2 METHODOLOGY

2.1 Appropriate Assessment Methodology

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures to be addressed in the AA process. Firstly, a project should aim to avoid any negative impacts on European sites by identifying possible impacts early in the project, and should design the project in order to avoid such impacts.

There are four stages in an AA, as outlined in the European Commission Guidance document (2001). The following is a brief summary of these steps.

- Stage One Screening: This stage examines the likely effects of a project either alone or in combination with other projects upon a European Site and considers whether it can be objectively concluded that these effects will not be significant.
- Stage Two Appropriate Assessment: In this stage, the impact of the project on the integrity of the European site is considered with respect to the conservation objectives of the site and to its structure and function. Mitigation measures should be applied to the point where no adverse impacts on the site(s) remain.
- Stage Three Assessment of Alternative Solutions: Should the Appropriate Assessment determine that adverse impacts are likely upon a European site, this stage examines alternative ways of implementing the project that, where possible, avoid these adverse impacts.
- Stage Four Assessment where no alternative solutions existend where adverse impacts remain: Where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the Natura site will be necessary. European case law highlights that consideration must be given to alternatives outside the project area in carrying out the IROPI test, which is a rigorous test which projects are generally considered unlikely to pass.

In the preparation of this assessment therefore regard has been given to the Habitats Directive and the European Communities (Birds and Natural Habitats) Regulations 2011, and with reference to the relevant guidance, in particular:

- Assessment of Plans and Projects significantly affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, European Commission 2001.
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats Directive' 92/43/EEC*, European Commission, 2000.
- 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 2009.

2.1.1 Impact Assessment

The first step in the screening process is to develop a list of European sites potentially affected by the proposed development. Each European site is reviewed to establish whether or not the proposed development is likely to have a significant effect on the integrity of the site, as defined by its structure and function, and its conservation objectives.

The qualifying interests of each European site are identified and the potential threats are summarised into the following categories for the screening process, and described within the screening matrix as follows:

• Direct impacts refer to habitat loss or fragmentation arising from land-take requirements for development or agricultural purposes. Direct impacts can be as a result of a change in land use or management, such as the removal of agricultural practices that prevent scrub encroachment.

- Indirect and secondary impacts do not have a straight-line route between cause and effect, and it is potentially more challenging to ensure that all the possible indirect impacts of the plan (or project) in combination with other plans and projects - have been established. These can arise when a development alters the hydrology of a catchment area, which in turn affects the movement of groundwater to a site, and the qualifying interests that rely on the maintenance of water levels. Deterioration in water quality can occur as both an indirect or direct consequence of development, which in turn changes the aquatic environment and reduces its capacity to support certain plants and animals. The introduction of invasive species can also be defined as an indirect impact, which results in increased movement of vectors (humans, fauna, surface water), and consequently the transfer of alien species from one area to another.
- Disturbance to fauna can arise directly through the loss of habitat (e.g. bat roosts) or indirectly through noise, vibration and increased activity associated with construction and operation.

2.2 Desktop Study

In order to complete the Screening for Appropriate Assessment certain information on the existing environment is required. 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:

- Draft Fingal County Development Plan 2017 2023 .
- Fingal County Development Plan 2011 2017
- National Parks and Wildlife Service (NPWS) website and metadata available (www.npws.ie)
- OSI Aerial photography and 1:50000 mapping
- National Biodiversity Data Centre (NBDC) (on-line mag-viewer)

- Switch required Environmental Protection Agency (EPA) Water quality data
- Geological Survey Ireland (GSI) area mapsion net register the Eastern T The Eastern River Basin District (ERBO) datasets (Water Framework Directive) now Inland Fisheries Ireland (IFI).

2.3 Field Assessment

Habitats

The habitats within the site of the proposed facility were identified and classified, according to 'A Guide to Habitats in Ireland' (Fossitt, 2000), during a walkover survey of the site on the 7th of July 2016. The dominant plant species present in each habitat type was recorded.

Habitats were appraised and evaluated according to their occurrence as protected habitats under Annex I of the EU Habitats Directive (92/43/EEC) and for their capacity to support rare, threatened and endangered species. The methodology used in this report to assess the impact on habitats is based on NRA guidelines (2009).

Mammals

Mammal observations or signs were recorded during site walkovers on the 7th of July 2016. Any signs or sightings noted during other ecological surveys on the site are also included in this report. The two small streams within the site were walked to search for potential otter holts. The conservation status of mammals within Ireland and Europe is assessed using one or more of the following documents; Wildlife Acts (1976 -2010), the Red List of Terrestrial Mammals (Marnell et al., 2009) and NPWS (2013) The Status of EU Protected Habitats and Species in Ireland.

Bats

A survey of all buildings, old trees and other structures within the site of the Millennium Park was conducted by FT ecologists during daylight hours on the 7th of July 2016. All structures were inspected for signs of bat presence; this was aided by the use of a powerful torch and endoscope. The animals themselves are less likely to be observed then evidence of their presence; however, they are observed from time to time. Evidence of bats can be the presence of grease staining, droppings, urine marks, feeding signs; in the form of invertebrate remains, dead bats and/or the presence of bat fly pupae, Nycteribiidae. Potential roosting habitat like cracks, holes and crevices within features on-site were noted for further investigation during the activity survey.

Evidence of bat roosts was searched for and information on all potential roosts was recorded according to roost identification guidelines 'Bat Survey Guidelines: Traditional Farm Buildings Scheme', Aughney, T., Kelleher, C. & Mullen, D. (2008). When investigating potential bat roosts, best practise methodology referred to in among other guidance document including NRA Guidelines for the Treatment of Bats during the Construction of National Road Schemes, (NRA, 2006) was be implemented.

A bat activity survey was conducted on the night of the 7th of July 2016. A frequency division bat detector (BatBox Duet) was used to identify bats in the field and a time expansion bat detector (Pettersson D240X) with an Edirol MP3 recorder were used to later confirm species identification. A handheld GPS was used to mark areas of bat activity. The survey began at 21:50 before sunset at the site and continued until 23:10.

There were no seasonal or climatic constraints during surveying. The weather on the survey night was good - dry with light winds (temp 9°C). For health and safety reasons there were access constraints in relation to certain buildings. The bat survey was limited as evidence of an unauthorised habitation of the derelict house was recorded during the daytime structural survey. A horse was also present in the back garden of the house. Therefore, the activity survey was concentrated along the treeline and sheds away from the derelict house as surveyors were advised not to approach the derelict house after dark.

A follow up bat survey was undertaken following a fire at the derelict house within the site on the 30th of September 2016. Surveys commenced within the site at 18:00 during which all buildings and features of interest were re-examined for signs of bat occupancy or utilisation. A dusk emergence half an hour prior to sunset (19.08) within the site. Conditions were suitable for bat activity with a temperature of 19° C, partly cloudy, with south westerly wind of approximately 24mph. A light shower commenced at 19.50 which was not forecasted for area. The survey was finished at 20.30 due to rain increasing. A dawn survey was carried out the following morning commencing at 5,30 with sunrise at 07.23. Conditions were dry with a temperature of 12° C, partly cloudy and a west south westerly wind measuring up to 20mph.

Avifauna

All bird species observed and heard within the study area boundary were noted during ecological surveys within the site.

Other Fauna

During the course of ecological surveys at the proposed site, other species of fauna were noted and included in the report.

STAGE ONE - SCREENING REPORT 3

3.1 Brief Description of the Existing Site

3.1.1 Site Location

The development site is located at the Millennium Business Park, Cappagh Road, Dublin 11 at an elevation of c. 82 mOD and is c. 2.4 ha in area. It is located in the townlands of Grange & Cappoge, approximately 4 km north-west of Finglas village and 3 km north-east of Blanchardstown village. The site is located approximately 700 m directly north of the M50 and 1.4 km west of the N2.

The site is currently undeveloped and comprises a grassed surfaced portion and a gravel hardstanding area, with two disused buildings thereon. The site is not currently enclosed along its western boundary. It is bordered to the immediate north by 2 no. concrete processing facilities and an existing waste management facility, to the east by an active quarry, to the south by the Cappagh Road and to the west by a light industrial unit and undeveloped lands. A small café, Rose Café, is also located directly behind the light industrial unit, approximately 70 m from the western boundary.

The Thorntons Recycling site is zoned for Heavy Industry, in accordance with the Fingal County Development Plan 2011 to 2017. There are a large number of commercial and industrial units within 1 km of the site boundary. In addition to the Millennium Business Park in which the site is located, the Northwest, Ballycoolin, Huntstown, Rosemont, Stadium, Keypoint and Premier Point Business Parks are also located nearby. The nearest major residential zones are Finglas West, located approximately 1.5 km south east of the site, and Corduff, located approximately 2 km south west of the site. There is one residential dwelling located approximately 270m south-east of the site on the Cappagh Road 8

3.1.2 Site Access

Access to the site is via two existing entrances from the Cappagh Road and through the Millennium Business Park. The existing entrances are currently blocked off to prevent unauthorised access. Access to the site through the Millennium Business Park is via the user closed western portion of the site. copying FOI

3.1.3 General Description of the Catchments

The proposed development lies within Hydrometric Area HA 09 known as the Liffey and Dublin Bay, which is under the responsibility of the Eastern River Basin District (ERBD). The site drains into the following waterbody catchment within the Tolka River Catchment:

EA_Tolka167_Tolka1_Lower (IE_EA_09_1868) .

The land proposed for the development site drains to the Bachelors Stream tributary of the Tolka River, however there are no watercourses running through the site. Bachelors Stream runs parallel to the N2 roadway, as far as Glasnevin where it joins the Tolka River.

3.1.4 Current WFD Status and Risk Assessment

A risk assessment was carried out in 2005 on each waterbody catchment, as defined under the WFD. Some of these assessments were updated in 2008. The results of the assessments are available on the WFD website (www.wfdireland.ie). The river waterbody IE_EA_Tolka (reference IE_EA_09_1868) is currently of 'Bad' status. The waterbody is designated as 'At Risk' due to risks from point sources and diffuse sources. It is an objective to restore the status of this waterbody to 'Good' by 2027. Specific status elements results relating to the above waterbody are presented in Table 3-1.

Table 3-1: Status element results for the Lower Tolka river waterbody

Lower Tolka	Status
Macroinvertebrate status	Bad
General physico-chemical status	Moderate
Fish status	Poor
Overall ecological status	Bad

12.1.1 Internal Site Drainage

The site currently falls very gently from south to north with a c. 0.5 - 1m gradient across the site. Incident runoff is likely to percolate through to groundwater and flow towards the eastern site boundary in the direction of the adjacent Huntstown quarry. No drainage system currently exists on site. The eastern portion of the site contains a gravel hardstanding with a similar gradient as the wider site. The remainder of the site is greenfield and is considered to be of high permeability.

3.1.5 Habitats within and immediately adjacent to the existing site

Dry Meadows and Grassy Verges (GS2)

'Dry meadows and grassy verges' are meadows which are rarely fertilised with little or no grazing. This habitat is comprised of mainly tall grasses such as cocksfoot (*Dactylis glomerata*), false-oats grass (*Arrhenatherum elatius*) and Yorkshire fog (*Holcus lanatus*) which were frequent with vascular plants such as ragwort (*Senecio jacobaea*) and bush vetch (*Vicia sepium*) were frequent within the grass. There were also patches of shorter grass where vascular species were more visible. Self-heaf (*Prunella vulgaris*), red clover (*Trifolium pratense*), white clover (*Trifolium repens*) and silverweed (*Potentila anserina*) were frequent. Within the grassland bramble (*Rubus fructicosus*) was occasional with young sycamore (*Acer pseudoplatanus*), elder (*Sambucus nigra*) and hawthorn (*Crataegus monogyna*) trees rare and ash (*Fraxinus excelsior*) saplings rare. Evidence of low level grazing (horse) was found within the mabitat.

Dry Meadows and Grassy Verges (GS2) Ornamental/non-native scrub (WS3)

The south-eastern edge of the site is comprised of a mosaic of 'ornamental/non-native scrub' (WS3) and 'dry meadows and grassy verges' (GS2). This habitat is located within the northern and southern areas of a derelict house. The habitat contains an overgrown ornamental garden categorised as 'ornamental/non-native scrub' (WS3). This habitat consists mainly of large shrubs (2-5m tall) with trees rare. An area which would have once been a lawn is categorised as 'dry meadows and grassy verges' (GS2). This habitat contains tall overgrown grassland which is scattered with non-native ornamental scrub. This habitat is comprised of mainly tall grasses such as Cocksfoot, false oats grass and Yorkshire fog which were frequent with vascular plants such as Ragwort and creeping thistle (*Cirsium arvense*) were frequent within the grassland. Evidence of a low level horse grazing was found within the habitat.

Spoil and Bare Ground (ED2) / Recolonising bare ground (ED3)

This habitat mosaic is made up of 'spoil and bare ground' (ED2) and 'recolonising bare ground' (ED3) located along most of the eastern edge of the site. This habitat is comprised mainly of crushed stone/hardcore and contains some remnant of construction material and now lies derelict. This habitat is made up of a mosaic of 'spoil and bare ground' which is yet to be colonised and 'recolonising bare ground' which contains different degrees of colonisation (but less than 50%) by grasses and vascular plants. Annual meadow-grass (*Poa annua*), rough meadow grass (*Poa trivialis*), self-heal (*Prunella vulgaris*) and Ragwort were frequent within the habitat. Towards the southern edge of this habitat was a number of heaps of material comprised of sand, gravel, concrete and cinder blocks. These heaps have been colonised by butterfly bush (*Buddleja davidii*) and red valerian (*Centranthus ruber*) which were abundant.

