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Appropriate Assessment Screening Report

Dublin Waste to Energy

Technical Amendment: Addition of Non-Hazardous Waste Streams
Existing Licence IE W0232-01

Project number: 60587300

April 2020

Quality information

Prepared by	Checked by	Approved by	Verified by
Alison Donnelly Graduate Ecologist	Paul Lynas Associate Director	James Riley Technical Director	James Riley Technical Director

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Distribution List

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0	1	Dublin Waste to Energy Limited

Prepared for:

Prepared for: Dublin Waste to Energy Limited

Prepared by:

Alison Donnelly
Graduate Ecologist
AECOM Ireland Ltd.
T: +353 012383100
E: Alison.donnelly@aecom.com

AECOM Ireland Limited
4th Floor
Adelphi Plaza
Georges Street Upper
Co. Dublin
Ireland

T: +353 1 238 3100
aecom.com

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1. INTRODUCTION

AECOM Ireland Limited (AECOM) are assisting Dublin Waste to Energy Limited (DWtE) apply to the Environmental Protection Agency (EPA) for a Technical Amendment to existing Industrial Emissions (IE) licence W0232-01. This Technical Amendment involves the addition of two non-hazardous European Waste Catalogue (EWC) codes to schedule A of existing IE licence W0232-01, thereby allowing for incineration of these additional waste streams at the DWtE site (hereafter 'the proposed project').

This Appropriate Assessment (AA) Screening Report contains information, prepared by AECOM on behalf of DWtE to inform the EPA Screening for AA of the proposed project. In the EPA's role as Competent Authority for the AA, the EPA must determine whether the proposed project could have likely significant effects on 'European sites' (see definition in section 1.2 below), either alone or in combination with other plans or projects.

1.1 Overview of Technical Amendments

So-called 'Technical Amendments', into which category of licence revision the proposed project falls, have been in place since the Protection of the Environment Act 2003 S.I 27 as amended (hereafter 'the Act'). Under Section 96 of the Act, the EPA has the power to make amendments to a licence of a clerical or technical nature without the need for a full licence review.

From the wording of Section 96 of the Act alone, there would generally be no likely significant effects predicted from Technical Amendments on European sites. This judgement can be reasonably formed because Section 96 of the Act categorizes Technical Amendments as:

a. Administrative or 'clerical' corrections and/or;
b. Operations reasonably regarded as having been understood within the existing licence albeit not expressly provided for (i.e. the potential effects) and/or;
c. Operations which will not contravene relevant environmental standards, or provide the EPA with any other reason named under Section 83 (5) to refuse the granting of a licence amendment.

In the context of the 'source-pathway-receptor' model approach to environmental assessment, the Technical Amendments could therefore predict no effects from the 'source' (i.e. DWtE), additional to those already approved under existing licensed operations.

1.2 Overview of Screening for Appropriate Assessment

The European Communities Habitats Directive 92/43/EEC ('the Habitats Directive') provides, in Article 6 (3), the legal basis for AA at European level. In the context of the proposed project, the Habitats Directive is transposed in Ireland, by the European Communities (Bird and Natural Habitats) Regulations 2011[1] as amended (hereafter 'the Regulations'). Regulation 42(1) transposes the requirement to screen for AA:

42. (1) *A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority, in this case the EPA assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site*.

An AA is required where significant effects on European sites, as described above, are likely (or more specifically 'cannot be excluded on the basis of objective information'[2]). If triggered, AA then determines whether the project will adversely affect the integrity of the European site, in light of the European sites' Conservation Objectives.

The scope of a 'project', which must be subject to AA Screening, is far reaching under the Regulations, and includes "*any approval*" and "*the revision, review, renewal or extension of the expiry date of the previous approvals*"[3]. As the proposed project is to submit a request for approval it is therefore subject to a Screening for AA, as informed by this AA Screening Report.

[1] S.I 477 of 2011.
[2] The' Waddenzee' ruling (C-127/02) is an influential judgement of the European Court of Justice (ECJ) which has clarified what "likely to have a significant effect" means; specifically that, "if it cannot be excluded on the basis of objective information, that it will have a significant effect on the site" and that unless a significant effect can be objectively ruled -out with certainty, then it is 'likely'.
[3] Source: Preamble to the European Communities (Birds and Natural Habitats) Regulations 2011-2015.

