Appropriate Assessment Screening Report

Industrial Emissions (IE) Licence (W0232-01) Review

Dublin Waste to Energy

Project number: 60587300

October 2020

Quality information

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1. Introduction

AECOM Ireland Limited (AECOM) is assisting Dublin Waste to Energy (DWtE) to apply to Environmental Protection Agency (EPA) for permission to accommodate a 15% increase in the amount of waste the facility can receive on an annual basis (hereafter '**the proposed project'**).

This Appropriate Assessment (AA) Screening Report contains information, produced by AECOM on behalf of DWtE to inform the EPA's 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 is likely to have a significant effect on any 'European sites' (see definition in section 1.2 below), either alone or in combination with other plans or projects.

1.1 Overview of Screening for Appropriate Assessment

The European Communities Habitats Directive 9ï2/43/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 Section 177U of the Planning and Development Acts 2000-2020 for land use planning. Section 177(U). – (1) transposes the requirement to screen for AA.

177U. — (1) A screening for appropriate assessment of a draft Land use plan or application for consent for proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site.

An AA is required where significant effects on European sites are likely (or more specifically '*cannot be excluded on the basis of objective information*'[1]). If triggered, AA then determines whether the project will adversely affect the integrity of the European site, in the light of the European site's Conservation Objectives.

1.2 European sites

European sites comprise[2]:

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

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 that they are subject to equal protection.

[1] The' Waddenzee' ruling (C-127/02) is an influential judgement of the Court of Justice European Union 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'.

[2] 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 DWtE site and proposed project at the DWtE site.

2.1 Existing Site Overview

The DWtE site is located on the Poolbeg Peninsula in Dublin Bay on the eastern side of Dublin City (Figure 1). The nearby intertidal extents of Dublin Bay are designated as the South Dublin Bay SAC (site code 210) and the South Dublin Bay and River Tolka SPA (site code 4024). Most of the 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 Port to the north, Shellybanks Road to the west and Ringsend Wastewater Treatment Plant (WwTP) to the east. A public footpath, roadway and the shoreline of Dublin Bay lie to the south. Irishtown Nature Park (which is not within a European site) is located directly south-east of the site.

There is significant industrial activity surrounding the DWtE site including the Electricity Supply Board (ESB) and Ringsend WwTP located to the east and All Away Waste and Dublin Bay Power Station located to the west. Ecocerm Ireland is located c. 50 m north of the DWtE site and Hammond Lane Metal Recycling is located c.150 m northwest of the DWtE site. There are residential areas c. 1 km to the west of the DWtE site.

2.2 Operation of Existing DWtE Site

In November 2007[3], An Bord Pleanála determined (and have similarly found for subsequent planning amendments) that the operation of the (now existing) DWtE site would not adversely affect the integrity of any European sites, either alone or in combination with other plans or projects. For the avoidance of doubt, the adjacent European sites in Dublin Bay were all designated at the time of An Bord Pleanála's original determination.

All processing carried out at the DWtE site is completed within the process building. This is where waste is received and processed. A site security building and a small pump station for cooling water are 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 traffic 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 two lines supply steam to one 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 62-63MW although this could increase to 69 MW if consent is granted for the 15% increase in waste volumes.

2.2.2 Waste

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

Bottom ash remains at the end of the grate after the burnout of the waste and is classified as a non-hazardous material. 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 recovery of bottom ash material.

[3] Planning Reference PL29S.EF2022).

Flue gas treatment residues are 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 is classified as hazardous. The residue is transported offsite in sealed containers for appropriate recovery.

2.2.3 Cooling Water

Cooling water supply from the River Liffey estuary is required to cool the steam from the boiler. The water is extracted at a rate of approximately 3.5 m^3/sec. after which it is returned to the estuary (in accordance with specific IE Licence conditions) on the northern side of the Poolbeg Peninsula through an existing outfall channel, located c.60 m from the DWtE site entrance. The outfall point is c. 750 m upstream of the nearest European site (South Dublin Bay and River Tolka SPA).

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 under the IE Licence. The permitted temperature difference between the intake water and the discharged water is limited to 9°C under the IE Licence.

2.3 Proposed Project

As noted in the introduction, the proposed project is an increase of annual waste tonnage capacity of the DWtE site from 600,000 tonnes per year to 690,000 tonnes per year (an increase of 15%).

