

This Report has been referred for submission to the Board by Director, Eimear Cotter

Signed: *Debra Kearey*

Date: 24/07/2018



**OFFICE OF ENVIRONMENTAL
SUSTAINABILITY**

**INSPECTOR'S REPORT ON A WASTE LICENCE REVIEW APPLICATION,
LICENCE REGISTER NUMBER W0277-03**

TO: DIRECTORS

FROM: Ewa Babiarczyk

DATE: 24 July 2018

Applicant: Roadstone Limited
CRO number: 11035 (status: normal)
Location/address: Huntstown Quarry, Huntstown, Kilshane and Johnstown
Townlands, Finglas, Dublin 11.

The facility is located in a developed area. Nearby there are housing estates and licensed facilities and a number of EPA-licensed installations.

Application date: 20th September 2017

Classes of activity (under Waste Management Act 1996 as amended):

R 5 Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials (main).

R 3 Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolysis using the components as chemicals.

R 13 Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)

European Directives/Regulations relevant to this assessment are listed in the Appendix 2 of this report.

Activity description/background:

Proposal to establish a C&D recovery facility and continue the restoration of the quarry through the recovery of waste soil & stone. The proposed maximum annual waste intake at the C&D recovery facility is 95,000 tonnes. No change to the authorised amount of soil and stone for backfill (1,500,000 tonnes per annum) is proposed as part of this review.

Types of waste sought for acceptance:	
<u>C&D recovery facility</u>	
<ul style="list-style-type: none"> • Concrete (Low code 17 01 01) • Bricks (Low code 17 01 02) • Tiles and ceramics (Low code 17 01 03) • Mixtures of concrete, bricks, tiles and ceramics (Low code 17 01 07) • Bituminous mixtures other than those mentioned in 17 03 01 (Low code 17 03 02) • Glass packaging (Low code 15 01 07) • Glass from mechanical treatment of waste (Low code 19 12 05) • Glass from municipal waste (Low code 20 01 02) 	
<u>The quarry</u>	
<ul style="list-style-type: none"> • Inert soil and stones arising from construction and demolition activities (LoW code 17 05 04); • Dredging spoil (LoW code 17 05 06); • Inert soil and stones arising from garden and parks incl. cemeteries (LoW code 20 02 02). 	
Additional information received:	No
No of submissions received:	None
EIS submitted: Yes (20 th September 2017)	NIS submitted: No
Site visit: 7 th June 2018	Site notice check: 20 th November 2017

1. Activity description/background

Roadstone Limited is the owner of the site. The existing activity comprises of a soil recovery facility at a former sand and gravel quarry located within the townlands of Huntstown, Johnstown and Kilshane, approximately 2.5 km north-west of the Dublin suburb of Finglas. The applicant seeks to develop a C&D waste recovery facility in addition to the existing soil recovery facility.

The existing facility boundary, as shown on Figure 1 below, covers an area of 48.65 hectares and includes the North Quarry and West Quarry. The applicant proposes to extend the site by 8.3 hectares, by inclusion of two additional areas as circled on Figure 2. Roadstone Limited are the owners of both areas. One of these areas is a 5.2 hectare greenfield located adjacent to the north-east of the existing site boundary. The applicant proposed to develop a new C&D waste recovery facility there. The other area, to the south of the existing site boundary, covers 1.9 hectares and consists of an existing C&D waste recovery facility. This facility is currently authorised by a waste facility permit from Fingal County Council (Permit Reference No. FG-WFP-09-0006-01). The applicant proposes to move this C&D waste recovery facility, together with C&D waste stored therein, to the proposed new recovery facility and proposes to accept 95,000 tonnes of C&D waste per annum there. The

proposed C&D waste streams include waste glass, which following the processing, will be destined for use in road construction works.