1.3 European sites

European sites comprise[4]:

- Special Areas of Conservation (SACs);
- Special Protection Areas (SPAs);
- candidate Special Areas of Conservation (cSACs); and,
- proposed Special Protection Areas (pSPAs).

The process of designating cSACs as SACs is ongoing in Ireland. The term SAC is used throughout this report for both SACs and cSACs, given they are subject to equal protection.

[4] European sites were formerly 'Natura 2000' sites prior to the Environmental and Miscellaneous Provisions Act (2011). SACs yet to be designated by statutory instrument remain Candidate (cSACs) but have the same protection as SACs.

2. PROJECT DESCRIPTION AND SITE OVERVIEW

This Section provides a brief overview of the, existing, and proposed project at the DWtE site.

2.1 Existing Site Overview

The DWtE site (the DWtE site) is located on the southern side of the Poolbeg Peninsula in Dublin Bay on the eastern side of Dublin City (Figure 1). Most of the DWtE site is located south of Pigeon House Road with a portion extending north of Pigeon House Road. The overall DWtE site is bounded by Dublin Harbour to the north, Shellybanks Road to the west and Ringsend Wastewater Treatment Works (WwTW) to the east. A public footpath, roadway and the shoreline of Dublin Bay lie to the south.

There is significant industrial activity surrounding the DWtE site including the Electricity Supply Board (ESB) Dublin Bay Power Station to the west across Shellybanks Road and the ESB Poolbeg Power Station to the east at the end of the peninsula. Irishtown Nature Park is located to the southeast and there are residential areas approximately 1 km to the west of the DWtE site.

2.2 Operation of Existing DWtE Site

Almost all processing carried out at the DWtE site is completed within the process building. This is where waste is received and incinerated. A site security building and a small pump station for cooling water is also present.

Waste materials are transported to the DWtE site on a daily basis (8:00 am until 10:00 pm Monday through Saturday). Access and egress for waste vehicles is via the existing entrance on Pigeon House Road. Vehicles proceed to the waste reception hall which has 12 unloading bays with a green/red signal system to control the traffic movement.

2.2.1 Main Process Building

The building has two identical waste-to-energy lines, each with separate boilers and flue gas cleaning. The DWtE site is currently licensed by the EPA to treat 600,000 tonnes of waste per annum.

The two lines supply steam to one complete high-voltage turbine/generator that is connected to the electrical grid. Cooling of the exhaust steam from the turbine takes place in a seawater-cooled condenser. The net power output from the DWtE site is approximately 60 MW.

2.2.2 Waste

Waste materials are accepted at the DWtE site as feedstock for the incineration and energy recovery process. The DWtE site is currently permitted to accept up to 600,000 tonnes of non-hazardous residual, commercial and industrial waste per year. The permitted waste types (by EWC code) are detailed in Schedule A of the DWtE site IE license. Ash and residue is generated in the incineration process.

Bottom ash is what remains at the end of the grate after the burnout of the waste.. Bottom ash is stored on-site in the bottom ash bunker and exported for recycling and/or reuse in accordance with waste legislation. DWTE is investigating local alternatives for acceptance of bottom ash material.

Boiler ash is contained in the flue gases from the combustion process and accumulates in the boiler. Depending on its content, the boiler ash is either stored with the bottom ash (if non-hazardous) or with the flue gas treatment residues (if hazardous), prior to removal offsite for either reuse or disposal overseas in accordance with relevant waste legislation.

Flue gas treatment residues are the residues removed from the flue gases in the treatment processes. Flue gas treatment residues are collected and stored in an enclosed system. The flue gas treatment residue, due to its composition, is classified as hazardous for transportation and disposal. The residue is transported offsite in sealed containers for appropriate treatment.