3. Methodology

3.1 Screening Assessment Methodology

This AA Screening report considers the likely area over which effects could occur (the Zone of Influence – see below), the potential for and type of impacts, whether there are Likely Significant Effects (LSE) on QIs/SCIs, and whether in-combination (cumulative) effects are possible. The identification of the ZoI and relevant European sites uses the source-pathway-receptor model.

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 assessment is focused solely on QIs/SCIs for which European sites are designated. Other species or habitats are not relevant except where QIs/SCIs depend upon them (for example, non-QI river habitat is relevant to QI otter and fish, non-QI prey fish of otter are relevant to QI otter, and SCI birds may be dependent on non-SCI functional land). Any Conservation Objectives referred to in this Report are referenced to identify the date of publication and version number (See Appendix B).

3.2 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 a Zone of Influence (ZoI). The proximity of the proposed project to European sites, and their QIs/SCIs, is of importance in identifying source-pathway-receptor models which could result in LSE. The ZoI will differ for different impacts and QIs/SCIs. Irish departmental guidance on AA states:

"*For projects, the distance could be much less than 15 km, and in some cases less than 100 m, 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*"[4] (DoEHLG, 2010; p.32, para 1).

[4] DoEHLG (2010) Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (Department of Environment, Heritage and Local Government, Rev Feb 2010).

Habitats and plants are not mobile and it is therefore easier to determine whether habitats and plants are within the ZoI. In contrast, fauna are mobile and the distances they move beyond European sites (i.e. range) and their use of functional land outside them must be considered in determining if they occur within the ZoI. The range of fauna species away from European sites for which they are QI/SCI varies considerably, from a maximum of several metres (e.g. whorl snails *Vertigo* spp.) to many kilometres (e.g. wetland birds and otter). QIs/SCIs, whether mobile or not, can be indirectly affected at considerable distances from an effect source, examples including airborne pollution, waterborne pollution, noise, vibration, heat, light or other visual disturbance, and recreational visitor pressure.

In this case, the Facility being assessed is not expanding into and does not lie within a European site. Consequently, direct loss of European site habitat will not occur, but indirect effects could. Noise and vibration disturbances associated with this type of Facility are relatively minor and would operate over short distances – the SCI bird species of nearby European sites are waterbirds, for which noise and visual disturbance typically does not exceed 300 m (see, for example, Cutts *et al* (2013); vibration dissipates more quickly than sound, and the associated ZoI would be expected to be smaller. Therefore, the ZoI for noise, visual disturbance and vibration is not likely to exceed 300 m. The study area for worst-case effects from airborne emissions is stated in the EIA air quality chapter (Chapter 7 of the EIA) to be 10 km, which is the maximum area over which effects (including those upon ecological features) from stack emissions are considered possible; traffic emissions would not be significant beyond 200 m (see for example Smithers, 2016). Waterborne pollution may travel significant distances, but cannot travel upstream and is very strongly diluted by the estuarine environment in the immediate and seaward direction, therefore the ZoI for waterborne pollution is also taken as up to 2 km. There is also no habitat outside of European sites (which includes the compensatory grassland strip) near the DWtE Site that could be used as functional land for QI/SCI species from the adjacent or more distant European sites (e.g. fields that might be used by SCI waterbirds for roosting/foraging). Therefore, the maximum ZoI for the DWtE Site is 10 km, for airborne stack emissions.

3.3 European Guidance

This report has been prepared in accordance with *Managing Natura 2000 sites. The Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (EC, 2001) and a recent update to this guidance issued in 2018 (EC, 2018). 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*" [5]. This AA Screening Report complies with relevant case law.

Note that mitigation is not considered at the AA Screening Stage, in compliance with the recent ruling of the Court of Justice of the European Union (CJEU)[6] 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]*".

3.4 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 legislation. The updated EC (2018) guidance is, therefore generally followed in lieu of DoEHLG guidance in this AA Screening Report, as supplemented by the (online) guidance from the National Parks and Wildlife Services (NPWS)[7] (last updated by NPWS on 15 August 2018, when accessed on 16 October 2020). Exceptions where the DoEHLG guidance is still referenced in this AA Screening Report including the approach to Zones of Influence therein, as detailed under "Zones of Influence".