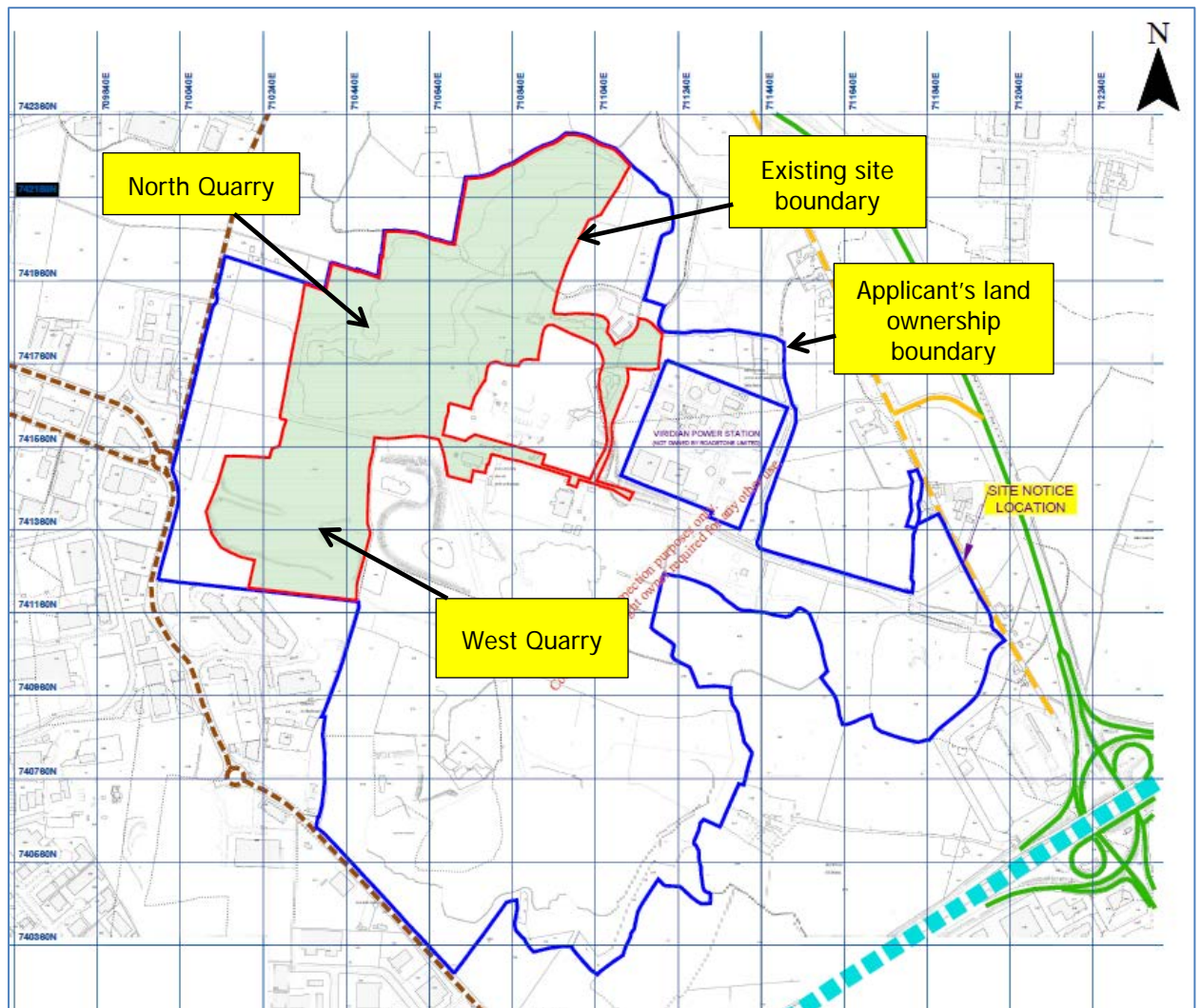


Figure 1: Extent of the existing facility

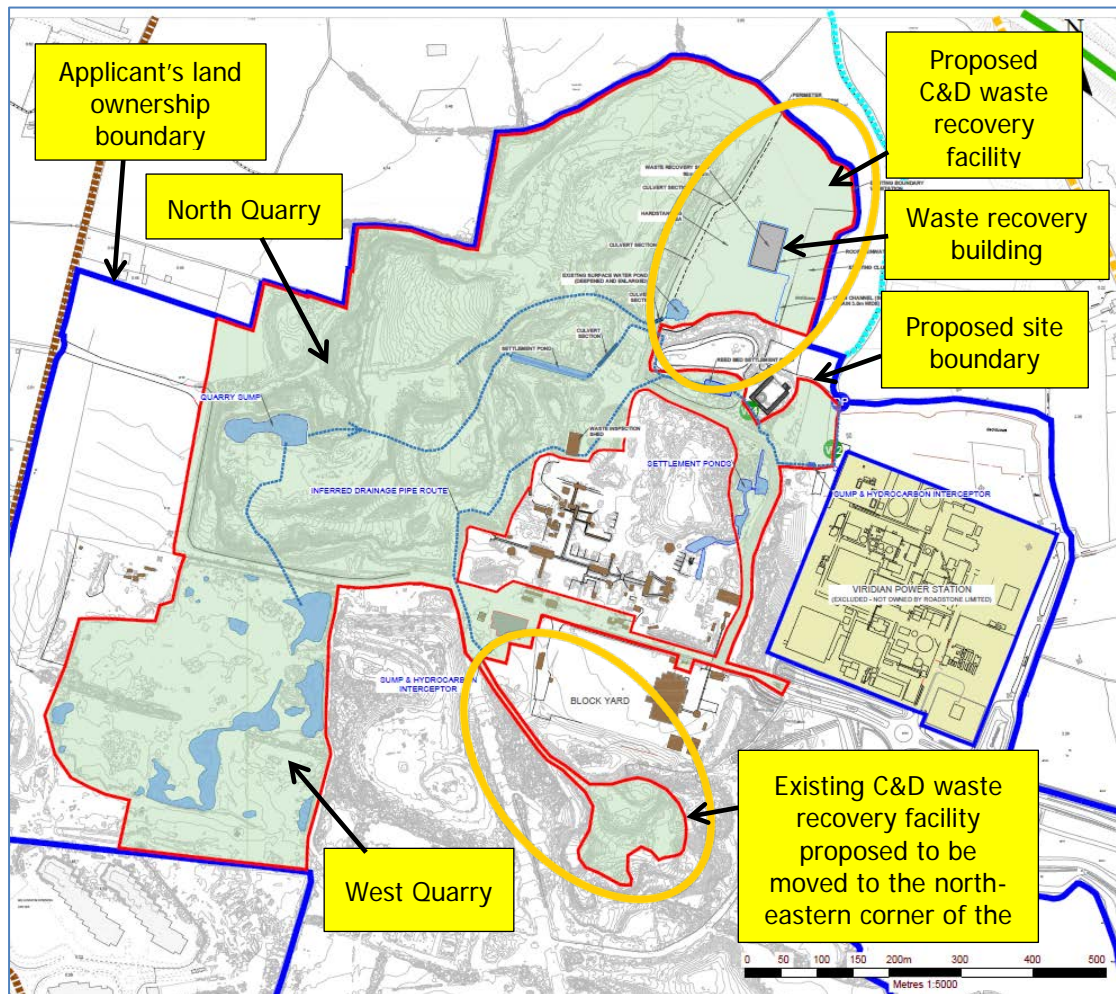


Figure 2: Layout of the proposed facility

Permitted activities, such as quarrying and concrete production, are conducted by Roadstone Ltd. adjacent to the facility. The existing waste licence was granted on 8th September 2017. The backfilling of the quarry void will facilitate the restoration of the site and its return to agricultural use. The proposed new C&D waste recovery facility will include new site drainage infrastructure, a hardstanding area for stockpiling of imported C&D waste and recycled (secondary) aggregate, an access road and a new waste recovery shed for processing (crushing) of C&D waste.

The infrastructure within the existing site boundary comprises of settlement ponds for storm water arising from the site, weighbridge, office, laboratory, fuel storage and machine maintenance building.

2. Scope of Review

Scope of Licence Review

Proposed change	Details/comment
Waste acceptance change	In addition to the currently authorised annual waste intake of 1,500,000 tonnes of waste for the backfill of the quarry, the applicant proposes to import 95,000 tonnes of C&D waste for recovery at the new C&D waste recovery facility.

Site related change	Extension of the site by 8.3 hectares in total by inclusion of two additional areas. Inclusion of a C&D recovery facility.
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3. Licence/Permit History

Licence/Permit	Details	Grant Date
W0277-02	Quarry restoration using imported natural soil and stone. The annual intake of waste to be used to backfill the quarry is 1,500,000 tonnes.	8 th September 2017
W0277-01	Waste licence to backfill the North Quarry with natural soil and stone including use of secondary aggregate, produced from imported inert C&D waste and which achieved end-of-waste status, for construction of haul roads at the facility.	11 th February 2015
WPW/F/075	Effluent Discharge Licence from Fingal County Council	7 th December 2012
WFP-FG-09-0006-01	Waste Facility Permit	22 nd January 2010
WPT 96	Waste Permit for soil recovery and quarry restoration activities	2006
WPT 21	Waste Permit for soil recovery and quarry restoration activities	2002

4. Compliance and Complaints Record

There have been no complaints in relation to the operation of this facility under the current licence (W0277-02). Five non-compliances were recorded in 2018, summarised as follows:

- wheel wash not being inspected on a weekly basis and content of the wheel cleaner being used as fill on-site without agreement by the Agency;
- unbanded and unlabelled drums and containers in the facility maintenance garage;
- failure to notify the Agency of exceedances of the emission limit value for dust;
- failure to provide and maintain an appropriately sized waste quarantine area;
- failure to notify the Agency as soon as practicable of an incident regarding the acceptance of waste with elevated Selenium level.

5. Best Available Techniques

Even though the facility is not a landfill (i.e. it is not a waste disposal activity) BAT for the activity is taken to be best represented by the guidance given in the Agency's Guidance Note on Best Available Techniques for the Waste Sector: Landfill Activities (2011), insofar as it relates to the backfill activities at this facility.

I have examined and assessed the application documentation and I am satisfied that the site, technologies and techniques specified in the application and as confirmed, modified or specified in the attached Recommended Decision comply with the requirements and principles of BAT. I consider the technologies and techniques as described in the application, in this report, and in the RD, to be the most effective in achieving a high general level of protection of the environment having regard - as may be relevant - to the way the facility is located, designed, built, managed, maintained, operated and decommissioned.