2.2.3 Cooling Water

Raw water supply from the River Liffey is required to cool the steam from the turbine. The water is extracted at a rate of approximately 3.5 m^3/seconds after which it is returned to Dublin Port on the northern side of the Poolbeg Peninsula into the River Liffey Estuary through an existing outfall channel, located c.100 m northeast of the DWtE boundary. The outfall point is c. 750 m upstream of the nearest European site (South Dublin Bay and River Tolka SPA (site code 4024). The discharged water has a higher temperature than the receiving water but is not expected to have a significant impact on water in the Port. Hypochlorite is added to the cooling water system to

prevent marine growth. Cooling water discharge is via emission point SW-1 and is limited to 14,040 m^3 per hour. The permitted temperature difference between the intake water and the discharged water is limited to 9°C.

2.3 Proposed Project

As noted in the introduction, the proposed project relates to a Technical Amendment to add two non-hazardous waste streams to those permitted for incineration at the DWtE site. These are specifically:

- 18 01 04 - wastes whose collection and disposal is not subject to special requirements in order to prevent infection (for example dressings, plaster casts, linen, disposable clothing, diapers);
- 18 01 09 - medicines other than those mentioned in 18 01 08.

3. METHODOLOGY

3.1 European Guidance

The methodology employed in this Technical Amendment, has drawn on AA guidance published by the European Commission, the Irish Department of Environment which has recently published updated guidance on the provisions of Article 6 of the Habitats Directive, including AA Screening and AA (EC, 2018). This replaces the original EC guidance on Article 6 of the Habitats Directive (EC, 2000), but should be read with other EC guidance available online[5] .

As stated in EC (2018), the updated guidance "*incorporates the large body of rulings that have been issued by the Court of Justice of the EU (CJEU) over the years on Article 6*".[6] One recent and significant CJEU ruling not expressly accounted for in EC (2018), dates from November 2018, and relates to the Kilkenny Northern Ring Road in Ireland ('Holohan; C-461/17[7]). In 'Holohan', the CJEU found, that among other points:

"*AA must examine the implications of the proposed project [for species and habitats for which] the European site has not been listed...provided that those implications are liable to affect the conservation objectives of the [European] site*"; and,

"*the competent authority is permitted to grant to a plan or project consent which leaves the developer free to determine subsequently certain parameters relating to the construction phase (e.g. location of the construction compound and haul routes etc..), only if that authority is certain that the development consent granted establishes conditions that are strict enough to guarantee that those parameters will not adversely affect the integrity of the European site*".

Mitigation is not considered at AA Screening Stage, having regard for the recent ruling of the Court of Justice of the European Union (CJEU)[8] that "*it is not appropriate, at the Screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on [a European site]*".

3.2 National Guidance

There have been significant changes to AA practice since the last published Irish governmental guidance on AA (Department of Environment, Heritage and Local Government DoEHLG, 2010) arising from rulings in European, and Irish courts, and associated changes in statute. The updated EC (2018) guidance is therefore followed in lieu of DoEHLG guidance in this AA Screening Report, as supplemented by the unpublished' (online) guidance from the National Parks and Wildlife Services (NPWS)[9] (updated to August 2018, at the time of writing) which covers regulatory scenarios related to AA.

3.3 Desktop Study

A desktop study was carried out by AECOM in April 2020, with particular regard for the following sources:

- Information on the existing operations of the DWtE (and the proposed project) provided by DWtE and AECOMs design team;

[5]Available from http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm . Accessed April 2020.
[6] Including, but not limited to Case C-323/17 'People Over Wind', C-258/11 'Galway City Outer Bypass'; Peter Sweetman v Coillte Teoranta
[7] Case C 461/17 'Holohan.
[8] Judgment of the Court (Seventh Chamber) 12 April 2018: Case C-323/17, REQUEST for a preliminary ruling under Article 267 TFEU from the High Court (Ireland), made by decision of 10 May 2017, received at the Court on 30 May 2017, in the proceedings People Over Wind, Peter Sweetman v Coillte Teoranta.
[9] Available online at https://www.npws.ie/development%20consultations. Accessed April 2020

- Information on ranges of mobile QI populations in Volume 1 of NPWS' Status of EU Protected Habitats and Species in Ireland (NPWS, 2019a and NPWS 2019b),
- Mapping of European site boundaries and known locations of QIs and SCIs in Conservation Objective mapping for relevant European sites available online from the NPWS[10];
- Distribution of mobile QI populations of distant European sites held online by the National Biodiversity Data Centre (NBDC)[11]; and,
- Data including surface water quality (including transitional waters) and ground water quality status, and river catchment boundaries available from the online database of the Environmental Protection Agency (EPA)[12].