3.5 Desktop Study

A desktop study was carried out by AECOM to obtain relevant information in April 2020 (updated in October 2020 regarding EPA water quality), using the following sources:

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

[5] Including, but not limited to Case C-323/17 'People Over Wind', C-258/11 'Galway City Outer Bypass'; Peter Sweetman v Coillte Teoranta.
[6] 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.
[7] Available online at https://www.npws.ie/development%20consultations. Accessed October 2020

- Information on all relevant European sites in Ireland and their Qualifying Interests (QI) for which sites are designated (i.e. non-bird species and habitats), and Special Conservation Interests (SCIs; bird species and habitats) available online from NPWS website;
- Information on ranges of mobile QI populations (i.e. the area over which mobile species are known to occur) in Status of EU Protected Habitats and Species in Ireland, Volume 1 (NPWS, 2019a,b);
- Mapping of relevant European site boundaries and known locations of QIs and SCIs in Conservation Objective mapping for relevant European sites available online from the NPWS[8]; and,
- Distribution records for QI populations held online by the National Biodiversity Data Centre (NBDC)[9]; and,Data including surface water quality (including transitional waters) and groundwater quality status, and river catchment boundaries available from the online database of the Environmental Protection Agency (EPA)[10].

4. Screening Assessment

4.1 Description of Relevant Baseline Environment

The DWtE site, is located entirely on made ground (Figure 1). Recent satellite mapping available from Google maps[11] indicates there are no significant semi-natural vegetated areas within the DWtE site. There are 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 data from the EPA's Envision web-based mapping application[12] indicates there are no surface water features within or directly adjacent to the DWtE site footprint. The nearest surface water feature is the River Liffey Estuary, located c. 230 m to the north of the DWtE site at its nearest point. The Liffey Estuary is not designated as a European site. According to the EPA's Envision web-based mapping application[13], the estuary is now of "*good" water status*[12]. Cooling water from the DWtE site is discharged to the Liffey Estuary through an existing outfall.

The fully tidal estuarine area of Dublin Bay is located c. 220 m south of the DWtE site.

4.2 European Sites

This section identifies all European sites within the potential ZoI. It should be read in conjunction with Figure 1. QI/SCI species/habitats and associated conservation objectives for relevant European sites are listed in Appendix B. In all cases, the conservation objective is "to maintain favourable conservation condition".

4.3 South Dublin Bay and River Tolka SPA

The nearest European site to the DWtE site is the South Dublin Bay and River Tolka SPA, part of which adjoins the proposed project. This part of the SPA comprises a narrow strip of managed grassland, located between the Ringsend WwTP to the north, Irishtown Nature Park to the south. This area, known to the Ringsend WwTP (and in ecology reports relating to same) as '*the compensatory grassland'*, was provided as a winter-feeding area for light-bellied Brent geese *Branta bernicla hrota*, as a planning condition of the 1997 planning permission for the Dublin Bay Project extension to Ringsend WwTP. The existing DWtE site does not impinge upon this compensatory grassland: the south-eastern corner of the DWtE Site is separated from the inland end of the compensatory grassland strip by an existing (permanent) paladin boundary fence. Surveys from 2007 to 2014 (Mayes 2012, Mayes 2014) found that this area holds 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.*

However, the vast majority of the SPA occupies large parts of Dublin bay itself, extending around the industrial areas northwards and southwards, and southwards beside other parts of Dublin, up to approximately 6 km from the DWtE Site. The total area of the South Dublin Bay and River Tolka SPA is 2193 hectares.

[8] Available from https://www.npws.ie/maps-and-data Accessed April 2020.
[9] Available from http://maps.biodiversityireland.ie/# Accessed April 2020.
[10] Available from http://gis.epa.ie/Envision Accessed October 2020.
[11] https://www.google.com/maps/ Accessed October 2020
[12] http://gis.epa.ie/Envision . Accessed October 2020
[13] http://gis.epa.ie/Envision . Accessed October 2020

4.4 South Dublin Bay SAC

The next nearest European site to the proposed project is the South Dublin Bay SAC which covers the area of fully tidal mudflat within Dublin Bay, at closest situated approximately 100 m south of the DWtE site. The SAC is designated solely for QI mudflat habitat. A portion of scrub-covered brownfield landforms a visual barrier between the DWtE Site and this estuarine area. This SAC is largely coincident with part of 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 in the vicinity of the DWtE site, although the estuarine habitats within the Dublin Bay and River Tolka SPA are used by 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; 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 approximately 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 (see Figure 1). 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.

