to prevent and contain fire and to control of the discharge of fire water, such as to enable the Board to assess the likely impacts of the proposed development on protected European Sites. In such circumstances, the Board is precluded from granting.*"

7 Remedial Natura Impact Statement

This remedial Natura Impact Statement (rNIS) has been prepared in accordance with the provisions of Part XAB of the Planning and Development Act, 2000 (as amended) and in accordance with the requirements of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive).

It considers the implications of the subject development, on its own and in combination with other plans or projects, for European sites in view of the conservation objectives of those sites. It includes a scientific examination of evidence and data to identify and assess the implications of the development for any European sites in view of the conservation objectives of those sites. It considers whether the subject development, by itself and in combination with other plans or projects, would adversely affect the integrity of European sites. In reaching a conclusion in this regard consideration is given to any mitigation measures necessary to avoid or reduce any potential negative impacts.

The purpose of this rNIS is to provide an examination, analysis and evaluation of the potential impacts of the development on European sites and to present findings and conclusions with respect to the development in light of the best scientific knowledge in the field. This rNIS will inform and assist the competent authority in carrying out its Appropriate Assessment as to whether or not the development will adversely affect the integrity of European sites, either alone or in combination with other plans and projects, taking into account their conservation objectives.

Having already ascertained that the potential for the subject development having a significant effect on a European site(s) is uncertain or cannot/or could not be ruled out by An Bord Pleanála previously, this rNIS has been prepared to inform and assist the competent authority in carrying out its Appropriate Assessment as to whether or not the subject development will adversely affect the integrity of European sites either alone or in combination with other plans and projects, taking into account the conservation objectives of the European sites.

There are two European sites for which a source-pathway-receptor link exists from the subject development. All other European sites are located beyond the ZoI and therefore, any possibility of there being any significant effects on any other European sites may be excluded, on the basis of objective information set out in this report and there is no reasonable scientific doubt about that conclusion.

7.1 Summary of Relevant European Sites

7.1.2 Malahide Estuary SAC [000205]

Malahide Estuary is situated immediately north of Malahide and east of Swords in Co. Dublin and is an estuary of the Broadmeadow River.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I/II of the EU Habitats Directive (* = priority; numbers = Natura 2000 codes).

Table 3: Qualifying interests of Malahide Estuary SAC

Aspect	Code	Level of Protection	Status
Fixed coastal dunes with herbaceous vegetation ("grey dunes")	1140	Habitats Directive Annex I Priority Habitat	Bad
Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")	1310	Habitats Directive Annex I	Inadequate
Salicronia and other annuals colonising mud and sand	1330		Inadequate
Mediterranean salt meadows	1410		Inadequate
Atlantic salt meadows	2120		Inadequate
Mudflats and sandflats not covered by seawater at low tide	2130		Inadequate

Site synopsis of Malahide Estuary SAC (000205)

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

The dune spit has a well-developed outer dune ridge dominated by Marram Grass (*Ammophila arenaria*). The dry areas of the stabilised dunes have a dense covering of Burnet Rose (*Rosa pimpinellifolia*), Red Fescue (*Festuca rubra*) and species such as Yellow-wort (*Blackstonia perfoliata*), Autumn Gentian (*Gentianella amarella*), Hound's tongue (*Cynoglossum officinale*), Carline Thistle (*Carlina vulgaris*) and Pyramidal Orchid (*Anacamptis pyramidalis*). Much of the interior of the spit is taken up by a golf course. The inner stony shore has frequent Sea-holly (*Eryngium maritimum*). Well- developed saltmarshes occur at the tip of the spit. Atlantic salt meadow is the principal type and is characterised by species such as Sea-purslane (*Halimione tripolium*), Thrift (*Armeria maritima*), Sea Arrowgrass (*Triglochin maritima*) and Common Saltmarsh-grass (*Puccinellia maritima*). Elsewhere in the outer estuary, a small area of Mediterranean salt meadow occurs which is marshes there are good examples of pioneering glasswort (*Salicornia spp*.) swards and other annual species, typified by *S. dolichostachya* and Annual Sea-blite (*Suaeda maritima*).