3.4 Information Required

This AA Screening report describes the nearest European sites to the DWtE site. It also identifies the presence of other potentially relevant European sites, including those designated for mobile QIs or SCIs; which could occur beyond the DWtE site, but within the potential Zone of Influence (ZoI; defined in Section 3.5) of likely significant effects from the proposed project. The identification of the ZoI and relevant European sites has regard for relevant source-pathway-receptors.

The 'source-pathway-receptor' conceptual model is a standard tool in environmental assessment to determine linkages between sensitive features and sources of effects. In order for an effect to occur, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism means there is no likelihood for the effect to occur. An example of this model is provided below:

- Source (s); e.g. Outfall of industrial discharge to watercourse;
- Pathway (s); e.g. Contamination of receiving watercourse including fish therein; and,
- Receptor (s); e.g. feeding otter *Lutra lutra* whose available prey may be reduced.

The model is focused solely on relevant QIs/SCIs for which European sites are designated. Any Conservation Objectives referred to in this Report are referenced to identify the date of publication and version number (See Appendix A).

3.5 Zone of Influence

The proposed project has the potential to result in a number of environmental effects. The analysis of these effects, using 'best available' scientific knowledge and professional judgement, leads to the identification of ZoIs. The proximity of the proposed project to European sites, and more importantly their QIs/SCIs, can be of importance in identifying source-pathway-receptor models which could result in significant effects. Irish departmental guidance on AA states:

"*For projects, the distance could be much less than 15 km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects*"[13] (DoEHLG, 2010; p.32, para 1).

Habitats and plants are not mobile, however, fauna species are and their predicted mobility outside European sites (i.e. range) will affect whether they occur within the ZoI. The range of fauna species varies considerably, from a maximum of several metres (e.g. in the case of whorl snails *Vertigo* spp.), to hundreds of kilometres (in the case of migratory wetland birds). Whilst habitats and plants are not mobile, these features can still be significantly affected at considerable distances from an effect source; for instance where an instream habitat is located many kilometres downstream from a pollution source.

4. SCREENING ASSESSMENT

4.1 Description of Relevant Baseline Environment

The DWtE site, within which the proposed project is located entirely on made ground within the boundary of the existing operational DWtE site (Figure 1). Online satellite mapping available from Google maps[14] indicates there

[10] Available from https://www.npws.ie/maps-and-data Accessed April 2020.
[11] Available from http://maps.biodiversityireland.ie/# Accessed April 2020.
[12] Available from http://gis.epa.ie/Envision Accessed April 2020.
[13] DoEHLG (2010) Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (Department of Environment, Heritage and Local Government, Rev Feb 2010).
[14] https://www.google.com/maps/ Accessed April 2020.

are no significant semi-natural vegetated areas within the DWtE site. A number of existing short 'defunct' treelines (i.e. with breaks) along each side of the Shellybanks Road, which partially screen the existing and proposed project from nearby roadways.

Analysis of the EPA online mapper[15] indicates there are no surface water features within the DWtE site. However, surface water features in the form of the ESB cooling water channel (this is not a natural watercourse as per datasets (river and stream segments) reviewed on EPA map viewer) exists 20 m north of the boundary of the DWtE site. This in turn drains into the River Liffey located 200 m north of the DWTE site. Cooling water from the DWtE site is discharged to the Liffey Estuary through an existing outfall, located c.100 m northeast of the DWtE boundary.

According to the EPA's online mapper, the estuary is of "Good" Transitional Waterbody Status (2013-2018)[15].