6. Planning Permission, EIS and EIA Requirements

6.1 EIA Screening

In accordance with Section 40(2A) of the Waste Management Act 1996 as amended, the Agency must ensure that before a licence or revised licence is granted, that the application is made subject to an environmental impact assessment (EIA), where the activity meets the criteria outlined in Section 40(2A)(b) and 40(2A)(c). In accordance with the EIA Screening Determination, the Agency has determined that the activities are likely to have a significant effect on the environment, and accordingly has carried out an assessment for the purposes of EIA.

6.2 Planning Status

A number of planning applications have been made by the licensee for the area within the facility boundary. Details of these planning applications and permissions have been provided in the application form and are summarised below.

Planning reference	Purpose of planning application	Date of grant
FW17A/0012	To relocate to the north-east corner of the site and intensify the operation of the C&D waste recovery facility. This includes an increase in the C&D waste intake from 24,950 tonnes per annum to 95,000 tonnes per annum and construction of the associated infrastructure.	8 th May 2017
FW16A/0120	To increase waste intake at the facility from 750,000 tonnes to 1,500,000. EIS submitted with this application.	8 th November 2016
FW12A/0022 ABP ref. 06F.241693	To continue operation of quarry, including restoration by backfilling with imported soil. EIS was required.	26 th August 2014

	The maximum soil intake authorised was 750,000 tonnes.	
F06A/0164 ABP ref. PL06F.217413	To develop a vehicular access to the facility	2006
Fingal Co. Co. ref. F03A/1430 ABP ref. PL06F.206789	Continuation of quarrying and related activities and restoration	2004
Fingal Co. Co. ref. F02A/0602 ABP ref. PL06F.200623	To establish a C&D waste recovery facility for waste types such as concrete, bricks, tiles and ceramics and asphalt.	2003
Fingal Co. Co. ref. 93A/1134 ABP ref. P06F.092622	Permission for 10 years for continued quarrying and production of aggregate and concrete materials; backfilling of the quarry	1994

Fingal County Council required an Environmental Impact Statement (EIS) in support of planning applications ref. FW12A/0022, FW16A/0120 and FW17A/0012. The licensee has, with the licence review application, submitted the EIS that relates to planning application reference FW17A/0012. Having reviewed the reports for previous planning permissions, it is considered that the EIS submitted with the licence review application, along with the licence review application, adequately identifies, describes and assesses the direct and indirect effects of the entire activity and that the EISs relating to previous planning permissions are not required for the Agency's assessment.

6.3 Content of EIS and licence application

I have considered and examined the content of the licence application and the EIS. I consider that the EIS, complies with the requirements of the *Waste Management Licensing Regulations, 2004, as amended, S.I. 395 of 2004*, when considered in conjunction with the additional material submitted in the application.

6.4 Environmental Impact Assessment Directive

Having specific regard to EIA, this Inspector's Report as a whole is intended to identify, describe and assess for the Agency the likely significant direct and indirect effects of the proposed activity on the environment, as respects the matters that come within the functions of the Agency, for each of the following environmental factors: human beings, flora, fauna, soil, water, air, climate, the landscape, material assets and cultural heritage.

This Inspector's Report addresses the interaction between those effects and the related development forming part of the wider project. The cumulative effects, with other developments in the vicinity of the activity have also been considered, as regards the combined effects of emissions. The main mitigation measures proposed to address the range of predicted significant effects arising from the activity have

been outlined. This Inspector's Report proposes conclusions to the Agency in relation to such effects.

In preparing this Inspector's Report I have considered and examined:

- the existing licence, Register Number: W0277-02;
- the review application, Register Number: W0277-03;
- the EIS associated with the most recent planning permission, reference FW17A/0012; and,
- the planning documentation.

While the environmental factors have been considered throughout my entire assessment, the following table identifies, for ease of reference, the sections of this report where each environmental factor has been predominantly discussed.

Table of Environmental Factors

Environmental Factor	Addressed in the following Sections:
Human Beings	Greenhouse gases and Climate Impact, Air Emissions, Discharges to Water and Ground, Noise, Waste Generation
Flora and Fauna	Greenhouse gases and Climate Impact, Air Emissions, Discharges to Water and Ground, Noise, Waste Generation
Soil	Greenhouse gases and Climate Impact, Discharges to Water and Ground, Air Emissions
Water	Greenhouse gases and Climate Impact, Discharges to Water and Ground
Air	Greenhouse gases and Climate Impact, Air Emissions
Climate	Greenhouse gases and Climate Impact, Air Emissions
Landscape	Other matters relating to EIA
Material Assets	Other matters relating to EIA
Cultural Heritage	Other matters relating to EIA

6.5 Consultation with Competent Authorities

The Agency consulted with Fingal County Council under the relevant section of the Waste Management Act.

The County Council's response was received on 13th December 2017 and states that the planning authority has no observations to make in relation to this licence application.

7. Submissions

There were no submissions received on this application.

8. Emissions to Air

This section addresses the following:

- greenhouse gases and climate impact
- dust
- odour

8.1 Greenhouse gases and Climate Impact

Climate change is a significant global issue which affects weather and environmental conditions (air, water and soil) which consequently affects human beings and amenities (material assets and cultural heritage) as well as biodiversity and habitats (flora and fauna). Climate change is caused by warming of the climate system by enhanced levels of atmospheric greenhouse gases due to human activities.