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

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

The estuary is an important wintering bird site and holds an internationally important population of Brent Goose and nationally important populations of a further 15 species (outlined in Table 4, below). There is a high numbers of diving birds reflects the lagoon-type nature of the inner estuary, which also attracts migrant species such as Ruff, Curlew Sandpiper, Spotted Redshank and Little Stint. Breeding birds of the site include Ringed Plover, Shelduck and Mallard. Up to the 1950s there was a major tern colony at the southern end of the island and the habitat remains suitable for these birds.

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

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

7.1.3 Broadmeadow/Swords/Malahide Estuary SPA [004025]

Malahide Estuary is situated in north Co. Dublin, between the towns of Malahide and Swords.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I/II of the EU Habitats Directive (* = priority; numbers = Natura 2000 codes).

Table 4: Qualifying interests of Malahide Estuary SPA

Code	Habitat/species	Status in Ireland
A005	Great Crested Grebe (*Podiceps cristatus*)	Amber (Breeding & Wintering)
A046	Light-bellied Brent Goose (*Branta bernicla hrota*)	Amber (Wintering)
A048	Shelduck (*Tadorna tadorna*)	Amber (Breeding & Wintering)
A054	Pintail (*Anas acuta*)	Red (Wintering)
A067	Goldeneye (*Bucephala clangula*)	Red (Wintering)
A069	Red-breasted Merganser (*Mergus serrator*)	Green (Breeding & Wintering)
A130	Oystercatcher (*Haematopus ostralegus*)	Amber (Breeding & Wintering)
A140	Golden Plover (*Pluvialis apricaria*)	Red (Breeding & Wintering)
A141	Grey Plover (*Pluvialis squatarola*)	Amber (Wintering)
A143	Knot (*Calidris canutus*)	Amber (Wintering)
A149	Dunlin (*Calidris alpina*)	Red (Breeding & Wintering)
A156	Black-tailed Godwit (*Limosa limosa*)	Amber (Wintering)
A157	Bar-tailed Godwit (*Limosa lapponica*)	Amber (Wintering)
A162	Redshank (*Tringa totanus*)	Red (Breeding & Wintering)

Site Synopsis of Broadmeadow/Swords/Malahide Estuary SPA (004025)

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

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Great Crested Grebe, Light-bellied Brent Goose, Shelduck, Pintail, Goldeneye, Red-breasted Merganser, Oystercatcher, Golden Plover, Grey Plover, Knot, Dunlin, Black-tailed Godwit, Bar-tailed Godwit and Redshank. The E.U. Birds Directive pays particular attention to wetlands and, as associated waterbirds are of special conservation interest for Wetland & Waterbirds.

This site is of high importance for wintering waterfowl and supports a particularly good diversity of species. It has internationally important populations of Light-bellied Brent Goose (1,104 individuals or 5% of the all-Ireland total) and Black-tailed Godwit (409 individuals or 2.9% of the all-Ireland total). See *Table 4* above for further figures on the site's wintering bird populations.

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

Figure 5: Extract from NPWS –Natura Sites closest to subject site

7.2 Impact Assessment

This section considers the potential impacts of the development on the qualifying interests and special conservation interests of Malahide Estuary SAC and SPA.

Potential impacts are based on information regarding the qualifying interests and conservation objectives of the Sites and have been informed by a desk study. Impact assessment is based on the Source-Pathway-Receptor model. Where no pathway exists, there is no possibility for significant effects on any qualifying interest of the European Site in question. The assessment is concentrated solely on the features and potential impacts highlighted in the screening assessment, i.e. impacts relating to surface water quality.