4.5 Other European Sites

There are a number of other European sites in the wider Dublin Bay to the north and east with the ZoI, which are listed below:

- **North Dublin Bay SAC (site code 0206)**

  Closest distance is 2.7 km north-east of the proposed project.

  QIs for this site are mudflats and sandflats not covered by seawater at low tide, annual vegetation of drift lines, *Salicornia* and other annuals colonising mud and sand, Atlantic and Mediterranean salt meadows, embryonic shifting dunes, shifting dunes along the shoreline with *Ammophila arenaria*, fixed coastal dunes, humid dune slacks and petalwort *Petalophyllum ralfsii*.

- **North Bull Island SPA (site code 4006)**

  Closest distance is 2.7 km north-east of the proposed project.

  SCIs for this site are waterbirds including light-bellied brent goose, shelduck *Tadorna tadorna*, teal *Anas crecca*, pintail *Anas acuta* and shoveler *Anas clypeata*.

- **Rockabill to Dalkey Island SAC (site code 3000)**

  Closest distance is 6.8 km east of the proposed project.

  QIs for this site are reefs and harbour porpoise *Phocoena phocoena*.

- **Howth Head SAC (site code 0202)**

  Closest distance is 7.2 km north-east of the proposed project.

  QIs for this site are vegetated sea cliffs of the Atlantic and Baltic coasts and European dry heaths.

- **Baldoyle Bay SAC (site code 0199)**

  Closest distance is 7.4 km, north-east of the proposed project.

  QIs for this site are mudflats and sandflats not covered by seawater at low tide, *Salicornia* and other annuals colonising mud and sand, and Atlantic and Mediterranean salt meadows.

- **Baldoyle Bay SPA (site code 4016)**

  Closest distance is 7.4 km north-east of the proposed project.

  SCIs for this site are light-bellied brent goose, ringed plover *Charadrius hiaticula*, golden plover *Pluvialis apricaria*, grey plover *Pluvialis squatarola* and bar-tailed godwit.

- **Dalkey Islands SPA (site code 4172)**

  Closest distance is 9.5 km north-east of the proposed project.

  SCIs for this site are roseate tern *Sterna dougalii*, common tern *Sterna hirundo* and arctic tern *Sterna paradisaea*.

4.6 Likely Significant Effects

The potential sources for Likely Significant Effects (LSE) have been set out in Section 3 in defining the ZoI. The primary issue is air emissions. Other possible sources of LSE are noise, visual and vibration disturbance, and water emissions.

The increase in air emissions from the DWtE stacks is expected to remain well within the Emission Level Values (ELVs) for the existing IE Licence. This is because the facility has not been operating close to the limit of its permitted emissions and this will remain the case even with the 15% increase in throughput. The ELVs are set by EPA for protection of the environment and it is a legal requirement in issuing Licences that impacts on European sites are considered by the regulator. Therefore, the ELVs have already taken into account the presence of European sites and will have been set at appropriate levels to avoid the likelihood of significant effects. The EIA air quality assessment (Chapter 9 of the EIAR) also notes that the ELVs are in accordance with the Industrial Emission Directive (IED) (2010/75/EU) and well within recent EC best available techniques guidance (Pinasseau *et al* 2018). The highest quantity of emitted pollutant of ecological concern is that of NO_x. However, as noted in the EIA air quality assessment and associated appendix (Chapter 9 of the EIAR), the standard itself will not be exceeded, and the impact of the proposed project on NO_X will not exceed 1% of the Irish air quality standard (30 ug m^{-3}), except to a negligibly small degree (1.05%) at Irishtown Nature Reserve adjacent to the DWtE Site – the vast majority of areas encompassed by European sites are further afield and would be subject to lower emissions. The 1% threshold has become widely used throughout the air quality assessment profession (for example, being referenced in Institute of Air Quality Management guidance and in the UK Environment Agencies permitting guidelines), to define a reasonable quantum of long-term pollution which is not likely to be discernible from fluctuations in background measurements. This can therefore be deemed a nugatory and imperceptible change to the existing operation, with no possibility of an effect on QI/SCI species or habitats of any European sites.