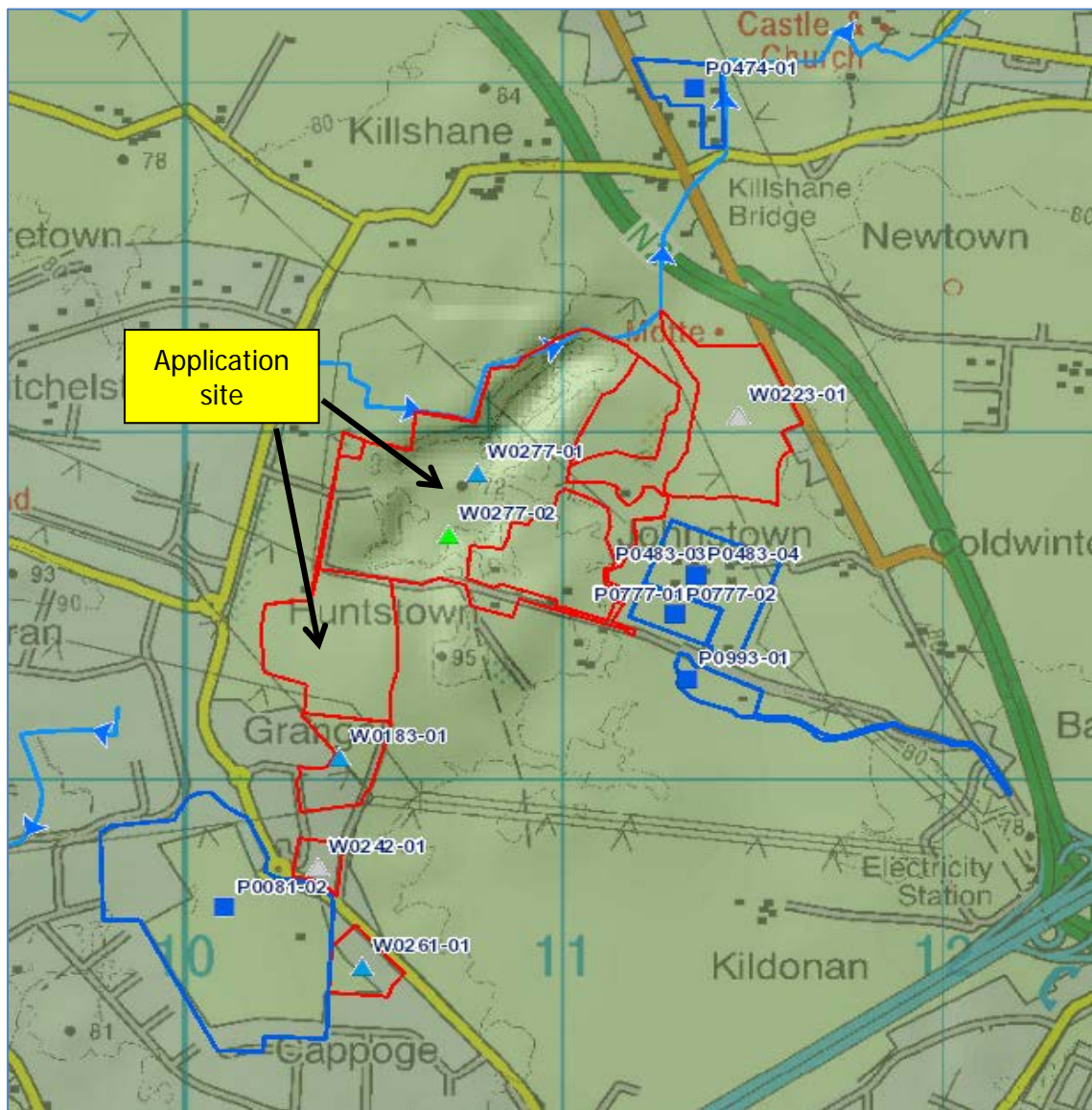
Operation of heavy goods vehicles (HGVs) bringing and collecting waste to and from the C&D waste recovery facility will generate exhaust gases with greenhouse gas potential. Also, the operation of vehicles and machines in the soil recovery facility will generate exhaust gases with greenhouse gas potential.

With regard to reducing the climate impact of the facility, the RD requires an energy efficiency audit and an assessment of resource use efficiency to be undertaken in accordance with Condition 7.

It is considered that the likelihood of accidental emissions occurring which could impact on climate is low in light of the measures outlined in the "Prevention of Accidents" section below and the proposed conditions in the RD.

Given the small quantity of climate altering substances that could be released from the activity, in a national context, I consider that the impact of any emissions from the facility on climatic considerations should be minimal.

The facility is located in a developed area adjacent to other licensed activities as shown on Figure 3 below.



Legend:

Licence Reg. No.	Facility's/Installation's name	Activity
P0777-02	- Viridian Power Limited	Gas turbine power plant
P0483-04	- Huntstown Power Company Limited	Combined cycle gas turbine
P0993-01	- Huntstown BioEnergy Limited	Anaerobic digestion facility – facility under construction
W0183-01	- Starrus Eco Holdings Limited	Waste recycling and transfer facility
W0261-02	- Nurendale Limited	Materials recovery facility
P0081-02	- Irish Asphalt Limited	Production of materials for use in road construction and maintenance industry, including recovery of road planings
P0474-01	- Kelly Timber Frame Limited	Wood treatment facility

Figure 3: Adjacent licensed sites

- Two nearby licensed activities, Viridian Power Limited (Licence Reg. No. P0777-02) and Huntstown Power Company Limited (Licence Reg. No. P0483-04), are regulated by Greenhouse Gas Emissions Permits. As there will be no significant emissions to air from the application site, significant cumulative effects on the environment from the use of energy by the licensee, Viridian Power Limited and Huntstown Power Company Limited are not likely.

Based on the above assessment, I am satisfied that there will not be significant effects on climate from the operation of the activity.

8.2 Fugitive Dust

Dust generation during dry weather is associated mainly with the operation of vehicles arriving to and departing from the C&D waste recovery facility and the filling activity. In addition, the processing of construction and demolition waste for recovery using crushing plant has the potential to generate dust emissions, if not managed properly.

Dust from the facility is the main potential emission to air that could affect air quality. The development of a new construction and demolition waste processing area at the facility presents the opportunity to reach a high standard of best practice, including the provision of an enclosed building for the crushing plant, which will be effective in the minimisation of dust emissions. The RD provides for the processing of construction and demolition waste to take place in a dedicated building, which will contain any dust as may arise. This is provided for in the RD.

The mitigation measures proposed by applicant include:

- spraying water on dry surfaces and waste stockpiles;
- sprinkler system along the access road and around the access road and around the northern and eastern boundary of the C&D waste recovery facility;
- screening walls and berms; and,
- routing HGVs through the wheelwash.

Condition 3.10.3 requires that in dry weather waste stockpiles stored outdoors shall be sprayed with water. Condition 3.10.4 requires that all waste processing shall be carried out in the enclosed building. The RD requires that dust control measures are employed to minimise the emission of dust at the facility during dry periods (Conditions 5.5 and 6.12). Schedule B.4 *Dust Deposition Limits* of the RD sets a limit on ambient dust deposition at the facility boundary while Schedule C.3 *Ambient Monitoring* of the RD requires bi-annual monitoring of ambient dust deposition.

For the purposes of EIA, the environmental factors potentially affected by dust emissions from the activity include: human beings, flora and fauna and air.

Dust arising from the activity could have the potential to deposit beyond the site boundary, causing nuisance for those living nearby and potentially affecting habitats located close to the site boundary.

The likelihood of accidental fugitive dust emissions is considered low in light of the measures outlined in the "Prevention of Accidents" section below and in light of the proposed conditions discussed above.

- Dust controls are in place in the licences relating to the other installations nearby, where there is potential for generation of dust emissions. These measures, along with controls included in the RD for the application site, will minimise the potential for significant cumulative effects from dust deposition on any area beyond the facility boundary.

Based on the above assessment, I am satisfied that there will not be significant effects on the environment from dust emissions from the activity.

8.3 Odour

There will be no odorous waste accepted either at the C&D waste recovery facility or the soil recovery facility. Accordingly, there is no potential for odour emissions from waste activities.

For the purposes of EIA, the environmental factors potentially affected by odour emissions from the activity include: human beings, fauna and air.

Odour is not expected to be an issue due to the fact that no odorous waste will be accepted at the facility. Accordingly, no specific mitigation measures are proposed. The applicant will be required to implement waste acceptance procedures to prevent the acceptance of unauthorised (including contaminated) waste at the facility (Condition 8.13).