It must be noted that two areas of Japanese knotweed (*Fallopia japonica*) were observed adjacent to this habitat outside the site along the sites eastern boundary.

Recolonising bare ground (ED3)

Within 'dry meadows and grassy verges' (GS2) which is located on the western side of the site is a small area of 'recolonising bare ground' (ED3). This habitat sometime in the past became bareground and has been colonised by a number of grasses and vascular plants; these included silverweed, creeping cinquefoil, annual meadow grass and creeping buttercup which were frequent.

Treelines (WL2)

An old treeline is located within the site and effectively acts as a buffer between the 'dry meadows and grassy verges' (GS2) and the rest of the site. The treeline is comprised of 10-12m stunted unhealthy looking ash trees with dieback, with standing dead trees occasional. Many of the trees are covered by ivy (*Hedera helix*). Hawthorn is present as an understorey tree and is frequent. These trees offer potential roosting habitat for bats. Bird droppings observed under dead standing trees indicate that potentially a bird of prey is likely using parts of this habitat to perch.

Buildings and artificial surfaces (BL3)

A derelict house, derelict farm buildings and an intact tall stone wall with mortar are located to the southeastern edge of the site.

Figure 3-1 shows the habitats within the site boundary.

3.1.6 Sites of National Importance

Sites of National Importance in the Republic of Ireland are termed, Natural Heritage Areas (NHA) and proposed Natural Heritage Areas (pNHA).

While the Wildlife (Amendment) Act 2000 has been passed into law, pNHAs will not have legal protection until the consultative process with landowners has been completed; this process is currently ongoing. Six pNHAs were recorded within 10 km of the proposed development. There are no NHAs within 10 km of the proposed development.

- Liffey Valley pNHA (site code 000128)
- Santry Demesne pNHA (site code 000778)
- North Dublin Bay pNHA (site code 00206)
- Feltrim Hill pNHA (site code 001208)
- Royal Canal pNHA (site code 002103)
- Grand Canal pNHA (site code 002104)

3.2 Brief Description of the European sites within 15 km of the Development

A total of 11 European sites are located within 15 km of the proposed development. These include 6 candidate Special Areas of Conservation (cSACs) and 5 Special Protection Areas (SPAs).

- North Dublin Bay cSAC* (site code 000206)
- Rogerstown Estuary cSAC* (site code 000208)
- South Dublin Bay and River Tolka Estuary SPA (site code 004024)
- South Dublin Bay cSAC* (site code 000210)
- North Bull Island SPA (site code 004006)
- Rye Water Valley/Carton cSAC* (site code 001398)
- Malahide Estuary cSAC* (site code 000205)
- Baldoyle Bay cSAC* (site code 00199)
- Rogerstown Estuary SPA (site code 004015)

- Baldoyle Bay SPA (site code 004016)
- Malahide Estuary SPA A.K.A. Broadmeadow/Swords Estuary SPA (site code 004025)

The full NPWS site synopses for the designated areas are available in Appendix 1. Table 3-2 summarises the details of the European sites, including the qualifying interests, conservation objectives and threats to the sites. Figure 3.2 shows the location of the European sites in relation to the proposed development.

The closest European site to the proposed development is the South Dublin Bay and River Tolka Estuary SPA (site code 004024) located 8.9 km south east of the proposed development. All other sites are located greater than 10km from the proposed development.

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Section 3

Table 3-2: The Characteristics of the European Sites

Distance from Proposed Development	8. 8	10.7km
Threats	High ranked threats and pressures Discharges (inside) Industrial or commercial areas (outside) Roads, motorways (outside) Walking, horseriding and non-motorised vehicles (inside) Urbanised areas, human habitation (outside) Reclamation of land from sea, estuary or marsh (outside) Reclamation of land from sea, estuary or Medium ranked threats and pressures Nautical sports (inside) bait digging / collection (inside) Leisure fishing (inside) Leisure fishing (inside) Leisure fishing (inside) Leisure fishing (inside) Leisure fishing (inside)	Medium ranked threats and pressuresmodifying structures of inland watercourses (inside)courses (inside)continuous urbanisation (outside)Sylviculture, forestry (inside)Sylviculture, forestry (inside)Eventilisation (outside)fertilisation (outside)dispersed habitation (outside)grazing (inside)fertilisation (outside)grazing (inside)roads, motorways (outside)Fertilisation (inside)
Conservation Objectives	Objective: To maintain or restore the favourable conservation of the Annex I species for which the SPA has been selected been selected	Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the cSAC has been selected
Qualifying Interests	 Light-bellied Brent Goose (Branta bernicla hrota) [A046] Oystercatcher (Haematopus ostralegus) [A130] Ringed Plover (Charadrius hiaticula) [A137] Rinot (Calidris canutus) [A143]⁶⁰ Sanderling (Calidris alba) [A144]⁶⁰ Sanderling (Calidris alba) [A144]⁶⁰ Bar-tailed Godwit (Limosa lapponica) ^{100,004} Bar-tailed Godwit (Limosa lapponica) ^{100,004} Bar-tailed Godwit (Limosa lapponica) ^{100,004} Bar-tailed Gull (Chroicocephalus [A157] Redshank (Tringa totanus) [A162] Black-headed Gull (Chroicocephalus ridibundus) [A179] Roseate Tern (Sterna dougallii) [A192] Common Tern (Sterna hirundo) [A193] Arctic Tern (Sterna paradisaea) [A194] Wetland and Waterbirds [A999] 	 Petrifying springs with tufa formation (Cratoneurion) [7220] Vertigo angustior (Narrow-mouthed Whorl Snail) [1014] Vertigo moulinsiana (Desmoulin's Whorl Snail) [1016]
Designated Site	South Dublin Bay and River Tolka Estuary SPA (004024)	Rye Water Valley/Carton SAC (001398)

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Designated Site	Qualifying Interests	Conservation Objectives	Threats	Distance from Proposed Development
			removal of hedges and copses or scrub (inside)	
Malahide Estuary cSAC (000205)	 Mudflats and sandflats not covered by seawater at low tide [1140] Salicornia and other annuals colonising mud and sand [1310] Spartina swards (Spartinion maritimae) [1320] Atlantic salt meadows (Glauco-and Puccinellietalia maritimae) [1330] 9944 Mediterranean salt meadows (Juncetalian aritimi) [1410] Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] 	Objective: To maintain or restore the favourable conservation of the Annex I habitat(s) and/or the Annex II species for which the cSAC has been selected selected	High ranked threats and pressures Urbanised areas, human habitation (outside) roads, motorways (outside) reclamation of land from sea, estuary or marsh (outside) nautical sports (inside) walking, horseriding and non-motorised vehicles (inside) Fertilisation (outside) Fertilisation (outside) Golf course (outside) Medium ranked threats and pressures golf course (outside) Hunting (inside)	11.0km
Malahide Estuary SPA A.K.A Broadmeadow / Swords Estuary SPA (004025)	 Great Crested Grebe (Podiceps cristatus) [A005] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Shelduck (Tadorna tadorna) [A048] Shelduck (Tadorna tadorna) [A048] Pintail (Anas acuta) [A054] Goldeneye (Bucephala clangula) [A067] Red-breasted Merganser (Mergus serrator) [A069] Oystercatcher (Haematopus ostralegus) [A130] Golden Plover (Pluvialis apricaria) [A140] 	Objective: To maintain or restore the favourable conservation condition of the Annex I species for which the SPA has been selected	High ranked threats and pressures disposal of industrial waste (outside) golf course (outside) invasive non-native species (inside) disposal of household / recreational facility waste (outside) Landfill, land reclamation and drying out, general (outside) Fertilisation (outside) Fertilisation (outside) Medium ranked threats and pressures nautical sports (inside)	11.0km

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Distance from Proposed Development		de) 11.4km de) tion sed y or	de) 11.5km ised
Threats	grazing (inside) dispersed habitation (outside) grazing (outside) <u>Low ranked threats and pressures</u> Hunting (inside)	High ranked threats and pressures accumulation of organic material (insi Industrial or commercial areas (outsic Urbanised areas, human habita (outside) walking, horseriding and non-motori vehicles (inside) roads, motorways (outside) Discharges (inside) Discharges (inside) marsh (outside) Medium ranked threats and pressures bait digging / collection (inside) eutrophication (natural) (inside) nautical sports (inside)	<u>High ranked threats and pressures</u> Shipping lanes (outside) Industrial or commercial areas (outsic roads, motorways (outside) walking, horseriding and non-motori walking, horseriding and non-motori vehicles (inside) golf course (inside) Discharges (outside) bridge, viaduct (inside) continuous urbanisation (outside)
Conservation Objectives		Objective: To maintain the favourable conservation footalition of the Annex I habitat(s) and construct the cSAC non-available selected of the selected of the	Objective: To maintain or restore the favourable conservation of the Annex I species for which the SPA has been selected
Qualifying Interests	 Grey Plover (Pluvialis squatarola) [A141] Knot (Calidris canutus) [A143] Dunlin (Calidris alpina) [A149] Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa lapponica) [A157] Redshank (Tringa totanus) [A162 Wetland and Waterbirds [A999] 	Mudflats and sandflats not covered by seawater at low tide [1140] seawater at low tide [1140]	 Light-bellied Brent Goose (Branta bernicla hrota) [A046] Shelduck (Tadorna tadorna) [A048] Teal (Anas crecca) [A052] Pintail (Anas acuta) [A054] Shoveler (Anas clypeata) [A056] Oystercatcher (Haematopus ostralegus) [A130] Golden Plover (Pluvialis apricaria) [A140]
Designated Site		South Dublin Bay cSAC (000210)	North Bull Island SPA (004006)

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Distance from Proposed Developme	de) sures (inside)	n-motorised 11.5km n-motorised as (outside) oressures de) de) sures (inside)
Threats	Medium ranked threats and J bait digging / collection (insi Discharges (inside) nautical sports (inside) Low ranked threats and pres other patterns of habitation (High ranked threats and presultanised areas, human (outside) golf course (outside) and no walking, horseriding and no vehicles (inside) Discharges (inside) Industrial or commercial area Industrial or commercial area industrial or collection (inside) bait digging / collection (inside) grazing (inside) grazing (inside) Leisure fishing (inside) Invasive non-native species (
Conservation Objectives		Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex fa species for which the cSAC has been selected
Qualifying Interests	 Grey Plover (Pluvialis squatarola) [A141] Knot (Calidris canutus) [A143] Sanderling (Calidris alba) [A144] Dunlin (Calidris alpina) [A149] Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa limosa) [A157] Curlew (Numenius arquata) [A60] Redshank (Tringa totanus) [A162] Turnstone (Arenaria interpres) [A169] Black-headed Gull (Chroicocephalus indibundus) Wetland and Waterbirds [A999] 	 Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Mediterranean salt meadows (Juncetalia maritimi) [1410] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] Humid dune slacks [2190]
Designated Site		North Dublin Bay cSAC (000206)

Threats	<u>High ranked threats and pressures</u> golf course (outside) Urbanised areas, human habitation (outside) invasive non-native species (inside) walking, horseriding and non-motorised vehicles (inside) <u>Medium ranked threats and pressures</u> roads, motorways (outside) Hunting (inside) eutrophication (natural) (inside) reclamation of land from sea, estuary or marsh (inside) bait digging / collection (inside)	High ranked threats and pressures reclamation of land from sea, estuary or marsh (inside) Urbanised areas, human habitation (outside) Fertilisation (outside) golf course (outside) invasive non-native species (inside) invasive non-native species (inside) medium ranked threats and pressures Hunting (inside) roads, motorways (outside) walking, horseriding and non-motorised vehicles (inside)
Conservation Objectives	Objective: To maintain or restore the favourable conservation and/or the Annex II species for which the cSAC has been selected	Objectives To maintain of estore the favourable conservation f Annex I species for which the SPA has been selected
Qualifying Interests	 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] 	 Light-bellied Brent Goose (Branta bernicla hrota) [A046] Shelduck (Tadorna tadorna) [A048] Ringed Plover (Charadrius hiaticula) [A137] Golden Plover (Pluvialis apricaria) [A140] Grey Plover (Pluvialis squatarola) [A141] Bar-tailed Godwit (Limosa lapponica) [A157] Wetland and Waterbirds [A999]
Designated Site	Baldoyle Bay cSAC (00199)	Baldoyle Bay SPA (004016)

13.1km

Thorntons Recycling Proposed Recycling Facility at Millennium Business Park Appropriate Assessment Screening Report

Proposed Development

13.0km

Distance

from

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Thorntons Recycling Proposed Recycling Facility at Millennium Business Park Appropriate Assessment Screening Report