Other pollutant concentrations are slight and well below critical loads for environmental protection (given for example at http://www.apis.ac.uk/). For example, the concentrations of NH_3 and SO_2 attributable to the proposed project are 0.45% and 0.30% respectively. Again, the vast majority of the adjacent European sites is further afield and can be expected to experience lower concentrations.

In respect of other pollutants, such as heavy metals, emissions are less than 10% of the allowable licensed concentrations. Traffic-related increases in emissions will also be negligible given the small increase of 20 vehicular waste deliveries and that the vast majority of the area encompassed by the adjacent European sites is more than 200 m from the relevant roads and DWtE Site and would therefore be unaffected by traffic emissions. Moreover, when translated into air quality results (NO_x concentrations and nitrogen deposition rates) this would be inconsequential even in-combination with other projects and plans for the following reasons:

- Daily traffic flows are not fixed numerals but fluctuate from day to day. The AADT for a given road is an annual average (specifically, the total volume of traffic for a year, divided by 365 days). It is this average number that is used in air quality modelling, but the 'true' flows on a given day will vary around this average figure. Very small changes in average flow lie well within the normal variation (known as the standard deviation or variance) and would not result in a statistically significant difference in the total AADT; and,
- When converted into NO_X concentrations, or nitrogen deposition rates, the experience of AECOM's air quality modelling team is that very small changes in AADT would only affect the third decimal place. The third decimal place is not normally reported in air quality modelling to avoid false precision. For this reason, pollution is generally not reported to more than 2 decimal places (0.01). Anything smaller is simply reported as less than 0.01 (< 0.01) i.e. probably more than zero but too small to model with precision.

In view of this information, it is concluded that the airborne emissions from the proposed project are nugatory and that there are no LSE from airborne emissions on any European sites.

The DWtE Site is not one that produces large amounts of noise, visual disturbance or vibration. These factors can potentially affect mobile relevant species sensitive to them, including SCI birds. However, there will not be any alteration to or expansion of the facility and vehicles supplying the increased waste are expected to rise in frequency by a modest 20 trips per day (currently, there are 95 such vehicular trips per day) and will utilise existing road

infrastructure. For example, a 50% increase in total traffic flows on a road is required to increase noise levels by 3 dB(A), the minimum change perceptible as a change. For these reasons, noise, visual disturbance and vibration would affect a far smaller area than the 300 m possible ZoI established in Section 3. Moreover, SCI bird species including brent goose, curlew and black-tailed godwit are known to occur on the compensatory grassland habitat strip immediately adjacent to the DWtE Site and other industrial sites, indicating low levels of noise, visual disturbance (if any) and vibration from the DWtE Site and other adjacent industrial sites, to which the birds are evidently habituated. Furthermore, there will be no change to the access used by waste disposal vehicles, which will still access the site via the Pigeon House Road, and the compensatory grassland strip is visually screened from this access by intervening structures. There are not known to be any other SCI birds within 300 m of the DWtE Site (see Figure 1 which shows records of other nearby SCI birds), nor would there be likely to be any given the adjacent land uses of industry and the small Irishtown Nature Reserve (containing rough grassland, dune and scrub habitats, which are not favoured habitats of the SCI bird species). Consequently, there are considered to be no LSE from noise, visual disturbance and vibration on any European sites.

There will be no significant change to water emissions. A toxicity survey carried out in 2019 (Heffernan, 2020) found the results to be as expected for estuarine waters with no possibility of adverse effects on marine biota. There will be no change to the way the existing operational facility interacts with the marine environment. Therefore, there are no LSE arising from water emissions on any European sites.

In view of the above, it is concluded that the proposed project will not result in any LSE on any European sites.

4.7 In-Combination Effects

Theoretically, the proposed project could result in in-combination effects with other consented, planned and reasonably foreseeable projects that include an industrial emissions source. There is a particularly large consented development in the nearby area, with register reference PWSDZ3270/19 – this is a mixed use urban development, incorporating various facilities, infrastructure and public realm, part of and intended to facilitate future aspects of the Poolbeg West Strategic Development Zone; it is non-industrial and does not therefore constitute a likely source of emissions relevant to in-combination assessment, particularly given that it was subject to EIA, and Natura Impact Assessment addressing European sites.