Accidental odour emissions could occur if odorous waste is accepted at the facility, causing odour nuisance beyond the facility boundary. However the likelihood of accidental odour emissions occurring is considered low in light of waste acceptance limitations, the measures outlined in the "Prevention of Accidents" section below and in light of the proposed conditions relating to odour emissions discussed above.

- Huntstown Bioenergy Limited (P0993-01), Starrus Eco Holdings Limited (W0183-01) and Nurendale (W0261-02) are installations that have the potential to cause odour nuisance. Accordingly, the licences for these sites require measures for control of odour. As there will be no odorous waste accepted at the applicant's site, any significant cumulative effects from odour beyond the facility boundary in considered not likely.

Based on the above assessment, I am satisfied that there will not be significant effects on the environment from odour emissions from the activity.

8.4 Overall Conclusions in relation to effects of air emissions from the activity on the environment

I am satisfied that there will not be significant effects on climate, air quality, human beings, flora and fauna or any other aspect of the environment from air emissions arising from the operation of the activity.

9. Discharges to Water and Ground

This section addresses the following:

- Direct discharges to waters
- Indirect process emissions to waters (emissions to sewer),
- Emissions to ground/groundwater
- Storm water discharges

9.1 Discharges to Waters

9.1.1 Direct Process Emissions to Waters

There are no direct process emissions to waters from the facility.

9.1.2 Direct storm water discharges to waters

The table below gives details on the facility's storm water discharges to waters, the sources of potential contamination of these discharges, the type of on-site abatement, as well as details of the receiving water.

Emission Reference	Potential contamination	Abatement	Receiving water
DP (discharge point)	There is a risk of fuel and oil spillages arising from the operation of vehicles and machinery within the C&D waste recovery plant and the soil recovery facility. This cause storm water pollution. Also, contaminated waste could cause pollution of storm water.	<ul style="list-style-type: none"> All vehicle and machinery refuelling and maintenance are required to be carried out in designated areas protected against spillage and run-off (Condition 8.10). All fuels and liquid chemicals must be stored in bunded areas. Implementation of waste acceptance procedures to prevent the acceptance of unauthorised (including contaminated) waste at the facility (Condition 8.13). 	<p>Unnamed stream which flows into River Huntstown (River Waterbody Code: IE_EA_08W010300) 0.6 km downstream of the discharge from the facility. The status of Huntstown River is good.</p> <p>Huntstown River discharges to the Ward River approximately 6km downstream of the discharge from the facility. The status of Ward River downstream of the confluence with Huntstown River is good.</p> <p>It is noted that the unnamed stream and Huntstown River are referred to in the application as 'Ballystrahan Stream'.</p> <p>This name, Ballystrahan Stream, is used throughout this Inspector's Report and in the RD.</p>

Since the issue of the existing licence (Reg. No. W277-02) the surface water management system at the facility has been adjusted. Prior to this adjustment, discharge of surface water run-off (and groundwater collected via dewatering) arising from the facility merged, prior to discharge to the Ballystrahan Stream, with another discharge containing waste water from the adjoining concrete production plant. The monitoring point for the discharge from the facility (referred to in the existing licence as W4) was prior to the merging location. This is no longer the case. There is no mixing of discharges from the application site and the concrete

production plant and the discharge from the concrete production plant has ceased. Condition 5.4 requires that all storm water and surface water run-off collected from ground or hardstanding surface within the facility shall be monitored at discharge location DP.

Surface water run-off (and groundwater collected via dewatering) is currently managed on the floor of the North Quarry. Water on the floor collects in a sump at a low point and is pumped up the edge of the quarry void prior to flowing into a settlement pond, a reed bed settlement pond and a hydrocarbon interceptor, from which it discharges into a land drain that connects to the Ballystrahan Stream.

The surface water arising at the proposed C&D waste recovery facility will be collected in a sump located in the south-western corner of this facility prior to joining the pumped quarry water upstream of the settlement ponds. Condition 6.11 provides for trigger levels to be established for storm water discharges, and for the separation of storm waters that have the potential to become contaminated through contact with construction and demolition waste from storm waters that do not have the potential to become contaminated through contact with construction and demolition waste.

Stormwater run-off arising from the roof of the waste recovery building will be collected by gullies and a sub-surface drainage system around the building and discharged to an open channel (swale), as shown on Figure 5, to be discharged to a ditch which runs east toward the Ballystrahan Stream. The roof run-off will be uncontaminated therefore, no monitoring of this run-off is required in the RD.