Distance from Proposed Development	14.0km	14.7km
Threats	<u>High ranked threats and pressures</u> invasive non-native species (inside) Fertilisation (outside) reclamation of land from sea, estuary or marsh (inside) Erosion (inside) Discharges (outside) use of biocides, hormones and chemicals (outside) <u>Medium ranked threats and pressures</u> golf course (outside) grazing (outside) grazing (inside) walking, horseriding and non-motorised vehicles (inside) bait digging / collection (inside) nautical sports (inside) motorised vehicles (outside) roads, motorways (outside)	<u>High ranked threats and pressures</u> disposal of industrial waste (outside) golf course (outside) invasive non-native species (inside) disposal of household / recreational facility waste (outside) Landfill, land reclamation and drying out, general (outside) Fertilisation (outside) Medium ranked threats and pressures nautical sports (inside) bait digging / collection (inside) grazing (inside) dispersed habitation (outside) grazing (outside)
Conservation Objectives	Objective: To maintain or restore the favourable conservation of the Annex I habitat(s) and/or the Annex II species for which the cSAC has been selected selected	Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the cSAC has been selected
Oualifying Interests	 Estuaries [1130] 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 maritim) [1410] Shifting dunes along the shorelinewith Ammophila arenaria (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] 	 Greylag Goose (Anser anser) [A043] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Shelduck (Tadorna tadorna) [A048] Shoveler (Anas clypeata) [A056] Shoveler (Anas clypeata) [A056] Oystercatcher (Haematopus ostralegus) [A130] Ringed Plover (Charadrius hiaticula) [A137] Grey Plover (Pluvialis squatarola) [A141] Knot (Calidris canutus) [A143] Dunlin (Calidris alpina) [A149] Black-tailed Godwit (Limosa limosa) [A156]
Designated Site	Rogerstown Estuary SAC (000208)	Rogerstown Estuary SPA (004015)

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Section 3

Thorntons Recycling Proposed Recycling Facility at Millennium Business Park Appropriate Assessment Screening Report

Designated Site	Qualifying Interests	Conservation Objectives	Threats	Distance from Proposed Development
	 Redshank (Tringa totanus) [A162] Wetland and Waterbirds [A999] 		Low ranked threats and pressures Hunting (inside)	

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3.3 Conservation Objectives

According to the Habitats Directive, the conservation status of a natural habitat will be taken as 'favourable' within its biogeographic range when:

- its natural range and areas it covers within that range are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable as defined below.

According to the Habitats Directive, the conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations. The conservation status will be taken as 'favourable' within its biogeographic range when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-• term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The specific conservation objectives for each site are available on www, npws.ie. These have been accessed only any other for the sites listed in Table 3-2 above on the [1st of October 2016].

The following sites overlap:

- South Dublin Bay cSAC (000206) with Dublin South Dublin Bay and River Tolka Estuary SPA (004024).
- North Dublin Bay cSAC (000206) and North Buildsland SPA (004006)
- Baldoyle Bay cSAC (00199) and Baldoyle SPA (004016) overlap.
- Malahide Estuary cSAC (000205) and Malahide Estuary SPA (004025) overlap.
- Rogerstown Estuary cSAC (000208) and Rogerstown Estuary SPA (004015) overlap.

The conservation objectives for these sites should be used in conjunction with those for the overlapping site as appropriate. Cos

Site specific and more detailed conservation objectives were available for the following sites:

- North Dublin Bay cSAC (000206) produced 6th November 2013
- South Dublin Bay and River Tolka Estuary SPA (004024) produced 9th March 2015
- South Dublin Bay cSAC (000210) produced 22nd August 2013
- North Bull Island SPA (004006) produced 9th March 2015
- Malahide Estuary cSAC (000205) produced 27th May 2013
- Malahide Estuary SPA A.K.A. Broadmeadow / Swords Estuary SPA (004025) produced 16th August 2013
- Baldoyle Bay cSAC (000199) produced 19th November 2012
- Baldoyle Bay SPA (004016) produced 27th Feb 2013
- Rogerstown Estuary cSAC (000208) produced 14th Aug 2013
- Rogerstown Estuary SPA (004015) produced 20th May 2013

Generic conservation objectives are available for the following site:

Rye Water Valley/Carton SAC (001398)

The following conservation objectives supporting documents have been produced for North Dublin Bay cSAC (000206):

- North Dublin Bay SAC (site code 206) Conservation objectives supporting document- coastal habitats [Version 1] October 2013
- North Dublin Bay SAC (site code 206) Conservation objectives supporting document- marine habitats [Version 1] April 2013

The following conservation objectives supporting documents have been produced for South Dublin Bay and River Tolka Estuary SPA (004024):

• North Bull Island SPA (site code: 4006) and South Dublin Bay and River Tolka Estuary SPA (site code: 4024) Conservation objectives supporting document [Version 1] October 2014

The following conservation objectives supporting documents have been produced for South Dublin Bay cSAC (000210):

• South Dublin Bay SAC (site code 210) Conservation objectives supporting document- marine habitat [Version 1] July 2013

The following conservation objectives supporting documents have been produced for Malahide Estuary cSAC (000205):

- Malahide Estuary cSAC (site code 205) Conservation Objectives Supporting Document-marine habitats [Version 1] May 2013
- Malahide Estuary cSAC (site code 205) Conservation Objectives Supporting Document-coastal habitats [Version 1] May 2013

The following conservation objectives supporting documents have been produced Malahide Estuary SPA (004025):

Malahide Estuary SPA (site code 4025) Conservation Objectives Supporting Document [Version 1]
 August 2013
 Conservation Objectives Supporting Document [Version 1]

The following conservation objectives supporting documents have been produced for Baldoyle Bay cSAC (00199):

- Baldoyle Bay cSAC (00199) Conservation Objectives Supporting Document-marine habitats [Version 1] September 2012
- Baldoyle Bay cSAC (00199) Conservation Objectives Supporting Document-coastal habitats [Version 1] November 2012

The following conservation objectives supporting documents have been produced for Baldoyle Bay SPA (004016):

Baldoyle Bay SPA (00199) Conservation Objectives Supporting Document [Version 1] December 2012

The following conservation objectives supporting documents have been produced for Rogerstown Estuary cSAC (000208)

 Rogerstown Estuary SAC (208) Conservation objectives supporting document- coastal habitats [Version 1] May 2013 Rogerstown Estuary SAC (208) Conservation objectives supporting document- marine habitats [Version 1] May 2013

The following conservation objectives supporting documents have been produced for Rogerstown Estuary SPA (004015)

Rogerstown Estuary SPA (site code 4015) Conservation Objectives Supporting Document [Version 1] May 2013

The following conservation objectives supporting documents have been produced for a number of designated sites within this report:

- Coastal Monitoring Project 2004-2006, 2009 .
- Saltmarsh Monitoring Project 2007-2008 Contract reference D/C/227 Final Report (2009)
- Saltmarsh Monitoring Project 2006 Contract reference D/C/191. Summary Report (2007)
- A Second Report on Areas of Scientific Interest in County Dublin November 1988
- A preliminary Report on Areas of Scientific Interest in County Dublin 1973

Management plans were not available for any sites.

All conservation objectives together with other designated site information are available on only any other us http://www.npws.ie/protectedsites.

3.4 Summary of Main Characteristics of the Project

A summary of the main characteristics of the proposed project.

Summary of Main Characteristics of the Project Table 3-3:

Size, scale, area, land- take	The development is not located within any European Site.
Details of physical changes that will take place during the various stages of implementing the proposal	 Proposed development The overall facility area will occupy 2.4 ha. In summary, the proposed development will comprise: The development of a materials processing and transfer facility for the acceptance of up to 170,000 tonnes per annum of residual MSW, source segregated 'brown bin' waste, waste wood and green waste with the following infrastructure: A waste processing building with gross floor area of 7,323 sq.m. A bale storage building with a gross floor area of 1,559 sq.m. An administration building gross floor area of 432 sq.m Redesigned operational traffic site entrance to facilitate access from the Cappagh Road A secondary entrance from the Millennium Business Park Boundary treatment on the western boundary comprising paladin fencing of c.2.4 m in height Weighbridge and weighbridge hut with a gross floor area of E0 an m

Size, scale, area, land- take	The development is not located within any European Site.
	 Odour abatement plant for the waste reception and processing building comprising 2 no. vessels and ancillary plant, with a stack of 20 m Rainwater harvesting tank Fuel storage tank I6 no. car parking spaces 6 no. truck parking spaces Landscaping treatment along the southern site boundary Foul drainage provision, tying in wider Millennium Business Park network Surfacewater provision, with attenuation, tying in wider Millennium Business Park network Other ancillary structures Relocation of 1 no. line termination mast for the Finglas-Ballycoolin 38kV line within the site boundary Demolition of existing 2 no. structures onsite i.e. 1 no. disused former residential property (with outbuilding) and 1 no. disused storage building Felling of a number of trees running through approximate centre of site in a north-south direction.
Description of resource requirements for the construction/operation and decommissioning of the proposal (water resources, construction material, human presence etc)	Construction period Article of the construction phase will include: Resources consumed during the construction phase will include: Diesel fuel for construction machinery Steel in the building construction Granular material for use as in-fill material for site development works and in concrete While exact quantities are difficult to quantify at this juncture, it is expected that the following resources will be consumed during construction: 6,120 m³ of concrete 360 tonnes of steel 12,000 m³ of fill material Steel, masonry, blockwork, pipework and stonefill Scaffolding, construction equipment and machinery. Operational period Natural resources consumed during the operational phase will include: Diesel fuel for site machinery (loading shovels, diesel plant) Foulwater Fuels sources for electricity consumed onsite Assuming 3 no. dedicated plant loading shovels or similar plant items, diesel fuel consumption is estimated at 15,000 litres per annum.
Description of timescale for the various activities that will take place as a result of implementation (including likely start and finish date)	 Construction work will generally be carried out during daylight hours. Construction work will generally be confined to the following times: 08:00 to 19:00 Monday to Saturday However, to ensure that optimal use is made of fair weather windows, or at critical periods within the programme, it could occasionally be necessary to

Size, scale, area, land- take	The development is not located within any European Site.
	work out with these hours. Any such out of hours working would be agreed in advance with the local planning authority. It is estimated that the proposed development will take 9 months to complete (i.e. 36 – 40 weeks). It is preferable, from a construction viewpoint, that the construction of the facility take place during the summer months to take advantage of longer daylight hours and drier weather. However, this may be dependent on a number of factors and construction could occur over winter months. It is anticipated that the following staff will be employed during facility operation:
	1 no. facility manager
	• 1 no. site foreman
	1 no. weighbridge operator
	3 no. loading shovel drivers
	3 no. general operatives
Description of wastes arising and other residues (including quantities) and their disposal	 Construction waste: concrete, fuel, chemicals associated with construction, wastewater and solid waste. Subsoil and suitable excavated soil to be reused for landscaping Operational waste – recycling waste including green waste, fuels, wastewater
Identification of wastes arising and other residues (including quantities) that may be of particular concern in the context of the Natura 2000 network	 Concrete Excavated soil to be reused for landscaping
Description of any additional services required to implement the project or plan, their location and means of construction	Chemical spillinger, spillage of cementitious material or other polluting substance associated with construction.

3.5 Screening Assessment Criteria

Throughout this section the line items in *italics* refer to suggested instructions for information to be contained in a screening assessment, and in an appropriate assessment from the guidance document 'Assessment of Plans and Projects significantly affecting Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC', (European Commission, 2001). The standard 'Screening Matrix' and 'Finding of No Significant Effects Report Matrix' in Annex 2 of this guidance document are also followed.