As per Section 177G under Part XA of the Planning and Development Act 2000, as amended ("the 2000 Act "):

"177G. — (1) A remedial Natura impact statement shall contain the following:

(a) a statement of the significant effects, if any, on the relevant European site which have occurred or which are occurring, or which can reasonably be expected to occur because the development the subject of the application for substitute consent was carried out; [emphasis added]

(b) details of —

(i) any appropriate remedial or mitigation measures undertaken or proposed to

be undertaken by the applicant for substitute consent to remedy or mitigate any significant effects on the environment or on the European site;
(ii) the period of time within which any such proposed remedial or mitigation measures shall be carried out by or on behalf of the applicant;"

As such, it is necessary to assess the impact of the Development on European sites taking into consideration the extent of the works carried out, any mitigation measures carried out, and any works proposed, but not yet undertaken.

Table 6: Analysis of likely significant effects on relevant European sites, for which a potential source-pathway-receptor connection exists with the development

Receptor(s) - Relevant European Site Name [Code] and its Qualifying Interest(s)/Special Conservation Interest(s) (*Priority Annex I Habitats)	Source(s)	Pathway(s) (including approximate distance from nearest potential source to receptor)	Potential Impact(s) of the development either alone or in-combination with other projects and plans/Likelihood of significant effects in absence of mitigation?	Conclusion of analysis
Special Area of Conservation				
Malahide Estuary SAC				
Mudflats and sandflats not covered by seawater at low tide [1140] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Mediterranean salt meadows (Juncetalia maritimi) [1410] Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]	An accidental pollution event during construction and/or operation Precipitation, resulting in runoff Hydrocarbons - spillages from site operations, depolluted cars etc Sediment losses from yard Contaminated soil/subsoil Upgradient groundwater quality Domestic wastewater Dust	Infiltrating water (vertical) Shallow subsurface flow (lateral) Surface runoff from upgradient lands Flow through current drainage system Bedrock aquifer flow Surface water runoff from yard Air	An accidental pollution event during construction or operation, of a sufficient magnitude, could potentially negatively affect water quality in Malahide Estuary A reduction in water quality could affect the quality of the aquatic and estuarine environments that support the qualifying interest habitats of the Malahide Estuary SAC Dust can cause siltation in rivers and estuaries within the ZoI, and can negatively affect the photosynthesis capabilities of vegetation	Unlikely significant effects, but mitigation measures necessary to protect the integrity of the European site

Special Protection Area				
Broadmeadow/Swords Estuary SPA				
Annex II Species				
Pintail (Anas acuta)	An accidental pollution event during construction and/or operation Precipitation Hydrocarbons - spillages from site operations, depolluted cars etc Sediment losses from yard Contaminated soil/subsoil Upgradient groundwater quality Domestic wastewater Dust	Surface water runoff (from yard, roof etc) Infiltrating water (vertical) Shallow subsurface flow (lateral) Surface runoff from upgradient lands Flow through current drainage system Bedrock aquifer flow Air	An accidental pollution event during construction or operation, of a sufficient magnitude, could potentially negatively affect water quality in Malahide Estuary A reduction in water quality could affect the quality of the aquatic and estuarine environments that support the qualifying interest habitats of the Malahide Estuary SAC Dust can cause siltation in rivers and estuaries within the ZoI	Unlikely significant effects, but mitigation measures necessary to protect the integrity of the European site
Teal (Anas crecca)				
Wigeon (Anas Penelope)				
Mallard (Anas platyrhynchos)				
Turnstone (Arenaria interpres)				
Pochard (Aythya ferina)				
Brent Goose (Branta bernicla)				
Goldeneye (Bucephala clangula)				
Sanderling (Calidris alba)				
Dunlin (Calidris alpina)				
Knot (Calidris canutus)				
Ringed Plover (Charadrius hiaticula)				
Snipe (Gallinago gallinago)				
Oystercatcher (Haematopus ostralegus)				
Bar-tailed Godwit (Limosa lapponica)				
Black-tailed Godwit (Limosa limosa)				
Goosander (Mergus merganser)				
Curlew (Numenius arquata)				
Golden Plover (Pluvialis apricaria)				
Grey Plover (Pluvialis squatarola)				
Great Crested Grebe (Podiceps cristatus)				
Shelduck (Tadorna tadorna)				
Greenshank (Tringa nebularia)				
Redshank (Tringa totanus)				
Lapwing (Vanellus vanellus)				

7.2.1 Examination and Analysis of Potential Direct and Indirect Impacts to Malahide Estuary SAC

As the subject development does not overlap directly with the Malahide Estuary SAC, none of the qualifying interest habitats would have been directly impacted. The habitat onsite – a waste processing transfer facility on hard standing, and adjacent grasslands – does not correspond to the qualifying interests of this SAC. Malahide Estuary SAC also lies beyond the ZoI of any hydrogeological, air quality or disturbance/displacement impacts.