4.2 European Sites

4.2.1 Nearest European Sites

This section should be read with Figure 1. The nearest European site to the DWtE site is the South Dublin Bay and River Tolka SPA, part of which adjoins the boundary of the proposed project (the DWtE site does not overlap the boundary of the SPA). This part of the SPA comprises a narrow strip of managed grassland, located between the Ringsend WwTW to the north, and the scrubby hill comprising the Irishtown Nature Park to the south. This area, commonly known as 'the compensatory grassland', was provided as a winter feeding area for light-bellied Brent geese *Branta bernicla hrota*, under a condition of the 1997 certification for the Dublin Bay Project extension to Ringsend WwTW. The existing DWtE site adjoins the compensatory grassland in its southeastern corner at which point the DWtE site is separated from the compensatory grassland by an existing (permanent) Paladin boundary fence. Surveys from 2007 to 2014 (Mayes 2012, Mayes 2014) have found this area is known to hold significant SCI feeding populations of light-belied Brent goose, and occasionally other SCI waders such as curlew *Numenius arquata*, and black-tailed godwit *Limosa limosa*.

The next nearest European site to the proposed project is the South Dublin Bay SAC (site code 210) in the area of fully tidal mudflat within Dublin Bay c. 230 m to the south of the DWtE site. The SAC is designated solely for QI mudflat habitat. The estuarine habitats in this area also designated as the South Dublin Bay and River Tolka SPA. A portion of scrub-covered brownfield land forms a visual barrier between the proposed project site and this estuarine area, which is co-designated as the South Dublin Bay SAC and South Dublin Bay and River Tolka SPA.

According to the latest version of Conservation Objectives available at the time of writing (NPWS, 2014), there are no roosting SCI populations within the DWtE site, although the estuarine habitats within the Dublin Bay and River Tolka SPA are home to SCI light-bellied Brent goose, nine species of wintering wader, and wintering black-headed gull *Chroicocephalus ridibundus*. All these species feed in the estuarine areas within 100 m of the DWtE site; while NPWS data (NPWS, 2014) indicates black-headed gull, and light-bellied Brent goose roost in nearby intertidal areas. NPWS data (2014) also records relatively small numbers of roosting oystercatcher *Haemotopus ostralegus* and turnstone *Arenaria interpres* roosting on grassy and manmade habitats on the upper shoreline on ESB lands c. 200 m to the east of the DWtE site.

The SPA is also designated for breeding colonies of common tern *Sterna hirundo*, roseate tern *Sterna dougalii* and Arctic tern *Sterna paradisaea* which breed on man-made, off-shore structures to the north of the Pigeon House peninsula, and feed in estuarine and offshore areas in summer and autumn. These tern populations feed throughout Dublin bay, and form a large post-breeding colony on the strand at Merrion Gates in late summer several kilometres to the south of the proposed project.

4.2.2 Other European Sites

There are a number of other European sites in wider Dublin Bay to the north and east. The nearest of these sites is the North Dublin Bay SAC (site code 206) located 2.72 km north of the proposed project. All the sites discussed above are shown in Figure 1. The Conservation Objectives and Qualifying Interests of all sites discussed are provided in Appendix A.

4.3 Source-Pathway Receptor Linkages

Having assessed the proposed project, there are no potential source-pathway-receptor linkages between the proposed project and European sites.

The design team has confirmed that, the addition of the new waste streams will:

[15] http://gis.epa.ie/Envision . Accessed April 2020

- Not increase the permitted annual capacity of 600,000 tonnes, and as such will not alter the existing nature or volume of emissions to air and water.
- Not increase operational traffic, lighting, noise, or human presence at the DWtE site associated with the proposed project.

The design team has provided further evidence in relation to the above as follows:

- In order to adhere to the current licence W0232-01 (Condition 1-Scope) the proposed project will, despite the proposed Technical Amendment, remain within the licence limits in accordance with relevant air emission regulations;
- Furthermore, regarding air emissions, the existing Air Pollution Control System will, following implementation of the proposed project, continue to control air emissions through automatically adjusting 'dosage rates' for the lime, activated carbon and ammonia water, as it currently does for the existing DWtE facility; and,
- In order to adhere to the current licence W0232-01 (Condition 5.-Emmsions), There will be no increase in the volume or temperature of emitted process cooling water into the receiving waters of the River Liffey Estuary.
- In order to adhere to the current licence W0232-01 (Condition 1-Scope) the proposed project will not result in an increase in operational traffic, noise, vibration and/or lighting from machinery and/or visible human presence.
- Having regard for the above, the proposed project will not result in any air, noise, surface or foul water, or other emissions likely to significantly affect European sites.