In considering whether the proposed development, by itself or in combination with other plans and projects, has the potential to affect the conservation objectives of the designated sites within 15 km of the proposed development, the following documents were considered:

- Draft Fingal County Development Plan 2017 2023
- Fingal County Development Plan 2011 2017
- Fingal County Council Online Planning Query System
- http://www.fingalcoco.ie/planning-and-buildings/apply-or-search-for-a-planning-application/viewor-search-planning-applications/
- Previously permitted projects in the vicinity of the development
- Proposed projects in the vicinity of the development

Table 3-4:Assessment of the Potential Impact of the Proposed Project either Alone or
in Combination with Other Plans or Projects on European (Natura 2000)
Sites

Assessment criteria	
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites.	 The individual elements of the proposed development that <i>could</i> give rise to impacts on the European (Natura 2000) sites are: No elements have been identified (either alone or in combination with other plans or projects) likely to give rise to impacts on the European (Natura 2000) sites.
 Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site by virtue of: Size and scale; Land-take; Distance from Natura 2000 site or key features of the site; Resource requirements; Excavation requirements; Transportation requirements; Duration of construction, operation etc.; Other. 	 Predicted Impacts: No cumulative impact has been identified. A cumulative impact arises from incremental changes caused by other past, present or reasonably foreseeable actions together with the proposed development. The site is located within an industrial site at Millennium Park, Dublin City. The surrounding environment is dominated by agricultural land, residential and commercial properties. The main damaging operations and threats to the greater regions ecological resources are agriculture, quarrying, residential and commercial development. The above operations are the most extensive but other threats and potentially damaging operations to valuable habitats include land drainage and reclamation, fertilisation and dumping. In relation to the greate of cumulative effects between this proposed development and softer projects, the most obvious is the effect of a combination of the proposed development and the existing waste management actifities and quarrying operations in the immediate vicinity of the proposed development location. Specific developments include: The Kilsaran Concrete batching plant directly bordering the northern boundary of the development site boundary. The Kaegan Quarries concrete batching plant located c.50 m north of the development site boundary. The Kaegan Quarries concrete batching materials recovery facility (W0251-02) located c. 100m north of the development site boundary. The Roadstone Huntstown inert soils recovery facility (W0277-01) located c. 650 m north of the site boundary. The Roadstone Huntstown active quarrying operation located c. 100 east of the site boundary. The Roadstone Huntstown active quarrying operation located c. 100 east of the site boundary. The Roadstone Huntstown active quarrying operation located c. 100 east of the site boundary. The Roadstone Huntstown active quarrying operation located c. 100 east of the

Assessment criteria	
	During the operational phase of the proposed development, sanitary foulwater flow from the administration building, and assuming a maximum of 12 persons working at the facility, wastewater loading is calculated using the 'EPA Wastewater Treatment Manual, Treatment Systems for Small Communities, Business, Leisure Centres and Hotels' for an industrial office and/or factory with canteen at:
	 Flow - 60 I/day per person BOD – 30 g/day per person
	This results in 0.72 cu.m per day of sanitary foulwater.
	Therefore, the total maximum daily foulwater flow from the site is estimated at 8.72 cu.m. While this represents the maximum flow, it is anticipated that there will typically be a flow of between 2-3 cu.m per day as intermittent washdown occurs and/or leachate drains to the collection network within the waste reception and storage building. This equates to a population equivalent (p.e.) of 100 p.e. Dependent on the direction of the foulwater collection network in the vicinity of the Millennium Business park, the foulwater discharge from the site could end up in one of the following four Waste Water Treatment Plants (with their sizing in p.e shown):
	 Portrane, Donabate, Rusho Lusk – 65,000 p.e Swords – 90,000 p.e Balbriggan – 70,000 p.e. Ringsend – 1.64 million p.e
	At 100 p.e., this would provide 0.00153% of the loading to Portrane the smallest of the four plants. Therefore, the increase in water entering these plant shall, not result in a significant impact to the European site downstream.
	Size and scale, land-take and distance from Natura 2000 sites
	Predicted Impacts: <i>No significant impact envisaged.</i> As the project is not located within any European site, there will be no direct impact as a result of the size and scale of the project. There will be no direct habitat removal (land take) from any European site as a result of the project.
	South Dublin Bay and River Tolka Estuary SPA is located at the mouth of the River Tolka as it drains into Dublin Bay 8.9km south west and a significantly greater distance downstream (14.6 river kilometres ¹) of the development. Given that best practice construction principles are to be implemented as part of the proposed project, the distance from the development site from the SPA and the dilution factor in the estuary and Dublin Bay no significant impact is envisaged.
	North Bull Island SPA and North Dublin Bay cSAC are located north east of the estuary in Dublin Bay and 11.5km across land from the proposed development. South Dublin Bay cSAC (11.4km) is located further to the south of the estuary. All three of these European site have very remote links to the site and no significant impact is envisaged.

¹ Distance measured along the waterway corridor from the near point to the development to the boundary of the European site.

Assessment criteria	
	There are a further seven sites greater than 10km from the development site namely Rye Water Valley/Carton SAC (10.7km), Malahide Estuary cSAC (11.0km), Malahide Estuary SPA A.K.A Broadmeadow / Swords Estuary SPA (11.0km), Baldoyle Bay cSAC (13.0km), Baldoyle Bay SPA (13.1km), Rogerstown Estuary SAC (14.0km) and Rogerstown Estuary SPA (14.7km).
	Given the scope and scale of the proposed development along with the distance to these sites and lack of a potential hydrological corridor a resultant significant impact on these European sites is not envisaged.
	Similarly, no significant impact is envisaged during the operational phase of the proposed development as there shall be no untreated emissions of chemical, fuels or other potential pollutants into these sites.
	Resource requirements and Excavation requirements
	Predicted Impacts: <i>No significant impact envisaged.</i> Excavation works will be required to construct the proposed development but these shall be confined to the site. Standard best practice construction guidelines shall be implemented as part of the proposed development. All works shall be confined to the site at a remove of 8.9km from the closest European site South Dublin Bay and River Tolka Estuary SPA. Given the scale of the proposed development, its distance from the European sites a significant impact is not envisaged to the South Dublin Bay and River Tolka Estuary SPA other European sites within 15km of the proposed development.
	Emissions 1005 Emissions
	Predicted Impacts: None.
	No impact is envisaged to European sites with 15km of the proposed site.
	Transportation requirements, Producted Impacts: Nana, Two access points to the site are proposed:
	you The main facility extreme for expecting the set are proposed.
	 The main facility entrance for operational neavy good vehicles (HGV) from the Cappagh Road, which will see a re-design of the existing two entrances to facilitate more ready HGV access and
	egress 2. A secondary entrance for staff, visitors and occasional light goods vehicle (LGV) or skip lorries from within the Millennium Business
	Park As the project is not located within the boundary of any European site, no direct impacts by way of transportation requirements are predicted.
	Duration of Construction and Operation
	Predicted Impacts: <i>None.</i> The construction phase will last for a period of 9 months. The duration of operation will be ongoing for the foreseeable future.
Describe any likely changes to the site arising as a result	Predicted Impacts: <i>Potential impact in relation to water quality during the construction phase of the development.</i>
of: Reduction of habitat area;	There will be no direct reduction in habitat area within any European site as a result of the project. The potential for habitat alteration due to the ingress of sediment within the South Dublin Bay and River Tolka Estuary SPA is

Assessment criteria

- Disturbance of key species;
- Habitat or species fragmentation;
- Reduction in species density;
- Changes in key indicators of conservation value;
- Climate change.

considered to be extremely unlikely given the scale of the proposed development, its distance from the European site and the dilution factor within the lower tidal reaches of the Tolka River. As already stated in the report there is no significant impact envisaged the other ten European sites located greater than 10km from the proposed development.

Construction phase

The South Dublin Bay and River Tolka Estuary SPA is designated for twelve bird species of conservation interest. The closest section of the SPA is located 8.9km south west from the proposed development boundary. During winter the site regularly supports Light-bellied Brent Geese, Oystercatcher, Ringed Plover, Knot, Sanderling, Dunlin, Bar-tailed Godwit and Redshank. During the breeding season this site supports a colony of Common Tern. This site is selected as an important passage area for three migratory waterbird species namely Common Tern, Arctic Tern and Roseate Tern based on significant concentrations recorded. The site is also designated for Black-headed Gull.

Given that proposed development is located within an industrial site, with ongoing operations and human activity, a potential impact due to the disturbance and/or displacement of species is not envisaged due to the increased levels of human activity and noise during the construction phase of the development. Given the distance to the other thirteen European sites located greater than 10km from the proposed development no impact is envisaged.

There will be no habitat or species fragmentation as a result of the proposed development. As discussed under 'size and scale and land-take' above, there will be no direct impacts on habitats within any European site.

Operational phase

ð No further excavation or construction works will be required during the operational phase of the proposed development. The primary potential impact from the proposed development is an increase in runoff from the site, which may have a direct, adverse effect on flooding downstream of the site. It is proposed to construct hardstanding areas and buildings over the majority of site, leaving small areas open to landscaping, which will result in an increase in run-off from the site. This increase in the rate of surface water runoff will be attenuated in the proposed attenuation facility, to be installed as part of the surface water drainage system. A Class 1 full retention hydrocarbon interceptor and silt trap will be incorporated into the drainage system to treat surface water runoff prior to discharge to the Millennium Business Park drainage system. Foul water from the site shall be discharged direct to the foul sewer network of the wider Millennium Business Park. Therefore, a significant impact to a European site is not envisaged as part of the proposed development. It is anticipated that the following staff will be employed during facility operation:

- 1 no. facility manager
- 1 no. site foreman
- 1 no. site foreman
- 1 no. weighbridge operator
- 3 no. loading shovel drivers
- 3 no. general operatives

Given that proposed development is located within an industrial site with ongoing operations and human activity, a potential impact due to the disturbance and/or displacement of species in not envisaged.

Assessment criteria	
	There will be no habitat or species fragmentation as a result of the proposed development. As discussed under 'size and scale and land-take' above, there will be no direct impacts on habitats within any Natura 2000 site.
	With regards to changes in key indicators of conservation value, a potential significant impact on any European site has not been identified.
 Describe any likely impacts on the Natura 2000 site as a whole in terms of: Interference with the key relationships that define the structure of the site; Interference with key relationships that define the function of the site. 	There no significant impacts identified on the key relationships that define the structure or function of the other European sites.
 Provide indicators of significance as a result of the identification of effects set out above in terms of: loss, fragmentation, disruption, disturbance, change to key elements of the site (e.g. water quality etc.). 	No indicators of significance have been noted on European sites within 15km of the proposed development.
Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale of magnitude of impacts is not known.	No elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale of magnitude of impacts is not known have been identified.

3.6 Stage One Screening Conclusion

No direct, indirect or cumulative significant impacts are envisaged to the eleven European sites within 15km of the proposed development. No significant impact is envisaged due to the scale of the project, it's location within an existing brownfield site and the lack of a direct link to any waterways. The following list of eleven European sites have been 'screening out' within the Stage 1: Appropriate Assessment Screening Report and do not require further study within a Stage 2: Natura Impact Statement:

- North Dublin Bay cSAC (site code 000206)
- Rogerstown Estuary cSAC (site code 000208)
- South Dublin Bay and River Tolka Estuary SPA (site code 004024)
- South Dublin Bay cSAC (site code 000210)
- North Bull Island SPA (site code 004006)

- Rye Water Valley/Carton cSAC (site code 001398)
- Malahide Estuary cSAC (site code 000205)
- Baldoyle Bay cSAC (site code 00199)
- Rogerstown Estuary SPA (site code 004015)
- Baldoyle Bay SPA (site code 004016)
- Broadmeadow/Swords Estuary SPA (site code 004025)

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Appendix 1

From the requirement of the requ









Finding of No Significant Effects Report	
Name and location of the Natura 2000 sites	 The proposed project is not located within any European site. Eleven European sites are located within 15 km of the proposed development: North Dublin Bay cSAC (site code 000206) Rogerstown Estuary cSAC (site code 000208) South Dublin Bay and River Tolka Estuary SPA (site code 004024) South Dublin Bay cSAC (site code 000210) North Bull Island SPA (site code 004006) Rye Water Valley/Carton cSAC (site code 000205) Baldoyle Bay cSAC (site code 00199) Rogerstown Estuary SPA (site code 004015) Baldoyle Bay SPA (site code 004016) Broadmeadow/Swords Estuary SPA (site code 004025)
Description of the project or plan	 The overall facility area will occupy 2.4 ha. In summary, the proposed development will comprise: The development of a materials processing and transfer facility for the acceptance of up to 170,000 of the tonnes per annum of residual MSW, source segregated brown bin' waste, waste wood and green waste with the following infrastructure: A waste processing building with a gross floor area of 7,323 sq. m. A bale storage building with a gross floor area of 1,559 sq.m. An administration building with a gross floor area of 432 sq.m. Redesigned operational traffic site entrance to facilitate access from the Cappagh Road A secondary entrance from the Millennium Business Park Boundary treatment on the western boundary comprising paladin fencing of c.2.4 m in height Weighbridge and weighbridge hut with a gross floor area of 50 sq.m. ESB substation Odour abatement plant for the waste reception and processing building comprising 2 no. vessels and ancillary plant, with a stack of 20 m Rainwater harvesting tank Tuel storage tank I6 no. car parking spaces Landscaping treatment along the southern site boundary

Finding of No Significant Effects Report	
	 Foul drainage provision, tying in wider Millennium Business Park network Surfacewater provision, with attenuation, tying in wider Millennium Business Park network Other ancillary structures Relocation of 1 no. line termination mast for the Finglas-Ballycoolin 38kV line within the site boundary Demolition of existing 2 no. structures onsite i.e. 1 no. disused former residential property (with outbuilding) and 1 no. disused storage buildings Felling of a number of trees running through approximate centre of site in a north-south direction
<i>Is the Project or Plan directly connected with or necessary to the management of the site (provide details)?</i>	No.
Are there other projects or plans that together with the project of plan being assessed could affect the site (provide details)?	No.
The Assessment of Significant Effects	start for
Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site	There are no project elements identified that are likely to give pse to impacts on the European / Natura 2000 sites within 15 km due to the proposed development.
Explain why these effects are not considered significant	As the project is not located within any European site, there will be no direct impact as a result of the size and scale of the project. There will be no direct habitat removal (land take) from any European site as a result of the project. South Dublin Bay and River Tolka Estuary SPA is located at the mouth of the River Tolka as it drains into Dublin Bay 8.9km south west and a significantly greater distance downstream (14.6 river kilometres ²) of the development. Given that best practice construction principles are to be implemented as part of the proposed project, the distance from the development site from the SPA and the dilution factor in the estuary and Dublin Bay no significant impact is envisaged. North Bull Island SPA and North Dublin Bay cSAC are located north east of the estuary in Dublin Bay and 11.5km across land from the proposed development. South Dublin Bay cSAC (11.4km) is located further to the south of the estuary. All three of these European site have very remote links to the site and no significant impact is envisaged.