However, there are the following indirect impacts by which the subject development could (in the absence of mitigation measures) have potentially affected the conservation objective attributes and targets supporting the conservation condition of the qualifying interests of Malahide Estuary SAC:

- An accidental pollution event during construction or operation, of a sufficient magnitude, could potentially negatively affect water quality in Malahide Estuary.
- A reduction in water quality arising from the activities of the development, during construction and/or operation, could affect the quality of the aquatic and estuarine environments that support the qualifying interest habitats of the Malahide Estuary SAC

7.2.2 Examination and Analysis of Potential Direct and Indirect Impacts to Malahide Estuary SPA

As the subject development does not overlap with the Malahide Estuary SPA directly, none of the qualifying bird species would have been directly impacted. The habitat onsite – a waste processing transfer facility on hard standing, and adjacent grasslands – does not correspond to the habitat required for the sea birds listed for the SAC. Malahide Estuary SAC also lies beyond the ZoI for disturbance/displacement impacts.

Below are indirect impacts by which the subject development could (in the absence of mitigation measures) have potentially affected the conservation objective attributes and targets supporting the conservation condition of the qualifying interests of Malahide Estuary SPA:

- An accidental pollution event during construction or operation, of a sufficient magnitude, could potentially negatively affect water quality in Malahide Estuary.
- A reduction in water quality arising from the activities of the development, during construction and/or operation, could affect the quality of the aquatic and estuarine environments that support the qualifying interest habitats of the Malahide Estuary SAC

7.3 Mitigation measures

7.3.1 Mitigation Measures during Construction

7.3.1.1 Surface Water

The only construction which has occurred since 2019 is understood to be (i) the replacement of the hammermill, (ii) the extension of the concrete yard by c.0.1 ha on lands formerly comprising compacted hardcore, (iii) replacement of existing prefabricated cabins on site, and (iv) maintenance and upgrade of Wastewater treatment system. The topsoiling and seeding of c.1.ha, does not involve the removal of hardcore or other soil from site to lower risk of impact. This reduces the risk significantly of siltation and thus the likelihood of direct or indirect impacts on the Natura 2000 sites via hydrological links.

The installation of the hammermill was an upgrade for the existing machinery on site. The hammermill was constructed on the footprint of the existing concreted yard and no soil was moved for the construction. This means there is no potential for impact on surface water due to the construction of the hammermill. The construction of the prefabricated cabins was similar, with the current portacabins being installed being installed on the footprint established by the previous portacabins.

The extension of the concrete yard by c.0.1 ha on lands formerly comprising compacted hardcore did not require the removal of soil for the construction. Best practice methods were employed during this construction, minimising the potential for impact.

7.3.1.2 Accidental Spills and leaks

As with all construction projects, there is potential for water (rainfall and/or groundwater) to become contaminated with pollutants associated with construction activity. Contaminated water which arises from construction sites can pose a significant temporary risk to groundwater quality for the duration of the construction if contaminated water is allowed percolate to the aquifer.

Accidental spillages which are not mitigated may result in localised contamination of soils and groundwater underlying the site should contaminants migrate through the subsoils and impact the underlying groundwater. Groundwater vulnerability at the site is currently classified as extreme, high, and moderate in the south, central portion, and north of the site respectively. No soil stripping occurred which can also further reduce the thickness of subsoil and the natural protection they provide to the underlying aquifer.
Based on the above, it is considered that there was no likelihood during construction of direct or indirect impacts on the Natura 2000 sites.

The construction was carried out using best practice methods. During the construction of the development, while there was a risk of accidental pollution incidences due to accidental spillages from construction plant or onsite storage, it is understood that no such spillages occurred and there is no likelihood of any impact on a Natura 2000 site.