However, as discussed above, the only material change to the current operation is a 15% increase in throughput and even with that increase the emissions from the facility would remain within the levels deemed acceptable by the EPA when the Licence for the facility was granted. The ELVs are set by EPA for protection of the environment and it is a legal requirement in issuing Licences that impacts on European sites are considered by the regulator. Therefore, the ELVs have already taken into account the presence of European sites and will have been set at appropriate levels to avoid significant effects. Moreover, the Irish standard for NO_X will not be exceeded even with the increase in throughput.

There are also several reasons why other projects or plans would be prevented from having significant effects:

- Any projects or plans would be subjected to screening for AA, and if necessary, AA with appropriate mitigation;
- Other projects involving emissions would similarly be subject to ELVs set by the EPA, which is duty-bound to protect the environment;
- There are a number of 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 is 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, providing checks to protect QI/SCI of European sites in Dublin Bay. Note that there are no physical changes to the DWtE sites required by the proposed project, and minimal traffic increase, and the proposed project does not breach any policy within these plans;
- Irish Water, which has a 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 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 Directive.

Given the inherent legal and policy protections above and the nugatory effects of the proposed project itself, it can be excluded, on the basis of objective information, that the proposed development when assessed in combination with other plans and projects will have a significant effect on the relevant European sites.

5. Concluding Statement

Air emissions are the primary concern, however, the operation of the proposed project to increase throughput by 15% at the DWtE Site will not cause an exceedance of an air quality standard, increase concentrations to put an air quality standard at risk of an exceedance, or worsen an existing exceedance, to an extent that would be considered significant. No significant effects from other emissions have been found. The effects of the proposed project are nugatory, and AECOM advises the competent authority (Environmental Protection Agency) that an Appropriate Assessment of the proposed project is not required, because the AA screening concludes that there are no LSE on European sites, i.e. it can be excluded that the proposed project would have likely significant effects on European sites, on the basis of objective scientific information, and in view of the Conservation Objectives of relevant sites, either individually or in combination with other plans or projects.

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Appendix A List of Wastes Accepted at the Facility

Waste Type	European Waste Catalogue (EWC)
Non-hazardous Residual Waste	
Mixed municipal waste	20 03 01
Waste from markets	20 03 02
Street cleaning residues	20 03 03
Bulky waste	20 03 07
Wastes from aerobic treatment of solid waste	19 05 01
Combustible waste (refuse derived fuel)	12 12 10
Sludges from treatment of urban wastewater	19 08 05
Commercial & Industrial Wastes	02 01 03, 02 01 04, 02 01 07' 02 02 02, 02 02 03, 02 03 02, 02 03 03, 02 03 05, 02 05 01, 02 06 01, 02 06 02, 02 07 01, 02 07 02, 02 07 03, 02 07 04, 02 07 05, 03 01 01, 03 01 05, 03 01 03, 03 01 07, 03 03 08, 04 02 09, 04 02 10, 04 02 15, 04 02 17, 04 02 21,04 02 22, 06 05 03, 07 02 13, 08 01 12, 12 01 05, 15 01 09, 15 02 03, 16 01 03, 16 01 19, 16 01 22, 16 03 04, 16 03 06, 19 02 03, 19 0210, 19 05 02, 19 05 03, 19 08 01, 19 08 09,19 10 04,19 10 06,19 12 01, 19 12 04, 19 12 07, 19 12 08, 19 12 12. 07 02 12, 07 05 12[14] 18 01 04, 18 01 09[15]

Note: Maximum annual quantity to be accepted shall not exceed 600,00 tonnes

[14] Technical Amendment 2019
[15] Technical Amendment 2020. The acceptance of this LoW code is limited to the date specified in the Health Act 1947 (Section 31A -Temporary Restrictions) (Covid 19) Regulations 2020 (S.I. No. 121 of 2020), as amended, and in accordance with Condition 8.2.3.

Appendix B Conservation Objectives of European Sites Described in Report

Table A. Conservation Objectives for Special Areas of Conservation

Site (Code) and distance from proposed project	Qualifying Interest (s)	Conservation Objective
South Dublin Bay SAC (210); 0.1 km Conservation Objectives: NPWS (2013c)	Mudflats and Sandflats	To Maintain Favourable Conservation Condition
North Dublin Bay SAC Conservation Objectives: NPWS (2013b)	Mudflats and sandflats	To Maintain Favourable Conservation Condition
	Annual vegetation of drift lines [	To Maintain Favourable Conservation Condition
	Salicornia and other annuals colonising mud and sand	To Maintain Favourable Conservation Condition
	Atlantic salt meadows	To Maintain Favourable Conservation Condition
	Mediterranean salt meadows	To Maintain Favourable Conservation Condition
	Embryonic shifting dunes	To Maintain Favourable Conservation Condition