² Distance measured along the waterway corridor from the near point to the development to the boundary of the European site.

Finding of I	No Significant Effects Report			
There are a further seven sites greater than 10km the development site namely Rye Water Valley/ SAC (10.7km), Malahide Estuary cSAC (11 Malahide Estuary SPA A.K.A Broadmeadow / S Estuary SPA (11.0km), Baldoyle Bay cSAC (13 Baldoyle Bay SPA (13.1km), Rogerstown Estuar (14.0km) and Rogerstown Estuary SPA (14.7km). Given the scope and scale of the proposed develo along with the distance to these sites and lack potential hydrological corridor a resultant sign impact on these European sites is not envisaged. Similarly no significant impact is envisaged duri operational phase of the proposed development at shall be no untreated emissions of chemical, fuels o potential pollutants into these sites.		greater than 10km from Rye Water Valley/Carton tuary cSAC (11.0km), Broadmeadow / Swords de Bay cSAC (13.0km), Rogerstown Estuary SAC ry SPA (14.7km). The proposed development ese sites and lack of a a resultant significant is not envisaged. is envisaged during the ed development as there of chemical, fuels or other tes.		
Name of Age	ency or Body Consulted	Summa	ry of Response	
Data Collec	ted to Carry out the Assessm	ent		
Who carried out the assessment This evaluation was completed by Fehily Timoney and Company	 Information on the designate conservation sites within 15 k study area was obtained find NPWS website and metadata online from the NPWS system (http://webgis.npws.ie/npwswite/npws	d nature m of the on the available mapping <u>viewer/</u>). aterbody ent area Water Mapping System 1:50000	Level of assessment completed Hit an offer Appropriate Assessment Screening	Where can the full results of the assessment be accessed and viewed This EIS is available for complimentary download at www.thorntonsrecycling millenniumpark.com. Any member of the public can view the planning application and accompanying EIS documentation, including the Non- Technical Summary and Stage 1 Appropriate Assessment, free of charge or can purchase on payment of a specified fee during normal office hours at

the following location:

• An Bord Pleanála, 64 Marlborough Street, Dublin 1, D01V902

• Fingal County Council, Civic Offices Grove Road, Blanchardstown,

Dublin 15

Appendix 2

NPWS Site Synopses for the European / Natura 2000 Sites within 15 km of the Proopsed Development











Site Name: Baldoyle Bay SAC

Site Code: 000199

Baldoyle Bay SAC extends from just below Portmarnock village to the west pier at Howth in Co. Dublin. It is a tidal estuarine bay protected from the open sea by a large sand-dune system. Two small rivers, the Mayne and the Sluice, flow into the bay.

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

[1140] Tidal Mudflats and Sandflats[1310] *Salicornia* Mud[1330] Atlantic Salt Meadows[1410] Mediterranean Salt Meadows

Large areas of intertidal flats are exposed at low tide at this site. These are mostly sands but grade to muds in the inner sheltered parts of the estuary. Extensive areas of Common Cord-grass (*Spartina anglica*) occur in the inner estuary. Both the Narrow-leaved Eelgrass (*Zostera angustifolia*) and the Dwarf Eelgrass (*Z. noltii*) are also found here. During summer, the sandflats of the sheltered areas are covered by mats of green algae (*Enteromorpha* spp. and *Ulva lactuca*).

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The sediments have a typical macrofauna, with Lugworm (*Arenicola marina*) dominating the sandy flats. The tubeworm *Lanice conchilega* is present in high densities at the low tide mark and the small gastropod *Hydrobia ulvae* occurs in the muddy areas, along with the crustacean *Corophium volutator*.

Areas of saltmarsh occur near Portmarnock Bridge and at Portmarnock Point, with narrow strips along other parts of the estuary. Species such as glassworts (*Salicornia* spp.), Sea-purslane (*Halimione portulacoides*), Sea Plantain (*Plantago maritima*) and Sea Rush (*Juncus maritimus*) are found here. Portmarnock Spit formerly had a well-developed sand dune system but this has been largely replaced by golf courses and is mostly excluded from the site. A few dune hills are still intact at Portmarnock Point, and there are small dune hills east of Cush Point and below the Claremont Hotel. These are mostly dominated by Marram (*Ammophila arenaria*), though Lymegrass (*Leymus arenarius*) is also found.

The site includes a brackish marsh along the Mayne River. Soils here have a high organic content and are poorly drained, and some pools occur. Rushes (*Juncus* spp.) and salt tolerant species such as Common Scurvygrass (*Cochleria officinalis*) and

Greater Sea-spurrey (*Spergularia media*) are typical of this area. Knotted Hedgeparsley (*Torilis nodosa*), a scarce plant in eastern Ireland, has been recorded here, along with Brackish Water-crowfoot (*Ranunculus baudotti*), a species of brackish pools and ditches which has declined in most places due to habitat loss. Two plant species, legally protected under the Flora (Protection) Order, 1999, occur in the Mayne marsh, Borrer's Saltmarsh-grass (*Puccinellia fasciculata*) and Meadow Barley (*Hordeum secalinum*).

Baldoyle Bay is an important bird site for wintering waterfowl and the inner part of the estuary is a Special Protection Area under the E.U. Birds Directive as well as being a Statutory Nature Reserve. Internationally important numbers of Pale-bellied Brent Goose (418) and nationally important numbers of two Annex I Birds Directive species - Golden Pover (1,900) and Bar-tailed Godwit (283) - have been recorded. Four other species also reached nationally important numbers: Shelduck (147), Pintail (26), Grey Plover (148) and Ringed Plover (218) - all figures are average peaks for four winters 1994/95 to 1997/1998. Breeding wetland birds at the site include Shelduck, Mallard and Ringed Plover. Small numbers of Little Tern, a species listed on Annex I of the E.U. Birds Directive, have bred on a few occasions at Portmarnock Point but not since 1991.

The area surrounding Baldoyle Bay is densely populated and so the main threats to the site include visitor pressure, disturbance to wildfowl and dumping. In particular, the dumping of spoil onto the foreshore presents a threat to the value of the site.

Baldoyle Bay is a fine example of an estuarine system. It contains four habitats listed on Annex I of the E.U. Habitats Directive, and supports two legally protected plant species. The site is also an important bird area and part of it is a Special Protection Area under the E.U. Birds Directive, as well as being a Statutory Nature Reserve. It supports internationally important numbers of Brent Goose and nationally important numbers of six other bird species, including two Annex I Birds Directive species.



Site Name: Malahide Estuary SAC

Site Code: 000205

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

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

[1140] Tidal Mudflats and Sandflats	
[1310] Salicornia Mud	
[1320] Spartina Swards	
[1330] Atlantic Salt Meadows	5 1 ^{150.}
[1410] Mediterranean Salt Meadows	N. NOT
[2120] Marram Dunes (White Dunes)	es offer all
[2130] Fixed Dunes (Grey Dunes)*	outor

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

The 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'stongue (*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 principle type and is characterised by species such as Sea-purslane (*Halimoine portulacoides*), Sea Aster (*Aster 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 characterised by the presence of Sea Rush (*Juncus maritimus*). Below the salt 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. Average maximum counts during the 1995/96-1997/98 period were: Brent Goose 1217; Great Crested Grebe 52; Mute Swan 106; Shelduck 471; Pochard 200; Goldeneye 333; Red-breasted Merganser 116; Oystercatcher 1228; Golden Plover 2123; Grey Plover 190; Redshank 454; Wigeon 50; Teal 78; Ringed Plover 106; Knot 858; Dunlin 1474; Greenshank 38; Pintal 53; Black-tailed Godwit 345; Bar-tailed Godwit 99. The high numbers of diving birds reflects the lagoon-type nature of the inner estuary.

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

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

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



Site Name: North Dublin Bay SAC

Site Code: 000206

This site covers the inner part of north Dublin Bay, the seaward boundary extending from the Bull Wall lighthouse across to the Martello Tower at Howth Head. The North Bull Island is the focal point of this site.

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

[1140] Tidal Mudflats and Sandflats
[1210] Annual Vegetation of Drift Lines
[1310] Salicornia Mud
[1330] Atlantic Salt Meadows
[1410] Mediterranean Salt Meadows
[2110] Embryonic Shifting Dunes
[2120] Marram Dunes (White Dunes)
[2130] Fixed Dunes (Grey Dunes)* ton street
[2190] Humid Dune Slacks
[1395] Petalwort (Petalophyllum valsii)

North Bull Island is a sandy spit which formed after the building of the South Wall and Bull Wall in the 18th and 19th centuries. It now extends for about 5 km in length and is up to 1 km wide in places. A well-developed and dynamic dune system stretches along the seaward side of the island. Various types of dunes occur, from fixed dune grassland to pioneer communities on foredunes. Marram Grass (*Ammophila arenaria*) is dominant on the outer dune ridges, with Lyme-grass (*Leymus arenarius*) and Sand Couch (*Elymus farctus*) on the foredunes. Behind the first dune ridge, plant diversity increases with the appearance of such species as Wild Pansy (*Viola tricolor*), Kidney Vetch (*Anthyllis vulneraria*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Common Restharrow (*Ononis repens*), Yellow-rattle (*Rhinanthus minor*) and Pyramidal Orchid (*Anacamptis pyramidalis*). In these grassy areas and slacks, the scarce Bee Orchid (*Ophrys apifera*) occurs.

About 1 km from the tip of the island, a large dune slack with a rich flora occurs, usually referred to as the 'Alder Marsh' because of the presence of Alder trees (*Alnus glutinosa*). The water table is very near the surface and is only slightly brackish. Saltmarsh Rush (*Juncus maritimus*) is the dominant species, with Meadowsweet (*Filipendula ulmaria*) and Devil's-bit Scabious (*Succisa pratensis*) being frequent. The orchid flora is notable and includes Marsh Helleborine (*Epipactis palustris*), Common

Twayblade (*Listera ovata*), Autumn Lady's-tresses (*Spiranthes spiralis*) and Marsh Orchids (*Dactylorhiza* spp.).

Saltmarsh extends along the length of the landward side of the island. The edge of the marsh is marked by an eroding edge which varies from 20 cm to 60 cm high. The marsh can be zoned into different levels according to the vegetation types present. On the lower marsh, Glasswort (*Salicornia europaea*), Common Saltmarsh-grass (*Puccinellia maritima*), Annual Sea-blite (*Suaeda maritima*) and Greater Sea-spurrey (*Spergularia media*) are the main species. Higher up in the middle marsh Sea Plantain (*Plantago maritima*), Sea Aster (*Aster tripolium*), Sea Arrowgrass (*Triglochin maritima*) and Thrift (*Armeria maritima*) appear. Above the mark of the normal high tide, species such as Common Scurvygrass (*Cochlearia officinalis*) and Sea Milkwort (*Glaux maritima*) are found, while on the extreme upper marsh, the rushes *Juncus maritimus* and *J. gerardi* are dominant. Towards the tip of the island, the saltmarsh grades naturally into fixed dune vegetation.

The habitat 'annual vegetation of drift lines' is found in places, along the length of Dollymount Strand, with species such as Sea Rocket (*Cakile maritima*), Oraches (*Atriplex* spp.) and Prickly Saltwort (*Salsola kali*).

The island shelters two intertidal lagoons which are divided by a solid causeway. The sediments of the lagoons are mainly sands with a small and varying mixture of silt and clay. The north lagoon has an area known as the "Salicornia flat", which is dominated by Salicornia dolichostachya, a pioneer glasswort species, and covers about 25 ha. Beaked Tasselweed (Ruppia martinia) occurs in this area, along with some Narrow-leaved Eelgrass (Zostera angustifolia). Dwarf Eelgrass (Z. noltii) also occurs in Sutton Creek. Common Cordgrass (Spartina anglica) occurs in places but its growth is controlled by management. Green algal mats (Enteromorpha spp., Ulva lactuca) cover large areas of the flats during summer. These sediments have a rich macrofauna, with high densities of Lugworms (Arenicola marina) in parts of the north lagoon. Mussels (Mytilus edulis) occur in places, along with bivalves such as Cerastoderma edule, Macoma balthica and Scrobicularia plana. The small gastropod Hydrobia ulvae occurs in high densities in places, while the crustaceans Corophium volutator and Carcinus maenas are common. The sediments on the seaward side of North Bull Island are mostly sands. The site extends below the low spring tide mark to include an area of the sublittoral zone.