4.4 In-Combination Effects

In November 2007[16], An Bord Pleanála determined (and have similarly found for subsequent planning amendments) that the operation of the existing Dublin Waste-to-Energy site would not adversely affect the integrity of any European sites, either alone or in combination with other plans or projects. The Pigeon House peninsula, and wider Dublin Bay are subjected to intensive recreational and industrial pressures, However, any further projects within the potential zone of influence of in-combination effects from the proposed project, will be subjected to the screening for AA, and if necessary AA.

There are ongoing initiatives to monitor and protect the European sites within the bay. For instance, the Dublin Bay Birds Project is a programme of monthly waterbird counts and observations within Dublin Bay to define the most important areas used by waterbirds and to examine their ecological requirements. BirdWatch Ireland and Dublin City Council are implementing the Dublin City Birds Project, with the aim to implement many of the key measures identified in the Action Plan for Urban and Suburban Birds in Ireland 2011-2020 throughout Dublin City (including waterbird usage of urban parklands).

There are, additionally, a suite of policy commitments in the Dublin City Development Plan 2016-2022, the Dun Laoghaire-Rathdown County Development Plan 2016-2012, and the Fingal Development Plan 2011-2017 targeted towards ensuring conservation of waterbird habitats, during planning and development.

The above projects and plans indicate there are checks in place to protect designated birds and their habitats in Dublin Bay.

Regarding water quality status, Irish Water, who has national statutory remit for wastewater and drinking water services, has committed to a 25 year programme of improvements to wastewater impacts on surface waters in their Water Services Strategic Plan (WSSP).

There are also binding obligations on all Irish local authorities including Dublin City Council to achieve good status of surface waters, under the terms of the EU Water Framework.

Having regard for the inherent legal and policy protections above, no significant in-combination effects are predicted on European sites.

[16] Planning Reference PL29S.EF2022.

5. Concluding Statement

The proposed project is not connected with, or necessary to the management, of any European site. In view of best scientific knowledge and on the basis of objective information, it is concluded that the proposed project whether individually or in combination with other plans or projects, beyond reasonable scientific doubt will not have significant effects on European sites identified during the AA Screening. There will be no potential for significant effect as a result of the proposed project on the conservation objectives or overall integrity of any European site. Therefore, a full Appropriate Assessment of the proposed project is not required and can be excluded on this basis.

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NPWS (2015b) Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and Gaeltacht.

Appendix A **Conservation Objectives Of European Sites Described In Report**

Table A. Conservation Objectives for Special Areas of Conservation Referenced in AA Screening Report

Site (Code) and distance from proposed project	Qualifying Interest (s)	Conservation Objective
South Dublin Bay SAC (Site code 210); 0.23 km south.	Mudflats and Sandflats	To Maintain Favourable Conservation Condition The favourable conservation status of a habitat is achieved when: • its natural range, and area it covers within that range, are stable or increasing; • 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.
North Dublin Bay SAC (Site code 206); 2.72 km north-east.	Mudflats and sandflats Annual vegetation of drift lines Salicornia and other annuals colonising mud and sand Atlantic salt meadows Mediterranean salt meadows Embryonic shifting dunes	To Maintain Favourable Conservation Condition Favourable conservation status of a habitat is achieved when: • its natural range, and area it covers within that range, are stable or increasing; • 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.