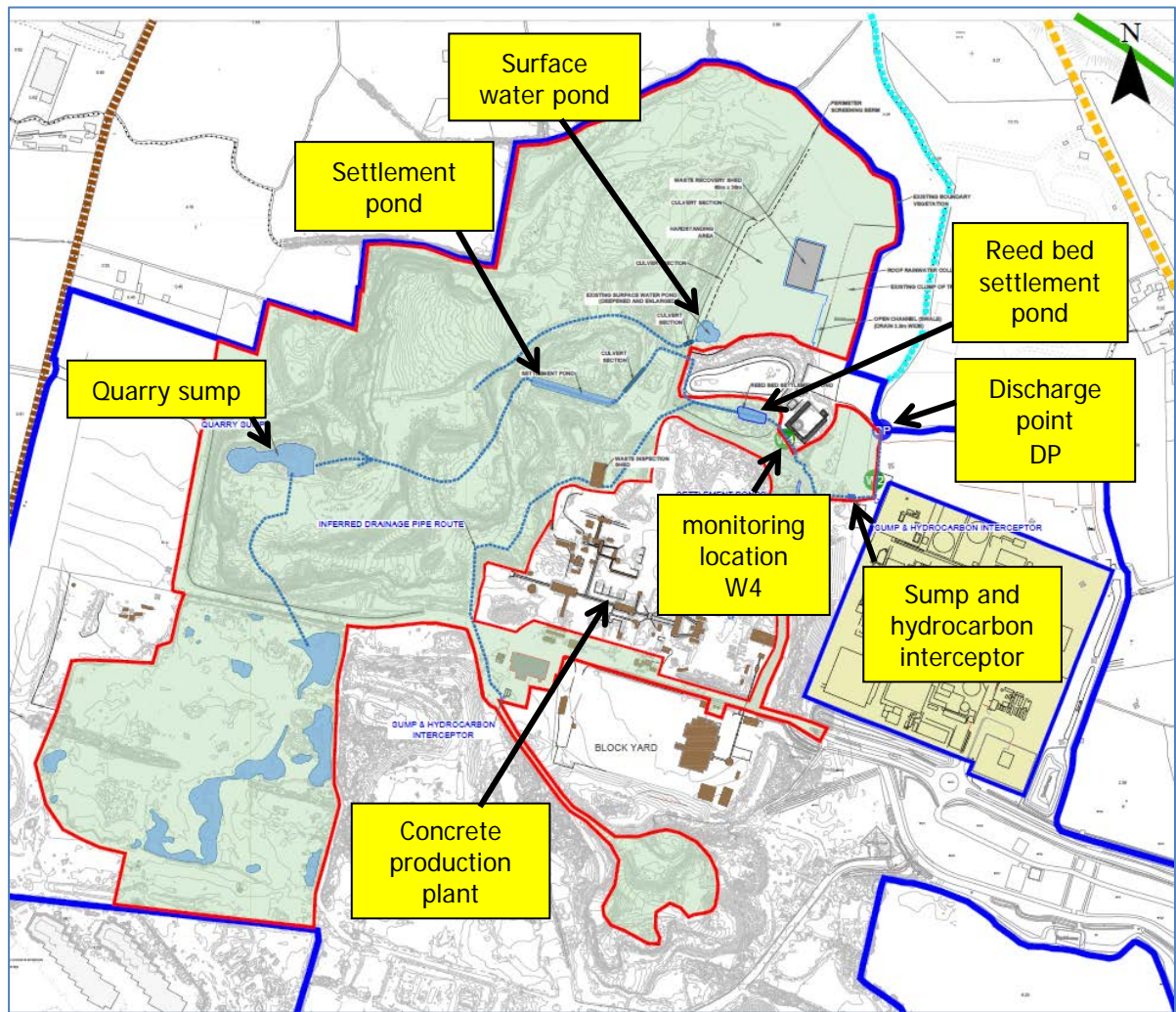


Figure 4: Surface water management at the entire facility

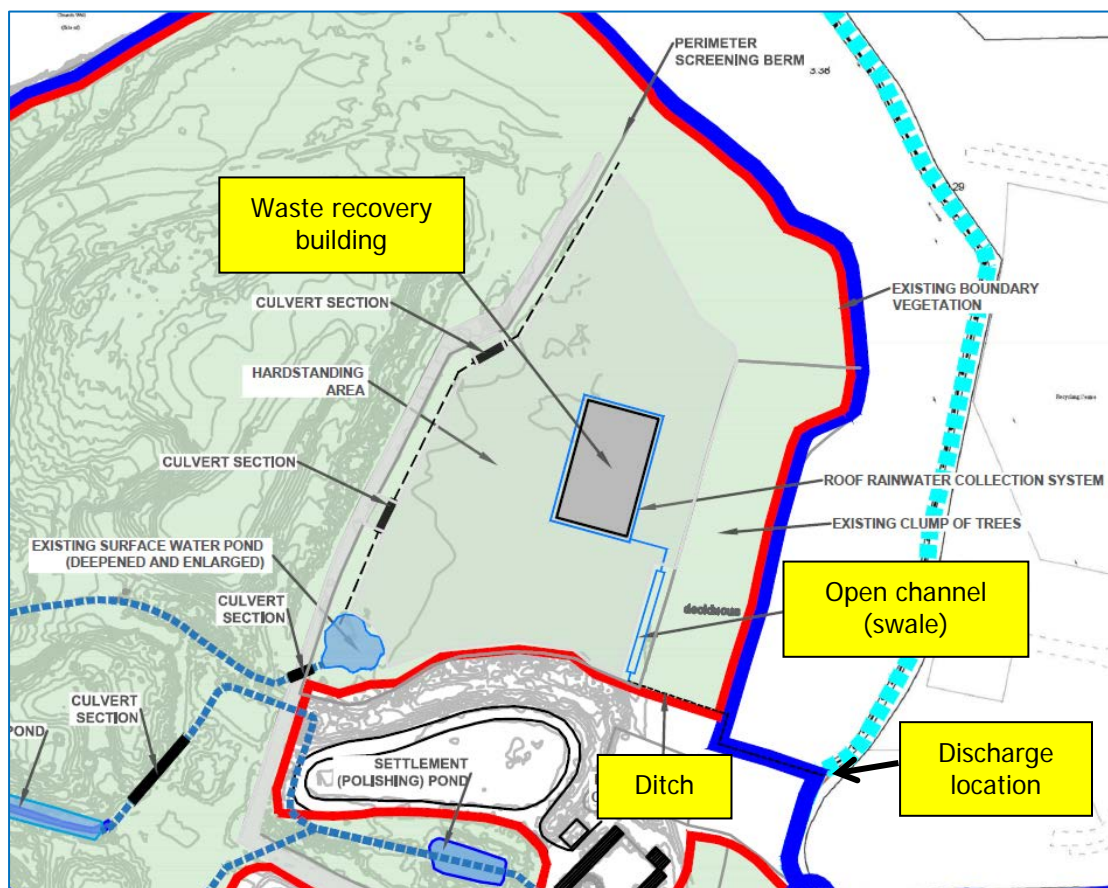


Figure 5: Surface water management system at the C&D waste recovery facility

Schedule B.2 *Emissions to Water* sets out the recommended limit values for the discharge at DP and these are as per the existing licence. The monitoring results show that the discharge is in compliance these limit values.

For the purposes of EIA, the environmental factors potentially affected by storm water discharges to waters include: water, soil, flora and fauna, and human beings.

Deposit of non-conforming waste in the fill area could potentially affect the quality of soil and groundwater.

The RD requires the licensee to maintain the storm water/rainwater collection system and the separation of storm waters that have the potential to become contaminated through contact with construction and demolition waste from storm waters that do not have the potential to become contaminated through contact with construction and demolition waste. The setting of trigger values for storm water discharges is also provided for in the RD. It requires that the storm water discharge is visually inspected and monitored for total petroleum hydrocarbons and other parameters at frequencies set out in Schedule C.1.2 *Monitoring of Emissions to Water*, and specifies that there can be no unauthorised discharge of polluting matter to the storm water drainage system.

The RD contains standard conditions in relation to the storage and management of materials and waste. The RD also requires that accident and emergency response procedures are put in place. The controls pertaining to accidents and emergencies are addressed in Section 13 below. These measures will help to control any impacts which could occur should any mitigation measures fail.

It is therefore considered that direct impacts as a result of storm water emissions through DP are considered to be neither likely nor significant.

- In relation to potential cumulative impacts, Viridian Power Limited (P0777-02) and Huntstown Power Company Limited (P0483-04) are discharging treated process effluent and storm water to the Ballystrahan Stream. Therefore, there may be potential cumulative effects from these discharges. However, the licences for Viridian Power Limited (P0777-02) and Huntstown Power Company Limited, as well as the RD, set limit values on the discharges and require measures for control and management of storm water arising within the sites. In addition, the RD provides for measures to ensure storm waters that have the potential to become contaminated through contact with construction and demolition waste are separated from storm waters that do not have the potential to become contaminated through contact with construction and demolition waste. Therefore, it is considered that significant cumulative effects from storm water emissions to water are not likely.

It is also considered that no indirect effects are likely as a result of the surface water emissions from the activity.

I am satisfied that based on the above assessment, the nature of the activity, the mitigation measures in place, and the conditions in the Recommended Decision that the likelihood of a significant effect on the environment occurring as a result of storm water emissions from DP is negligible.

9.2 Emissions to Sewer (Indirect Discharges to Water)

9.2.1 Process emissions to sewer (Indirect process emissions to waters)

There are no process emissions to sewer at the facility.