Three rare plant species which are legally protected under the Flora (Protection) Order, 1999 have been recorded on the North Bull Island. These are Lesser Centaury (*Centaurium pulchellum*), Red Hemp-nettle (*Galeopsis angustifolia*) and Meadow Saxifrage (*Saxifraga granulata*). Two further species listed as threatened in the Red Data Book, Wild Clary/Sage (*Salvia verbenaca*) and Spring Vetch (*Vicia lathyroides*), have also been recorded. A rare liverwort, *Petalophyllum ralfsii*, was first recorded from the North Bull Island in 1874 and has recently been confirmed as still present. This species is of high conservation value as it is listed on Annex II of the E.U. Habitats Directive. The North Bull is the only known extant site for the species in Ireland away from the western seaboard. North Dublin Bay is of international importance for waterfowl. During the 1994/95 to 1996/97 period the following species occurred in internationally important numbers (figures are average maxima): Brent Goose 2,333; Knot 4,423; Bar-tailed Godwit 1,586. A further 14 species occurred in nationally important concentrations - Shelduck 1505; Wigeon 1,166; Teal 1,512; Pintail 334; Shoveler 239; Oystercatcher 2,190; Ringed Plover 346; Grey Plover 816; Sanderling 357; Dunlin 6,238; Black-tailed Godwit 156; Curlew 1,193; Turnstone 197 and Redshank 1,175. Some of these species frequent South Dublin Bay and the River Tolka Estuary for feeding and/or roosting purposes (mostly Brent Goose, Oystercatcher, Ringed Plover, Sanderling and Dunlin).

The tip of the North Bull Island is a traditional nesting site for Little Tern. A high total of 88 pairs nested in 1987. However, nesting attempts have not been successful since the early 1990s. Ringed Plover, Shelduck, Mallard, Skylark, Meadow Pipit and Stonechat also nest. A well-known population of Irish Hare is resident on the island

The invertebrates of the North Bull Island have been studied and the island has been shown to contain at least seven species of regional or national importance in Ireland (from the Orders Diptera, Hymenoptera and Hemiptera).

The main land uses of this site are amenity activities and nature conservation. The North Bull Island is the main recreational beach in Co. Dublin and is used throughout the year. Much of the land surface of the island is taken up by two golf courses. Two separate Statutory Nature Reserves cover much of the island east of the Bull Wall and the surrrounding intertidat flats. The site is used regularly for educational purposes. North Bull Island has been designated a Special Protection Area under the E.U. Birds Directive and it is also a statutory Wildfowl Sanctuary, a Ramsar Convention site, a Biogenetic Reserve, a Biosphere Reserve and a Special Area Amenity Order site.

This site is an excellent example of a coastal site with all the main habitats represented. The site holds good examples of nine habitats that are listed on Annex I of the E.U. Habitats Directive; one of these is listed with priority status. Several of the wintering bird species have populations of international importance, while some of the invertebrates are of national importance. The site contains a numbers of rare and scarce plants including some which are legally protected. Its proximity to the capital city makes North Dublin Bay an excellent site for educational studies and research.



Site Name: Rogerstown Estuary SAC

Site Code: 000208

Rogerstown Estuary is situated about 2 km north of Donabate in Co. Dublin. It is a relatively small, narrow estuary separated from the sea by a sand and shingle bar. The estuary is divided by a causeway and narrow bridge, built in the 1840s to carry the Dublin-Belfast railway line.

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

[1130] Estuaries
[1140] Tidal Mudflats and Sandflats
[1310] Salicornia Mud
[1330] Atlantic Salt Meadows
[1410] Mediterranean Salt Meadows
[2120] Marram Dunes (White Dunes)
[2130] Fixed Dunes (Grey Dunes)*

The estuary drains almost completely at low tide. The intertidal flats of the outer estuary are mainly of sands, with soft muds in the north-west sector and along the southern shore. Associated with these muds are stands of Common Cordgrass (*Spartina anglica*). Green algae (mainly *Enteromorpha* spp. and *Ulva lactuca*) are widespread and form dense mats in the more sheltered areas. The intertidal angiosperm Beaked Tasselweed (*Ruppia maritima*) grows profusely in places beneath the algal mats. The Lugworm (*Arenicola marina*) is common in the outer estuary and large Mussel beds (*Mytilus edulis*) occur at the outlet to the sea.

The area of intertidal flats in the inner estuary is reduced as a result of the local authority refuse tip on the north shore. The sediments are mostly muds, which are very soft in places. Common Cordgrass is widespread in parts, and in summer, dense green algal mats grow on the muds. In the extreme inner part, the estuary narrows to a tidal river.

The habitat '*Salicornia* mud' occurs in both the outer and inner estuaries, and *S. dolichostachya* is the main glasswort species found. Other species include *S. ramosissima, S. europaea* and Annual Sea-blite (*Suaeda maritima*).

Saltmarsh fringes parts of the estuary, especially the southern shores and parts of the outer sand spit. Common plant species of the saltmarsh include Sea Rush (*Juncus*

maritimus), Sea-purslane (*Halimione portulacoides*) and Common Saltmarsh-grass (*Puccinellia maritima*). Salt meadows and wet brackish fields occur along the tidal river. Low sand hills occur on the outer spit, including some small areas of fixed dunes and Marram Grass (*Ammophila arenaria*) dunes. Fine sandy beaches and intertidal sandflats occur at the outer part of the estuary.

Two plant species which are legally protected under the Flora (Protection) Order, 1999, occur within the site: Hairy Violet (*Viola hirta*) occurs on the sand spit and Meadow Barley (*Hordeum secalinum*) occurs in the saline fields of the inner estuary. This species has declined, apparently due to reclamation and embankment of lands fringing estuaries. Another rare species, Green-winged Orchid (*Orchis morio*), occurs in the sandy areas of the outer estuary.

Rogerstown Estuary is an important waterfowl site, with Brent Goose having a population of international importance (1176). A further 16 species have populations of national importance: Greylag Goose (186), Shelduck (785), Teal (584), Pintail (30), Shoveler (69), Oystercatcher (1028), Ringed Plover (152), Golden Plover (1813), Grey Plover (245), Lapwing (4056), Knot (2076), Dunlin (2625), Sanderling (57), Black-tailed Godwit (272), Curlew (1549), Redshank (732) and Greenshank (22) (All counts are average peaks over four winters 1994/95 - 1997/98), The presence of a significant population of Golden Plover is of note and this species is listed on Annex I of the E.U. Birds Directive. The estuary is a regular staging post for autumn migrants, especially Green Sandpiper, Ruff, Little Stint, Gurlew Sandpiper and Spotted Redshank.

Little Tern has bred at the outer sand spit, but much of the nesting area has now been washed away as a result of erosion. The maximum number of pairs recorded was 17 in 1991. Ringed Plover breed in the same area.

The outer part of the estuary has been designated a Statutory Nature Reserve and a Special Protection Area under the E.U. Birds Directive. The inner estuary has been damaged by the refuse tip which covers 40 ha of mudflat.

This site is a good example of an estuarine system, with all typical habitats represented, including several listed on Annex I of the E.U. Habitats Directive. Rogerstown is an internationally important waterfowl site and has been a breeding site for Little Terns. The presence within the site of three rare plant species adds to its importance.



Site Name: South Dublin Bay SAC

Site Code: 000210

This site lies south of the River Liffey in Co. Dublin, and extends from the South Wall to the west pier at Dun Laoghaire. It is an intertidal site with extensive areas of sand and mudflats. The sediments are predominantly sands but grade to sandy muds near the shore at Merrion Gates. The main channel which drains the area is Cockle Lake.

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

- [1140] Tidal Mudflats and Sandflats
- [1210] Annual vegetation of drift lines
- [1310] Salicornia and other annuals colonising mud and sand
- [2110] Embryonic shifting dunes

The bed of Dward Eelgrass (*Zostera noltii*) found below Merrion Gates is the largest stand on the east coast. Green algae (*Enteroptorpha* spp. and *Ulva lactuca*) are distributed throughout the area at a low density. Fucoid algae occur on the rocky shore in the Maretimo to Dún Laoghaire area. Species include *Fucus spiralis*, *F. vesiculosus*, *F. serratus*, *Ascophyllum nodosum* and *Pelvetia canaliculata*.

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Several small, sandy beaches with incipient dune formation occur in the northern and western sectors of the site, notably at Poolbeg, Irishtown and Merrion/ Booterstown. The formation at Booterstown is very recent. Drift line vegetation occurs in association with the embryonic and incipient fore dunes. Typically drift lines occur in a band approximately 5 m wide, though at Booterstown this zone is wider in places. The habitat occurs just above the High Water Mark and below the area of embryonic dune. Species present are Sea Rocket (Cakile maritima), Frosted Orache (Atriplex laciniata), Spear-leaved Orache (A. prostrata), Prickly Saltwort (Salsola kali) and Fat Hen (Chenopodium album). Also occurring is Sea Sandwort (Honkenya peploides), Sea Beet (Beta vulgaris subsp. maritima) and Annual Sea-blite (Suaeda *maritima*). A small area of pioneer saltmarsh now occurs in the lee of an embryonic sand dune just north of Booterstown Station. This early stage of saltmarsh development is here characterised by the presence of pioneer stands of glassworts (Salicornia spp.) occurring below an area of drift line vegetation. As this is of very recent origin, it covers a small area but ample areas of substrate and shelter are available for the further development of this habitat.

Lugworm (*Arenicola marina*), Cockles (*Cerastoderma edule*) and annelids and other bivalves are frequent throughout the site. The small gastropod *Hydrobia ulvae* occurs on the muddy sands off Merrion Gates.

South Dublin Bay is an important site for waterfowl. Although birds regularly commute between the south bay and the north bay, recent studies have shown that certain populations which occur in the south bay spend most of their time there. The principal species are Oystercatcher (1215), Ringed Plover (120), Sanderling (344), Dunlin (2628) and Redshank (356) (average winter peaks 1996/97 and 1997/98). Up to 100 Turnstones are usual in the south bay during winter. Brent Goose regularly occur in numbers of international importance (average peak 299). Bar-tailed Godwit (565), a species listed on Annex I of the E.U. Birds Directive, also occur.

Large numbers of gulls roost in South Dublin Bay, e.g. 4,500 Black-headed Gulls in February 1990; 500 Common Gulls in February 1991. It is also an important tern roost in the autumn, regularly holding 2000-3000 terns including Roseate Terns, a species listed on Annex I of the E.U. Birds Directive. South Dublin Bay is largely protected as a Special Protection Area.

At low tide the inner parts of the south bay are used for amenity purposes. Baitdigging is a regular activity on the sandy flats. At high tide some areas have windsurfing and jet-skiing.

This site is a fine example of a coastal system, with extensive sand and mudflats, and incipient dune formations. South Dublin Bay is also an internationally important bird site.



Site Name: Rye Water Valley/Carton SAC

Site Code: 001398

Rye Water Valley/Carton SAC is located between Leixlip and Maynooth, in Counties Meath and Kildare, and extends along the Rye Water, a tributary of the River Liffey.

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

[7220] Petrifying Springs*[1014] Narrow-mouthed Whorl Snail (*Vertigo angustior*)[1016] Desmoulin's Whorl Snail (*Vertigo moulinsiana*)

The Rye Water in Carton Estate is dammed at intervals, creating a series of lakes. Reed Sweet-grass (*Glyceria maxima*) is frequent around the lakes, along with Yellow Iris (*Iris pseudacorus*), Reed Canary-grass (*Phalaris arundinacea*), Bulrush (*Typha latifolia*), Water Forget-me-not (*Myosotis scorptoides*), Marsh-marigold (*Caltha palustris*) and starworts (*Callitriche* spp.). Along the remainder of the site the river has been dredged and much of the reed fringe removed.

To the north-west of Carton Bridge a small clump of willows (*Salix* spp.), with dogwood (*Cornus* sp.), Alder (*Alnus glutinosa*), Ash (*Fraxinus excelsior*) and Elder (*Sambucus nigra*) occurs. The ground flora found here includes Golden Saxifrage (*Chrysosplenium oppostifolium*), Meadowsweet (*Filipendula ulmaria*), Common Valerian (*Valeriana officinalis*), Wavy Bitter-cress (*Cardamine flexuosa*) and Bittersweet (*Solanum dulcamara*).

The woods on Carton Estate are mostly old demesne woods with both deciduous and coniferous species. Conifers, including some Yew (*Taxus baccata*) – a native species, are dominant, with Beech (*Fagus sylvatica*), oak (*Quercus* sp.), Sycamore (*Acer pseudoplatanus*), Ash and Hazel (*Corylus avellana*) also occurring. The ground flora is dominated by Ivy (*Hedera helix*), with such species as Hedge Woundwort (*Stachys sylvatica*), Wood Speedwell (*Veronica montana*), Woodruff (*Galium odoratum*), Wood Avens (*Geum urbanum*), Common Dog-violet (*Viola riviniana*), Wild Angelica (*Angelica sylvestris*), Ramsons (*Allium ursinum*), Ground-ivy (*Glechoma hederacea*) and Ivy Broomrape (*Orobanche hederae*) also found.

Hairy St. John's-wort (*Hypericum hirsutum*), a species legally protected under the Flora (Protection) Order, 1999, occurs in Carton Estate and there is an old record from the estate for the similarly protected Hairy Violet (*Viola hirta*). However, this latter species has not been recorded from the site in recent years. Another species

listed in the Red Data Book, Green Figwort (*Scrophularia umbrosa*), occurs on the site in several locations by the Rye Water. The woods at Carton Demesne are the site of a rare Myxomycete fungus, *Diderma deplanatum*.