Table B. Conservation Objectives for Special Protection Areas Referenced in AA Screening Report

Site (Code) and distance from proposed project	Qualifying Interest (s)	Scientific Name	Population	Conservation Objective
South Dublin Bay and Tolka Estuary SPA (Site code 4024); < 0.01 km south.	Artic tern	*Sterna paradisaea*	Breeding/passage	To Maintain Favourable Conservation Condition The favourable conservation status of a species is achieved 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; • 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.
	Bar-tailed godwit	*Limosa lapponica*	Wintering	
	Black-headed gull	*Chroicocephalus ridibundus*	Wintering	
	Common tern	*Sterna hirundo*	Breeding/passage	
	Dunlin	*Calidris alpina*	Wintering	
	Grey plover	*Pluvialis squatarola*	Wintering	
	Knot	*Calidris canutus*	Wintering	
	Light-bellied Brent goose	*Branta bernicla hrota*	Wintering	
	Oystercatcher	*Haematopus ostralegus*	Wintering	
	Redshank	*Tringa totanus*	Wintering	
	Ringed plover	*Charadrius hiaticula*	Wintering	
	Roseate tern	*Sterna dougalii*	Breeding/passage	
	Sanderling	*Calidris alba*	Wintering	
	Wetlands and waterbirds	N/A	N/A	
North Bull Island SPA (Site code 4006); 2.72 km north east.	Bar-tailed Godwit	*Limosa lapponica*	Wintering	To Maintain Favourable Conservation Condition The favourable conservation status of a species is achieved 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; • 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.
	Black-headed gull	*Chroicocephalus ridibundus*	Wintering	
	Black-tailed Godwit	*Limosa limosa*	Wintering	
	Curlew	*Numenius arquata*	Wintering	
	Dunlin	*Calidris alpina*	Wintering	
	Golden plover	*Pluvialis apricaria*	Wintering	
	Grey plover	*Pluvialis squatarola*	Wintering	
	Knot	*Calidris canutus*	Wintering	
	Light-bellied Brent goose	*Branta bernicla hrota*	Wintering	
	Oystercatcher	*Haematopus ostralegus*	Wintering	
	Pintail	*Acuta acuta*	Wintering	
	Redshank	*Tringa totanus*	Wintering	
	Sanderling	*Calidris alba*	Wintering	

Site (Code) and distance from proposed project	Qualifying Interest (s)	Scientific Name	Population	Conservation Objective
	Shelduck	*Tadorna tadorna*	Wintering	
	Shoveler	*Anas clypeata*	Wintering	
	Turnstone	*Arenaria interpres*	Wintering	
	Wetland and Waterbirds	N/A	N/A	

Appendix B **Figure 1**

Legend

- Proposed Project Site

Numbers of Roosting Birds

- 1-49
- 50-99
- Waterbird Survey Programme Roost Locations
- Special Areas of Conservation (SAC)
- Special Protection Areas (SPA)
- SAC QI - 1140 Tidal Mudflats and Sandflats

Bird species abbrevations:

BH	Black-headed gull
OC	Oystercatcher
PB	Light-bellied Brent goose
SS	Sanderling
TT	Turnstone

Notes:
- Bird roosting data sourced from NPWS Conservation Objectives Supporting Document for North Bull Island SPA and South Dublin Bay and River Tolka Estuary SPA (NPWS, 2012); based on a single winter season survey data 2011/2012.

0 — 200 Meters

N

Alternate roosting site for terns of South Dublin Bay and River Tolka Estuary SPA

The Dolphins' Tern Breeding Platform

Brent Goose Compensatory Grassland

South Dublin Bay SAC

South Dublin Bay and River Tolka Estuary SPA

BH

BH

BH, PB

Client: Dublin Waste to Energy Ltd.	Title: Fig. 1. Proposed Project Site and Locations of Relevant Features of European Sites in AA Screening Report	AECOM Adelphi Plaza George's Street Upper Dun Laoghaire Co. Dublin A96 T927 Tel +353 (1) 238 3100 Fax +353 (1) 238 3199 www.aecom.com	Drawn: Steven Walker / Checked: XXX
Project: Dublin Waste to Energy Technical Amendment			Verified: XXX / Approved: XXX
			Date: 29/01/2019 / Scale at A3: 1:4,000
			Drawing Reference: 20190129_Fig1_Designated_Sites.v2 / A3

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