7.3.1.3 Dust

The site has mitigation comprising of an existing dust netting above the western boundary fencing. The site is fully surfaced with concrete and is housekeeping is above the standard usually found at this type of facility. The site is cleaned by a road sweeper 3 times per week, and a forklift with a brush attachment is used regularly. The site is surrounded by enclosed boundary fencing, treelines and embankment. Double stacked shipping container form an obstacle for the dust fall emissions to the south of the hammermill. When dust generation is likely (dry weather and/or high wind speed) the site is misted with water by a tractor with a water tank trailer. This reduces the potential for dust emissions from construction activities taking place in the compound.

The import of the topsoil for the rewilding of the southern area does not involve the removal of hardcore or other soil from site to lower risk of impact. This reduces the risk significantly of dust and thus the likelihood of direct or indirect impacts on the Natura 2000 sites via hydrological links.

Sampling carried out during 2024, which included on site dust analysis and control samples outside the site, indicated that dust produced on site does not escape the compound and therefore the potential impact from dust during construction is negligible.

7.3.1.4 Fire Water

No fires occurred during the construction phase. The construction phase fire mitigation measures would depend on the site mitigation measures as explained in the operational mitigation measures below.

7.3.2 Mitigation Measures during Operation

7.3.2.1 Surface Water

In the operational phase of the development, there will be no change from the current surface water management of the facility. All rainfall landing on open yard areas is captured, via a series of gulleys, in a subsurface piped network and diverted towards the stormwater treatment system. The drainage network diverts stormwater in a northern direction in line with the site topography, before being diverted in a west/northwest direction towards the outfall points.

The current surface water treatment system serving the site comprises a series of silt traps, a buffer tank with oil decanting unit and two hydrocarbon interceptors, which manages and treats runoff from defined hardstanding areas. This infrastructure is described briefly as follows:

- Runoff from the southern portion of the site, which comprises a hammer mill plant and storage area for processed metals and depolluted vehicles. drains to a silt trap prior to passing through a 10 m^3 oil decanting unit. Run-off from the central and northern areas of the site flows through a silt trap, located in the northern portion of the site, and a 206 m3 buffer tank before passing through Interceptor 1 (Klargester Full Retention Interceptor NSFA200), located in close proximity to the weighbridge. Following treatment. treated yard runoff outfalls to a field drain just south of the site entrance.

- Runoff from the 'Reception Yard" in the northwestern area of the site is diverted through Interceptor 2 (Klargester Interceptor NSBD10), also positioned close to the weighbridge. This treated stormwater water also outfalls to the open drain south of the site entrance.

- All roof runoff is currently collected in the existing gutters and downpipes and transferred to three 35m^3 rainwater harvesting tanks located along the western boundary of the site. This water is stored for emergency firefighting needs. Any excess water or overflow is diverted to the open drain that flows south to north along the western boundary.

7.3.2.2 Accidental Spills and leaks

Any accidental emissions of oil, petrol or diesel could cause contamination if the emissions enter the water environment unmitigated. The development includes the storage and use of fuel oil. The oils and fuels are stored in double sided tanks within a bunded area. The car dismantling line is a state-of-the-art system where liquids are removed by a suction system and directly transport to the bulk storage tanks.

Chemical pollution (e.g. hydrocarbon spillages as a result of operational activities) has the potential to occur at the site. However, as the entire footprint of the site has been capped with **hardstanding** for the purposes of site operations and storing of de-polluted vehicles, there will be no resultant impacts to the underlying geological environment as a result of the continued operation.

In the event of an accidental leakage of fuel or a spill, this will be intercepted by the drainage infrastructure; drainage from the site passes through a silt trap, a petrol interceptor and a sand filter prior to the discharge.

Based on the above, it is considered that there was no likelihood during ongoing operation of direct or indirect impacts on the Natura 2000 sites.