The marsh, mineral spring and seepage area found at Louisa Bridge supports a good diversity of plant species, including stoneworts, Marsh Arrowgrass (*Triglochin palustris*), Purple Moor-grass (*Molinea caerulea*), sedges (*Carex* spp.), Common Butterwort (*Pinguicula vulgaris*), Marsh Lousewort (*Pedicularis palustris*), Grass-of-parnassus (*Parnassia palustris*) and Cuckooflower (*Cardamine pratensis*). The mineral spring found at the site is of a type considered to be rare in Europe and is a habitat listed on Annex I of the E.U. Habitats Directive. The Red Data Book species Blue Fleabane (*Erigeron acer*) is found growing on a wall at Louisa Bridge.

Within the woods, Blackcap, Woodcock and Long-eared Owl have been recorded. Little Grebe, Coot, Moorhen, Tufted Duck, Teal and Kingfisher, the latter a species listed on Annex I of the E.U. Birds Directive, occur on and about the lake.

The Rye Water is also a spawning ground for Trout and Salmon, and the rare, Whiteclawed Crayfish (*Austropotamobius pallipes*) has been recorded at Leixlip. The latter two species are listed on Annex II of the E.U. Habitats Directive. The rare Narrowmouthed Whorl Snail and Desmoulin's Whorl Snail occur in marsh vegetation near Louisa Bridge. Both are rare in Ireland and in Europe, and are listed on Annex II of the E.U. Habitats Directive. The scarce dragon fly, *Orthetrum coerulescens*, has also been recorded at Louisa Bridge.

The conservation importance of the site lies in the presence of several rare and threatened plant and animal species, and the presence of petrifying springs, a habitat type listed on Annex I of the E.N. Habitats Directive. The woods found on Carton Estate and their birdlife are of additional interest.

SITE SYNOPSIS

SITE NAME: NORTH BULL ISLAND SPA

SITE CODE: 004006

This site covers all of the inner part of north Dublin Bay, with the seaward boundary extending from the Bull Wall lighthouse across to Drumleck Point at Howth Head. The North Bull Island sand spit is a relatively recent depositional feature, formed as a result of improvements to Dublin Port during the 18th and 19th centuries. It is almost 5 km long and 1 km wide and runs parallel to the coast between Clontarf and Sutton. Part of the interior of the island has been converted to golf courses.

Saltmarsh extends along the length of the landward side of the island and provides the main roost site for wintering birds in Dublin Bay. The island shelters two intertidal lagoons which are divided by a solid causeway. These lagoons provide the main feeding grounds for the wintering waterfowl. The sediments of the lagoons are mainly sands with a small and varying mixture of silt and clay. Green algal mats (*Ulva* spp.) are a feature of the flats during summer. These sediments have a rich macro-invertebrate fauna, with high densities of Lugworm (*Arenicola marina*) and Ragworm (*Hediste diversicolor*).

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Light-bellied Brent Goose, Shelduck, Teal, Pintail, Shoveler, Oystercatcher, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Black-tailed Godwit, Bar tailed Godwit, Curlew, Redshank, Turnstone and Black-headed Gull. The site is also of special conservation interest for holding an assemblage of over 20,000 wintering waterbirds. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The North Bull Island SPA is of international importance for waterfowl on the basis that it regularly supports in excess of 20,000 waterfowl. The site supports internationally important populations of three species, Light-bellied Brent Goose (1,548), Black-tailed Godwit (367) and Bar-tailed Godwit (1,529) - all figures are mean peaks for the five winters between 1995/96 and 1999/2000. The site is one of the most important in the country for Light-bellied Brent Goose. A further 14 species have populations of national importance – Shelduck (1,259), Teal (953), Pintail (233), Shoveler (141), Oystercatcher (1,784), Grey Plover (517), Golden Plover (2,033), Knot (2,837), Sanderling (141), Dunlin (4,146), Curlew (937), Redshank (1,431), Turnstone (157) and Black-headed Gull (2,196). The populations of Pintail and Knot are of particular note as they comprise 14% and 10% respectively of the all-Ireland population totals. Other species that occur regularly in winter include Grey Heron, Little Egret, Cormorant, Wigeon, Goldeneye, Red-breasted Merganser, Ringed Plover and Greenshank. Gulls are a feature of the site during winter and, along with the nationally important population of Black-headed Gull (2,196), other species that occur include Common Gull (332) and Herring Gull (331). While some of the birds

also frequent South Dublin Bay and the River Tolka Estuary for feeding and/or roosting purposes, the majority remain within the site for much of the winter. The wintering bird populations have been monitored more or less continuously since the late 1960s and the site is now surveyed each winter as part of the larger Dublin Bay complex.

The North Bull Island SPA is a regular site for passage waders, especially Ruff, Curlew Sandpiper and Spotted Redshank. These are mostly observed in single figures in autumn but occasionally in spring or winter.

The site formerly had an important colony of Little Tern but breeding has not occurred in recent years. Several pairs of Ringed Plover breed, along with Shelduck in some years. Breeding passerines include Skylark, Meadow Pipit, Stonechat and Reed Bunting. The island is a regular wintering site for Short-eared Owl, with up to 5 present in some winters.

The North Bull Island SPA is an excellent example of an estuarine complex and is one of the top sites in Ireland for wintering waterfowl. It is of international importance on account of both the total number of waterfowl and the individual populations of Light-bellied Brent Goose, Black-tailed Godwit and Bar-tailed Godwit that use it. Also of significance is the regular presence of several species that are listed on Annex I of the E.U. Birds Directive, notably Golden Plover and Bar-tailed Godwit, but also Ruff and Short-eared Owl. North Bull Island is a Ramsar Convention site, and part of the North Bull Island SPA is a Statutory Nature Reserve and a Wildfowl Sanctuary. 25.3.2014

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SITE SYNOPSIS

SITE NAME: ROGERSTOWN ESTUARY SPA

SITE CODE: 004015

Rogerstown Estuary is situated about 2 km north of Donabate in north County Dublin. It is a relatively small, funnel shaped estuary separated from the sea by a sand and shingle peninsula; the site extends eastwards to include an area of shallow marine water. The estuary receives the waters of the Ballyboghil and Ballough rivers and has a wide salinity range, from near full seawater to near full freshwater. The estuary is divided by a causeway and narrow bridge, built in the 1840s to carry the Dublin-Belfast railway line. At low tide extensive intertidal sand and mud flats are exposed and these provide the main food resource for the wintering waterfowl that use the site. The intertidal flats of the estuary are mainly of sands, with soft muds in the northwest sector and along the southern shore. Associated with these muds are stands of Common Cord-grass (Spartina anglica). Green algae (mainly Ulva spp.) are widespread and form dense mats in the more sheltered areas. The intertidal vascular plant Beaked Tasselweed (Ruppia maritima) grows profusely in places beneath the algal mats and is grazed by herbivorous waterfowl (notably Light-bellied Brent Goose and Wigeon). Salt marsh fringes parts of the estuary, especially its southern shores. Common plant species of the saltmarsh include Sea Rush (Juncus maritimus), Sea Purslane (Halimione portulacoides) and Common Saltmarsh-grass (Puccinellia nt owner maritima).

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Greylag Goose, Light-bellied Brent Goose, Shelduck, Shoveler, Oystercatcher, Ringed Plover, Grey Plover, Knot, Dunlin, Black-tailed Godwit and Redshank. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Rogerstown Estuary is an important winter waterfowl site and supports a population of Light-bellied Brent Goose of international importance (1,069) - all counts are mean peaks over the five winters 1995/96 – 1999/2000. A further 10 species have populations of national importance as follows: Greylag Goose (160), Shelduck (773), Shoveler (59), Oystercatcher (1,345), Ringed Plover (188), Grey Plover (229), Knot (2,454), Dunlin (2,745), Black-tailed Godwit (195) and Redshank (490). The Greylag Geese are part of a larger population which spends most of the winter on Lambay Island. Other species which occur regularly include Wigeon (358), Teal (346), Mallard (214), Red-breasted Merganser (30), Golden Plover (1,059) Lapwing (2,129), Sanderling (50), Curlew (505) and Turnstone (77). Large numbers of gulls including Herring Gull, Great Black-backed Gull and Black-headed Gull are attracted to the area, partly due to the presence of an adjacent local authority landfill site. Little Egret, a species which has recently colonised Ireland, also occurs at this site. Some of the wader species also occur on passage, notably Black-tailed Godwit with numbers often exceeding 300 in April. The estuary is a regular staging post for scarce migrants, especially in autumn when Green Sandpiper, Ruff, Little Stint, Curlew Sandpiper and Spotted Redshank may be seen. Shelduck breed within the site.

Rogerstown Estuary SPA is an important link in the chain of estuaries on the east coast. It supports an internationally important population of Light-bellied Brent Goose and nationally important populations of a further 10 species. The presence of Little Egret and Golden Plover is of note as these species are listed on Annex I of the E.U. Birds Directive. Rogerstown Estuary is also a Ramsar Convention site, and part of Rogerstown Estuary SPA is designated as a Statutory Nature Reserve and a Wildfowl Sanctuary.

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SITE SYNOPSIS

SITE NAME: BALDOYLE BAY SPA

SITE CODE: 004016

Baldoyle Bay, located to the north and east of Baldoyle and to the south of Portmarnock, Co. Dublin, is a relatively small, narrow estuary separated from the open sea by a large sand dune system. Two small rivers, the Mayne River and the Sluice River, flow into the inner part of the estuary.

Large areas of intertidal flats are exposed at low tide. These are mostly sands but grade to muds in the inner sheltered parts of the estuary. Extensive areas of Common Cord-grass (*Spartina anglica*) occur in the inner estuary. Both the Narrow-leaved Eelgrass (*Zostera angustifolia*) and the Dwarf Eelgrass (*Z. noltii*) are also found here. During summer, the sandflats of the sheltered areas are covered by mats of green algae (*Ulva* spp.). The sediments have a typical macrofauna, with Lugworm (*Arenicola marina*) dominating the sandy flats. Areas of saltmarsh occur near Portmarnock Bridge and at Portmarnock Point, with narrow strips found along other parts of the estuary. Species such as Glasswort (*Salicornia* spp.), Sea-purslane (*Halimione portulacoides*), Sea Plantain (*Plantago maritima*) and Sea Rush (*Juncus maritimus*) are found here.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Light-bellied Brent Goose, Shelduck, Ringed Plover, Golden Plover, Grey Plover and Bar-tailed Godwit. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

Baldoyle Bay is an important site for wintering waterfowl, providing good quality feeding areas and roost sites for an excellent diversity of waterfowl species. It supports an internationally important population of Light-bellied Brent Goose (726), and has a further five species with nationally important populations (all figures are mean peaks for the five winters 1995/96 to 1999/2000): Shelduck (147), Ringed Plover (223), Golden Plover (2,120), Grey Plover (200) and Bar-tailed Godwit (353). Other species which occur include Great Crested Grebe (42), Pintail (35), Teal (138), Mallard (46), Common Scoter (61), Oystercatcher (531), Lapwing (524), Knot (189), Dunlin (879), Black-tailed Godwit (113), Curlew (98), Redshank (224), Greenshank (11) and Turnstone (43).

Regular breeding birds include Shelduck, Mallard and Ringed Plover. In autumn, passage migrants such as Curlew Sandpiper, Spotted Redshank and Green Sandpiper are regular in small numbers. Little Egret, a species which has recently colonised Ireland, also occurs at this site.

Baldoyle Bay SPA is of high conservation importance, for supporting internationally important numbers of Light-bellied Brent Goose as well as nationally important populations of a further five species, including Golden Plover and Bar-tailed Godwit, both species that are listed on Annex I of the E.U. Birds Directive. The inner part of the site is a Statutory Nature Reserve and also designated as a wetland of international importance under the Ramsar Convention.

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SITE SYNOPSIS

SITE NAME: SOUTH DUBLIN BAY AND RIVER TOLKA ESTUARY SPA

SITE CODE: 004024

The South Dublin Bay and River Tolka Estuary SPA comprises a substantial part of Dublin Bay. It includes the intertidal area between the River Liffey and Dun Laoghaire, and the estuary of the River Tolka to the north of the River Liffey, as well as Booterstown Marsh. A portion of the shallow marine waters of the bay is also included.