9.3 Discharges to ground/groundwater

The predominant bedrock at Huntstown is limestone. There are two types of aquifers beneath the site. These are a Locally Important Aquifer and a Poor Aquifer. The groundwater vulnerability beneath the site is high to extreme.

The facility is located across the Swords Groundwater Body (GWB) and the Dublin GWB. There are no identified groundwater supply source protection areas within Swords GWB and there are no major abstractions for groundwater from the Dublin GWB. The source protection area for a wellfield at Dunboyne extends marginally into the Dublin GWB. The source protection zone for this wellfield however is 8.5 km west of the Huntstown quarry. The Swords GWB is classified as being of 'Good' overall status and is identified as being 'probably not at risk' of losing its current 'Good' status. The Dublin GWB is also classified as being of good overall status, however it is classified as being 'at risk' of losing its current 'Good' status from urban development pressures.

The quarry excavations at Huntstown have intersected the groundwater table and lowered it around the periphery with the excavation of each quarry bench. There are minor groundwater inflows to each of the quarries that drain to the quarry floor, where they are contained. Water is pumped from the quarry floor as and when

required in order to maintain dry conditions on the floor. When pumps are active, the North Quarry has an estimated discharge rate of around 20 litres per second.

Surface water run-off (and groundwater collected via dewatering) is currently managed on the floor of the North Quarry as described above.

Water in the West Quarry infiltrates naturally to the ground and, in general, there is no requirement for surface water management in this quarry.

9.3.1 Direct process emissions to ground/groundwater

There are no direct process emissions to ground/groundwater at the facility.

9.3.2 Storm water discharges to ground

Rain water falling on the site percolates to ground through the quarry floor.

For the purposes of EIA, the environmental factors potentially affected by storm water discharges to ground/ground water include: water quality, soil, flora and fauna, human beings and material assets.

Any accidental discharges to ground could potentially affect the quality of soil and groundwater directly, which could affect those using the groundwater body as a source of drinking water. Also, polluted groundwater, if it flows into a surface waterbody, could cause pollution in this surface waterbody.

Due to the non-hazardous and inert nature of the waste to be accepted at the facility and the conditions of the RD that restrict and limit the intake of waste and its nature, the risk of adverse effects on groundwater is low.

The RD requires the licensee to implement waste acceptance procedures to prevent the acceptance of unauthorised (including contaminated) waste at the facility (Condition 8.13).

The RD requires that there is no discharge from the wheel wash and specifies that there can be no unauthorised discharge of polluting matter to the storm water drainage system.

The RD contains standard conditions in relation to the storage and management of materials and waste. The RD also requires that accident and emergency response procedures are put in place. The controls pertaining to accidents and emergencies are addressed in Section 13 below. These measures will help to control any impacts which could occur should any mitigation measures fail.

It is therefore considered that direct impacts as a result of storm water discharge to ground are considered to be neither likely nor significant.

- None of the licences for the nearby activities authorise emissions to ground or groundwater. Therefore it is considered that there will be no significant cumulative impact from the activity and the adjoining licensed sites on ground/groundwater.

I am satisfied that based on the above assessment, the nature of the activity, the mitigation measures in place, and the conditions in the Recommended Decision that the likelihood of a significant effect on the environment occurring as a result of storm water discharge to ground is negligible.

9.3.3 Other emissions to ground/groundwater

Septic tank

There is an existing septic tank and percolation area on site for the disposal of domestic sewage.

For the purposes of EIA, the environmental factors potentially affected by a percolation area discharge to ground/groundwater include: groundwater and surface water quality, flora and fauna, soil and humans.

The RD includes a standard condition which requires the applicant to provide and maintain a wastewater treatment plant for the treatment of sanitary effluent. The waste water treatment system is to satisfy the requirements of Condition 3.20 of the RD.

In the unlikely event of the septic tank failing, the impact to soil beneath the tank and in the percolation area would be localised and would not be significant and the attenuation provided by the underlying soil would ensure that groundwater would not be impacted significantly. It is therefore considered that direct impacts as a result of sewage emissions to ground/groundwater are considered to be neither likely nor significant.

I am satisfied that based on the above assessment, the nature of the activity, the mitigation measures in place, and the conditions in the RD that the likelihood of a significant effect on the environment occurring as a result of domestic sewage emissions to ground through the percolation area is negligible.

Groundwater quality

The groundwater monitoring in 2015-2016 indicates generally good groundwater quality across the five wells and in the aquifer around and beyond the Huntstown quarry complex. Some coliforms have been recorded in samples, although faecal coliforms are low or absent from the monitoring wells. Hydrocarbons including Diesel Range Organics (DRO) and Total Petroleum Hydrocarbons (TPH) are recorded in samples but are present at relatively low levels only. Petrol Range Organics (PRO) are below laboratory detection level.

Any groundwater contamination could potentially affect those using the groundwater body as a source of drinking water. Please refer to Section 9.3.2 above for mitigation measures for prevention of pollution of groundwater beneath the site.

9.4 Overall Conclusions in relation to effects of emissions to water and ground on the environment

I am satisfied that there will not be significant effects on human beings, flora and fauna, water quality, soil quality, material assets or any other aspect of the environment from emissions to water and ground arising from the operation of the activity.

10. Noise

The main sources of noise at the facility include blasting, vehicles and machinery. Blasting will continue to be used within the North Quarry. A programme of mitigation measures will continue to be implemented to ensure that the blasting operations do

not result in any significant impact on residential amenity of the area. Limit values for air overpressure and vibration are included in planning permission (FW12A/0022) granted in 2014 for quarrying activities as follows:

- vibration levels are limited to a peak velocity of 12 mm/s or, where blasting is frequent, 8mm/s; and
- air overpressure values at sensitive locations are limited to 125dB (linear maximum peak value) with a 95% confidence limit. No individual air overpressure value is to exceed the limit value by more than 5dB(Lm).

For the purposes of EIA, the environmental factors potentially affected by noise emissions from the activity include: human beings and flora and fauna.

Noise monitoring in and around the application site indicate that noise levels are elevated and that average ambient noise levels in the local area typically range between 60 dBA LAeq and 75 dBA LAeq, depending on location and proximity to the N2 dual carriageway, M50 motorway or the flight path of Dublin Airport.

The development of a new construction and demolition waste processing area at the facility presents the opportunity to reach a high standard of best practice, including the provision of an enclosed building for the crushing plant, which will be effective in the minimisation of noise emissions. The RD provides for the processing of construction and demolition waste to take place in a dedicated building. This is provided for in Condition 3.10.

There has been no noise or vibration complaints in respect of the facility.

Noise prediction assessment indicates that there will be minimal, if any, increase in noise under a worst case scenario when a crushing/ screening plant and a front end loader are operating simultaneously 100% of the time at the boundary.

The resultant predicted maximum levels at nearby sensitive receptors are comparable to, and only slightly elevated above, existing ambient levels.

Standard noise conditions and emission limit values, which apply at the noise sensitive locations, have been included in the RD. It is therefore considered that direct significant impacts as a result of noise and vibration from the activity are unlikely.