Table B. Conservation Objectives for Special Protection Areas

Site (Code) and distance from proposed project	Qualifying Interest (s)	Scientific Name	Population	Conservation Objective
South Dublin Bay and Tolka Estuary SPA (4024) ; 0.02 km Conservation Objectives: NPWS (2015b)	Artic tern	*Sterna paradisaea*	Breeding/passage	To Maintain Favourable Conservation Condition
	Bar-tailed godwit	*Limosa lapponica*	Wintering	To Maintain Favourable Conservation Condition
	Black-headed gull	*Chroicocephalus ridibundus*	Wintering	To Maintain Favourable Conservation Condition
	Common tern	*Sterna hirundo*	Breeding/passage	To Maintain Favourable Conservation Condition
	Dunlin	*Calidris alpina*	Wintering	To Maintain Favourable Conservation Condition
	Grey plover	*Pluvialis squatarola*	Wintering	To Maintain Favourable Conservation Condition
	Knot	*Calidris canutus*	Wintering	To Maintain Favourable Conservation Condition
	Light-bellied Brent goose	*Branta bernicla hrota*	Wintering	To Maintain Favourable Conservation Condition
	Oystercatcher	*Haematopus ostralegus*	Wintering	To Maintain Favourable Conservation Condition
	Redshank	*Tringa totanus*	Wintering	To Maintain Favourable Conservation Condition

Site (Code) and distance from proposed project	Qualifying Interest (s)	Scientific Name	Population	Conservation Objective
	Ringed plover	*Charadrius hiaticula*	Wintering	To Maintain Favourable Conservation Condition
	Roseate tern	*Sterna dougalii*	Breeding/passage	To Maintain Favourable Conservation Condition
	Sanderling	*Calidris alba*	Wintering	To Maintain Favourable Conservation Condition
	Wetlands and waterbirds	*N/A*	N/A	To Maintain Favourable Conservation Condition
North Bull Island SPA (4006); 1 km Conservation Objectives: NPWS (2015a)	Bar-tailed Godwit	*Limosa lapponica*	Wintering	To Maintain Favourable Conservation Condition
	Black-headed gull	*Chroicocephalus ridibundus*	Wintering	To Maintain Favourable Conservation Condition
	Black-tailed Godwit	*Limosa limosa*	Wintering	To Maintain Favourable Conservation Condition
	Curlew	*Numenius arquata*	Wintering	To Maintain Favourable Conservation Condition
	Dunlin	*Calidris alpina*	Wintering	To Maintain Favourable Conservation Condition
	Golden plover	*Pluvialis apricaria*	Wintering	To Maintain Favourable Conservation Condition
	Grey plover	*Pluvialis squatarola*	Wintering	To Maintain Favourable Conservation Condition
	Knot	*Calidris canutus*	Wintering	To Maintain Favourable Conservation Condition
	Light-bellied Brent goose	*Branta bernicla hrota*	Wintering	To Maintain Favourable Conservation Condition
	Oystercatcher	*Haematopus ostralegus*	Wintering	To Maintain Favourable Conservation Condition
	Pintail	*Acuta acuta*	Wintering	To Maintain Favourable Conservation Condition
	Redshank	*Tringa totanus*	Wintering	To Maintain Favourable Conservation Condition
	Sanderling	*Calidris alba*	Wintering	To Maintain Favourable Conservation Condition
	Shelduck	*Tadorna tadorna*	Wintering	To Maintain Favourable Conservation Condition
	Shoveler	*Anas clypeata*	Wintering	To Maintain Favourable Conservation Condition
	Turnstone	*Arenaria interpres*	Wintering	To Maintain Favourable Conservation Condition
	Wetland and Waterbirds	N/A	N/A	To Maintain Favourable Conservation Condition

Appendix C Figures

Figure 1. Proposed Project Site and Locations of Relevant Features of European Sites Referenced in AA Screening Report.

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; Verified: XXX; Approved: XXX; Date: 29/01/2019; Scale at A3: 1:4,000; Drawing Reference: 20190129_Fig1_Designated_Sites.v2; A3
Project: Dublin Waste to Energy Technical Amendment			

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