7.3.2.3 Dust

The closest residence is situated behind 3 treelines and upwind from the prevailing wind at the facility. The receptors are also protected by an existing dust netting above the western boundary fencing. The site is fully surfaced with concrete and is housekeeping is above the standard usually found at this type of facility. The site is cleaned by a road sweeper 3 times per week, and a forklift with a brush attachment is used regularly. The site is surrounded by enclosed boundary fencing, treelines and embankment. Double stacked shipping container form an obstacle for the dust fall emissions to the south of the hammermill. When dust generation is likely (dry weather and/or high wind speed) the site is misted with water by a tractor with a water tank trailer.

Sampling has been carried out during 2024. This included on site dust analysis and control samples outside the site, and the indicated that dust produced on site does not escape the compound and therefore the potential impact from dust during the operational phase is negligible.

7.3.2.4 Fire Water

In the event of a fire (as occurred in 2018) the outfall was blocked manually, and water was retained on site within the existing drainage system which includes a 206m3 retention tank. In the 2018 fire incident the firewater was successfully retained and tinkered off to a licenced facility. Although the fire retention facilities proved to be sufficient in this case, more mitigation measures are proposed and are included in a separate NIS for the proposed development. The sampling carried out after the incident showed that there was no impact on the surface water and therefore no impact occurred on the conservation objectives of any Natura 2000.

7.3.2.5 Foul Water

Foul water on site is directed to an on-site wastewater treatment system as per the current operation of the site. The wastewater treatment system has been designed and installed according to the standards outlined in the Code of Practice 2009 for wastewater treatment. Due to this, there is no likely potential for impact on hydrology and hydrogeology due to foul water on site.

7.3.4. Relevant Mitigation Measures Guidelines and Regulations

The environmental protection measures for the construction and operational stages were developed in accordance with standard policy, regulations and guidelines including;

- The SuDS Manual
- The Greater Dublin Strategic Drainage Study (GDSDS)
- Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (published by the Department of Environment Heritage and Local Government in conjunction with the National Construction and Demolition Waste Council, July 2006).
  The Guidelines promote an integrated approach to the management of this waste stream. They are designed to promote sustainable development, environmental protection and the optimum use of resources. The Guidelines introduce the concept of integrated waste management planning for construction projects above certain thresholds.
- CIRIA document 133 Waste Minimisation in Construction
- Irish Water Code of Practice for Wastewater Infrastructure, Building Regulations (Section H) guidance appropriate for the assessment of flood risk is to be found in the "Guidelines for Planning Authorities" titled "The Planning System and Flood Risk Management" published in November 2009 by the Office of Public Works (OPW) and the Department of Environment, Heritage and Local Government (DOEHLG).

7.3.5. Timescale for the Implementation of Mitigation Measures

- Environmental management measures were implemented prior to/during the relevant construction works being carried out, and therefore none are proposed re. construction in relation to the retention application.

- Mitigation measures relevant to the operational phase are implemented and maintained on an ongoing basis.

7.3.6. Additional and Future Potential Mitigation Measures

On-going monitoring occurs through site management, and in accordance with the conditions of the waste permit. Additional and future mitigation measures are not considered in this rNIS, these will be considered in a separate NIS for proposed development.

8. rNIS Conclusion

This rNIS has examined and analysed, in light of the best scientific knowledge, with respect to those European sites within the ZoI of the proposed development, the potential impact sources and pathways, how these could impact on the Sites' qualifying interest habitats and qualifying interest/special conservation interest species and whether the predicted impacts would adversely affect the integrity of the European sites.

Avoidance, design requirements and mitigation measures are set out within this report, and they ensure that any impacts on the conservation objectives of European sites will be avoided during the construction and operation of the proposed development such that there will be no adverse effects on these European sites.

It has been objectively concluded by ESC Environmental Ltd., following an examination, analysis and evaluation of the relevant information, including in particular the nature of the predicted impacts from the proposed development and with the implementation of the mitigation measures proposed, that the proposed development **will not** adversely affect (either directly or indirectly) the integrity any European site, either alone or in-combination with other plans or projects, and there is no reasonable scientific doubt in relation to this conclusion.

9. References

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