In the south bay, the intertidal flats extend for almost 3 km at their widest. The sediments are predominantly well-aerated sands. Several permanent channels exist, the largest being Cockle Lake. A small sandy beach occurs at Merrion Gates, while some bedrock shore occurs near Dun Laoghaire. The landward boundary is now almost entirely artificially embanked. There is a bed of Dwarf Eelgrass (Zostera noltii) below Merrion Gates which is the largest stand on the east coast. Green algae (Ulva spp.) are distributed throughout the area at a low density. The macroinvertebrate fauna is well-developed, and is characterised by annelids such as Lugworm (Arenicola marina), Nephthys spp. and Sand Mason (Lanice conchilega), and bivalves, especially Cockle (Cerastoderma edule) and Baltic Tellin (Macoma balthica). The small gastropod Spire Shell (Hydrobia ulvae) occurs on the muddy sands off Merrion Gates, along with the crustacean Corophium volutator. Sediments in the Tolka Estuary vary from soft this otrophic muds with a high organic content in the inner estuary to exposed, welk act ated sands off the Bull Wall. The site includes Booterstown Marsh, an enclosed area of saltmarsh and muds that is cut off from the sea by the Dublin/Wexford railway line, being linked only by a channel to the east, the Nutley stream. Sea water incursions into the marsh occur along this stream at high tide. An area of grassland at Poolbeg, north of Irishtown Nature Park, is also included in the site.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Light-bellied Brent Goose, Oystercatcher, Ringed Plover, Grey Plover, Knot, Sanderling, Dunlin, Bar-tailed Godwit, Redshank, Black-headed Gull, Roseate Tern, Common Tern and Arctic Tern. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of the SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The site is an important site for wintering waterfowl, being an integral part of the internationally important Dublin Bay complex – all counts for wintering waterbirds are five year mean peaks for the period 1995/96 to 1999/2000. Although birds regularly commute between the south bay and the north bay, recent studies have shown that certain populations which occur in the south bay spend most of their time there. An internationally important population of Light-bellied Brent Goose (368) occurs regularly and newly arrived birds in the autumn feed on the Eelgrass bed at

Merrion. At the time of designation the site supported nationally important numbers of a further nine species: Oystercatcher (1,145), Ringed Plover (161), Grey Plover (45), Knot (548), Sanderling (321), Dunlin (1,923), Bar-tailed Godwit (766), Redshank (260) and Black-headed Gull (3,040). Other species occurring in smaller numbers include Great Crested Grebe (21), Curlew (127) and Turnstone (52). Little Egret, a species which has recently colonised Ireland, also occurs at this site.

South Dublin Bay is a significant site for wintering gulls, with a nationally important population of Black-headed Gull, but also Common Gull (330) and Herring Gull (348). Mediterranean Gull is also recorded from here, occurring through much of the year, but especially in late winter/spring and again in late summer into winter.

Both Common Tern and Arctic Tern breed in Dublin Docks, on a man-made mooring structure known as the E.S.B. dolphin – this is included within the site. Small numbers of Common Tern and Arctic Tern were recorded nesting on this dolphin in the 1980s. A survey in 1995 recorded nationally important numbers of Common Tern nesting here (52 pairs). The breeding population of Common Tern at this site has increased, with 216 pairs recorded in 2000. This increase was largely due to the ongoing management of the site for breeding terns. More recent data highlights this site as one of the most important Common Tern sites in the country with over 400 pairs recorded here in 2007.

South Dublin Bay is an important staging/passage site for a number of tern species in the autumn (mostly late July to September). The origin of many of the birds is likely to be the Dublin breeding sites (Rockabill and the Dublin Docks) though numbers suggest that the site is also used by birds from other sites, perhaps outside the state. This site is selected for designation for its autumn tern populations: Roseate Tern (2,000 in 1999), Common Tern (5,000 in 1999) and Arctic Tern (20,000 in 1996).

The South Dublin Bay and River Tolka Estuary SPA is of ornithological importance as it supports an internationally important population of Light-bellied Brent Goose and nationally important populations of a further nine wintering species. Furthermore, the site supports a nationally important colony of breeding Common Tern and is an internationally important passage/staging site for three tern species. It is of note that four of the species that regularly occur at this site are listed on Annex I of the E.U. Birds Directive, i.e. Bar-tailed Godwit, Common Tern, Arctic Tern and Roseate Tern. Sandymount Strand/Tolka Estuary is also a Ramsar Convention site.

30.5.2015

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SITE SYNOPSIS

SITE NAME: MALAHIDE ESTUARY SPA

SITE CODE: 004025

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

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 these form part of this SPA, the site and its 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 Lightbellied Brent Goose (1,104 individuals or 5% of the all-Ireland total) and Black-tailed Godwit (409 individuals or 2.9% of the all-Ireland total) - figures given here and below are mean peaks for the five winters 1995/96-1999/2000. Furthermore, the site supports nationally important populations of an additional 12 species: Great Crested Grebe (63), Shelduck (439), Pintail (58), Goldeneye (215), Red-breasted Merganser (99), Oystercatcher (1,360), Golden Plover (1,843), Grey Plover (201), Knot (915), Dunlin (1,594), Bar-tailed Godwit (156) and Redshank (581). The high numbers of diving ducks reflects the lagoon-type nature of the inner estuary, and this is one of the few sites in eastern Ireland where substantial numbers of Goldeneye can be found. A range of other species occurs, including Mute Swan (37), Pochard (36), Ringed Plover (86), Lapwing (1,542), Curlew (548), Greenshank (38) and Turnstone (112).

The estuary also attracts other migrant wader species such as Ruff, Curlew Sandpiper, Spotted Redshank and Little Stint. These occur mainly in autumn, though occasionally in spring and winter.

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 Malahide Island. Grey Herons breed nearby and feed regularly within the site.

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

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23.8.2013

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2.4 Attachment B.9 Site Notice, Newspaper Advertisement and Planning Authority Notice

Find enclosed in the following:

- Copy of site notice erected onsite at locations shown in Drawing LW1504602_L-002 in accordance with Article 6 of S.I. 137 of 2013
- Copy of newspaper notice published in The Herald on 2nd March 2017 in accordance with Article 5 of S.I. 137 of 2013
- Copy of letter sent to both Fingal County Council and An Bord Pleanála, as relevant planning authorities, in accordance with Article 8 of S.I. 137 of 2013

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APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A LICENCE

Notice is hereby given that Padraig Thornton Waste Disposal Ltd. t/a Thorntons Recycling, having its principal offices at Unit S3B, Parkwest Business Park, Henry Road, Dublin 12, intends to apply to the Environmental Protection Agency for an Industrial Emissions licence for their proposed materials transfer and processing facility at this site in the Millennium Business Park, Cappagh Road, Dublin 11 in the townlands of Grange and Cappoge.

The proposed facility will accept up to 170,000 tonnes per annum of municipal solid waste (MSW). Activities that will take place on site will include the acceptance and processing of residual MSW for transfer and for the production of solid recovered fuel (SRF), and the acceptance of waste wood, green waste and source segregated 'brown bin' material for bulking up, prior to consignment offsite to an appropriate treatment facility.

In accordance with the First Schedule of the EPA Act 1992, as amended, the following classes of activities apply to the site:

- Class 11.1 The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in this Schedule in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the said Part is or will be required (is an industrial emissions directive activity, in so far as the process development or operation specified in 11.1 is carried on in an installation connected or associated with another activity that is an industrial emission directive activity).
- Class 11.4(b) Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day, involving one opmore of the following activities (other Purposes of c than activities to which the Urban Waste Water Treatment Regulations 2001 (S.I. No. 254 of 2001) apply):
 - biological treatment (i)
 - pre-treatment of waste for incineration or co-incineration (ii)
 - treatment of slags and ashes (iii)
 - treatment in shredders of metals waste, including waste electrical and (iv) electronic equipment and end-of-life vehicles and their components

The application is being accompanies by an Environmental Impact Statement (EIS). The EIS and any further information relating to the effects on the environment of the emissions from the activity which may be furnished to the Agency in the course of the Agency's consideration of the application, will be available at the headquarters of the Agency. A planning application has been made to An Bord Pleanála. This application was accompanied by an EIS.

A copy of the application for the licence and the EIS may be inspected on the Agency's website or, inspected at, or obtained from the headquarters of the Agency at PO Box 3000, Johnstown Castle Estate, Co. Wexford as soon as is practicable after the receipt by the Agency of the application for the licence.

Signed: Wal MM

Derek Milton, Fehily Timoney & Company, J5 Plaza, North Park Business Park, Dublin 11; Agent on behalf of applicant

Date: ___14th March 2017__

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APPLICATIONS

A P LICATION TO THE NVIRONMENTAL PROTECTION AGENCY FOR A LICENCE Notice is hereby given that Padraig Thornton Waste Disposal Ltd. t/a Thorntons Recycling, having its principal offices at Unit S3E, Parkwest Business Park, Henry Road, Dublin 12, intends to apply to the Environmental Protection Agency for an Industrial proposed materials transfer and processing facility in the Millennium Business Park, Cappoge The proposed facility will accept up to 170,000 tonness er annum of municipal solid take place on site will include to the production of solid acceptance of waste wood green waste and source segregated brown bin material of nsidual MSW for transfer and propriate treatment facility. In accordance with the First Schedule of the EPA Act 1992 as amended, the following classes of activities apply to the schedule in respect of which a propriate treatment facility. In accordance under the sall of he Actol 1996, which facility is connected or associated with and activity specified in this Schedule in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the sall associated with another activity in a sociated with another activity and strial amissions directive activity in so far as the process development or operation an installation connected or associated with another activity in of the activities of the than activities to which the Urban in dustrial emission directive activities to which the Urban in dustrial emission and ashes (iv) treatment of specified in 1.1 is carried on in an astellation connected or associated with another activity waste for incineration or con-traction contactive activity information relating to the application for the licence and environmental Impact Statement information relating to the application for the licence and the headquarters of the Agency, at the headquarters of the Agency at the headquarters of the Agency at the headquarters of the Agency at the Agency i



CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES

Our Ref: US:/LW15/046/02/Let/MT

Ms. Sinéad McInerney **Executive Officer** Laps-Sids Section An Bord Pleanála 64 Marlborough Street Dublin 1 D01 V902

23 February 2017

RE: Proposed development by Padraig Thornton Waste Disposal Ltd. t/a Thorntons Recycling of a materials transfer and processing facility in the Millennium Business Park, Cappagh Road, Dublin 11, in the townlands of Grange and Cappoge.

Dear Ms. McInerney

onty. any other new Pursuant to An Bord Pleanála Planning reference PL06F.PA0048, and in accordance with Article 8 of the Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations 2013 (S.I. nov 137 of 2013), Padraig Thornton Waste Disposal Ltd. t/a Thorntons Recycling having its principal offices at Unit S3B, Parkwest Business Park, Henry Road Dublin 12, provides notice that it intends to apply to the Environmental Protection Agency for an Industrial Emissions licence for their proposed materials transfer and processing facility in the Millennium Business Park, Cappagh Road, Dublin 11% in the townlands of Grange and Cappoge. 60

The proposed facility will accept up to 170,000 tonnes per annum of municipal solid waste (MSW). Activities that will take place on site will include the acceptance and processing of residual MSW for transfer and for the production of solid recovered fuel (SRF), and the acceptance of waste wood, green waste and source segregated 'brown bin' material for bulking up, prior to consignment offsite to an appropriate treatment facility.

In accordance with the First Schedule of the EPA Act 1992, as amended, the following classes of activities apply to the site:

Class 11.1 – The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in this Schedule in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the said Part is or will be required (is an industrial emissions directive activity, in so far as the process development or operation specified in 11.1 is carried on in an installation connected or associated with another activity that is an industrial emission directive activity).

Cont'd.....



J5 PLAZA, NORTH PARK BUSINESS PARK, NORTH ROAD, DUBLIN 11 T: Tel: +353 1 658 3500 F: +353 1 658 3501 E: info@ftco.ie W: www.fehilytimoney.ie Directors: Eamon Timoney Bernadette Guinan Associate Director: John Nolan Company Secretary: Sinéad Timoney



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- Class 11.4(b) Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day, involving one or more of the following activities (other than activities to which the Urban Waste Water Treatment Regulations 2001 (S.I. No. 254 of 2001) apply):
 - (i) biological treatment
 - (ii) pre-treatment of waste for incineration or co-incineration
 - (iii) treatment of slags and ashes
 - (iv) treatment in shredders of metals waste, including waste electrical and electronic equipment and end-of-life vehicles and their components

The application is accompanied by an Environmental Impact Statement (EIS). The EIS and any further information relating to the effects on the environment of the emissions from the activity which may be furnished to the Environmental Protection Agency in the course of the Agency's consideration of the application, will be available at the headquarters of the Agency. As you are aware, a planning application has been made to An Bord Pleanála and this application was accompanied by an EIS.

A copy of the application for the licence and the EIS may be inspected on the Agency's website or inspected at or obtained from the headquarters of the Agency at PO Box 3000, Johnstown Castle Estate, Co. Wexford as soon as is practicable after the receipt by the Agency of the application for the licence.

As agent for Padraig Thornton Waste Disposal Ltd. t/a Thorntons Recycling in relation to this proposed development, please note my contact details as follows:

Mr. Derek Milton Fehily Timoney & Company J5 Plaza North Park Business Park North Road Dublin 11 Phone: 01 6583500 Email: <u>derek.milton@ftco.ie</u>

If you have any queries in relation to this letter, please do not hesitate to contact me.

Yours sincerely

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Derek Milton, Principal Scientist for and on behalf of **Fehily Timoney & Company**



CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES

Our Ref: US:/LW15/046/02/Let/MT

Ms. Rita McGrath Senior Executive Scientist Fingal County Council Environment Division Environment and Water Services Department County Hall Swords Co. Dublin

23 February 2017

RE: Proposed development by Padraig Thornton Waste Disposal Ltd. t/a Thorntons Recycling of a materials transfer and processing facility in the Millennium Business Park, Cappagh Road, Dublin 11, in the townlands of Grange and Cappoge.

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far as the process development or operation specified in 11.1 is carried on in
an installation connected or associated with another activity that is an
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Cont'd.....



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If you have any queries in relation to this letter, please do not hesitate to contact me.

Yours sincerely

~ ml

Derek Milton, Principal Scientist for and on behalf of **Fehily Timoney & Company**