- In relation to cumulative impacts, there are no significant noise emissions from the nearby activities or from the applicant's site. The licences for the nearby activities and the RD set up standard limit values for noise. Accordingly, if operating in compliance with their licences, these activities are not considered to be sources of significant noise emissions that lead to likely or significant cumulative effects beyond the site boundary.

Overall Conclusions in relation to effects of noise emissions from the activity on the environment

Based on the above assessment and the controls in place, I am satisfied that there will not be significant effects on the environment from noise and vibration from the facility.

11. Waste Generation

The activity does not produce significant quantities of waste and is limited to municipal type waste from office and welfare facilities onsite. Only operators and

haulage firms authorised under waste collection permits will be engaged to transfer these waste streams to waste disposal or recovery facilities.

For the purposes of EIA, the environmental factors potentially affected by waste generated by the activity include: material assets; flora and fauna.

If dealt with in accordance with the conditions of the RD, the management of waste generated at the facility will be in accordance with the requirements of Section 29 (2A) of the Waste Management Act as amended.

There are standard conditions in the RD pertaining to the storage and management of waste generated at the facility.

The licensee will continue quarrying within the licence boundary. Condition 2.3 of the RD proposes the preparation of an extractive waste management plan. Planning permission already requires the preparation of an extractive waste management plan.

The controls in the RD in relation to waste will prevent the occurrence of possible direct and indirect negative effects.

- The nearby licensed activities do not generate significant amounts of waste. Accordingly it is considered that cumulative effects on the environment from the generation of waste by this facility and the nearby activities are not likely.

Overall Conclusions in relation to effects of the generation of waste from the activity on the environment

Based on the above assessment and the mitigation measures in place, I am satisfied that there will not be significant effects on the environment from the generation of waste from the operation of the activity.

12. Use of Resources

The operation of the facility involves consumption of electricity and diesel fuel. Electricity is used for lighting, heating, weighbridge, pumping equipment at the quarry floor, office, canteen and welfare facilities. Electricity will be also used for a wheelwash. The amount of electrical energy consumed at the facility is 2,500 kW per week. Diesel is used for powering earthworks equipment used for placing and compacting the imported soil and stone.

Condition 7 of the RD sets out the requirements with regard to resource use and energy efficiency.

For the purposes of EIA, the environmental factors potentially affected by resource use include material assets.

Condition 7 of the licence provides for the efficient use of resources and energy in all site operations. This condition also requires an energy audit to be carried out and repeated at intervals as required by the Agency.

Water abstraction

There is no water abstraction within the facility. Water for the site office and welfare facilities is supplied by water mains.

Hazardous Materials

Once the C&D waste recovery facility is operational, the consumption of fuel at the entire facility will be 6,750 litres per week.

There is a risk of fuel spillages that could cause groundwater pollution.

Condition 8.10 requires that all vehicle and machinery refuelling and maintenance is carried out in designated areas protected against spillage and run-off. All fuels and liquid chemicals must be stored in bunded areas. These measures address a number of key provisions of the Groundwater Directive (2006/118/EC), namely that hazardous substances should not be allowed to enter groundwater, and will ensure compliance with the European Communities Environmental Objectives (Groundwater) Regulations 2010.

- The applicant or nearby licensed activities do not use resources to an extent that could lead to likely or significant cumulative effects beyond the site boundary.

Overall Conclusions in relation to effects of the use of resources by the activity on the environment

I am satisfied that there will not be significant effects on the environment from the use of natural resources from the operation of the activity.

13. Prevention of Accidents

Measures to be taken to prevent accidents and limit consequences

Table 1 Summary of potential accidents and prevention/mitigation measures

Potential for an accident or hazardous or emergency situation to arise at the facility	Due to the non-hazardous and inert nature of the waste to be accepted at the facility, the risk of adverse effects on human beings and the environment as a result of an accident is low. The risk of fire is low due to the absence of flammable waste at the facility.
Preventative and mitigation measures to reduce the likelihood of accidents and mitigate the effects of the consequences of an accident at the facility	Provision and maintenance of adequate bunding. The RD requires the licensee to: <ul style="list-style-type: none">• implement waste acceptance procedures to prevent the acceptance of unauthorised (including contaminated) waste at the facility (Condition 8.13);• employ a suitably qualified and experienced facility manager (Condition 2.1.1);• put in place a documented Accident Prevention Procedure which addresses all hazards on-site

	<p>(Condition 9.1);</p> <ul style="list-style-type: none"> • put in place an Emergency Response Procedure which will ensure any effects of an emergency on-site are minimised (Condition 9.2); • implement a preventative maintenance programme (Condition 2.2.2.7); and • implement procedures to ensure corrective and preventative action is taken should the specified requirements of the licence not be fulfilled (Condition 2.2.2.4).
Additional measures provided for in the RD	<p>Specifies accident prevention and emergency response requirements (Condition 9).</p> <p>Integrity of tanks to be assessed every 3 years and maintenance carried out as required (Condition 6.7).</p>

Condition 9 of the RD requires procedures to be put in place to prevent accidents with a possible impact on the environment and to respond to emergencies so as to minimise the impact on the environment.

The risk of accidents and their consequences, and the preventative and mitigation measures listed in the table above, have been considered in full in the assessments carried out throughout this report.

It is considered that the conditions of the RD and the mitigation measures proposed will significantly reduce the likelihood of accidental emissions occurring and limit the environmental consequences of an accidental emission should one occur.

14. Cessation of activity

The application details a range of measures to be employed upon cessation of the activity. These include:

- Removal of all plant and machinery;
- Decommission/excavation and removal off-site of any dedicated site accommodation, infrastructure and services;
- Breaking up of concrete surfaces and transferring the material arising from the breakage to authorised waste recovery facilities.

A Closure Restoration and Aftercare Management Plan (CRAMP) was submitted with the application (see Section 18 of this report for further details).

The measures to be taken upon cessation of the activity have been considered in full in the assessments carried out throughout this report.

I am satisfied that there will not be significant effects on the environment from the measures that will be taken upon cessation of the activity.

15. Other matters relating to EIA

15.1 Effects on landscape, material assets and cultural heritage

(a) Disturbance of archaeology and architecture from the operation of the activity

Any loss of archaeological or architectural heritage could impact negatively on human beings. These matters are dealt with in the decision of the planning authority to grant planning permission for the developments on site and are not controlled by the Agency. The planning authority has considered the impacts to be acceptable.

The current Fingal County Development Plan shows a protected structure, a holy well, within Roadstone's landholding adjacent to the north-west of the application site (Ref. No 663). In reality, this is a natural spring, located immediately inside the application site. This structure was removed from the register of protected structures in the Fingal County Development Plan by Fingal County Council in September 2016. Records held by the National Monuments Service of the Department of Environment, Heritage and Local Government indicate that there are a number of national monuments within and in the immediate vicinity of Roadstone's landholding. Beyond the north-western end of the application site, the ruins of Kilshane Church, a graveyard and holy well (Ref. DU014-012) are identified as part of an extended archaeological site. There are no visible remains of these monuments remaining in situ. Neither the proposed C&D waste recovery facility or the filling activity will have impact on these ruins. Accordingly, there will be no direct or indirect impact on any known archaeological, architectural or cultural heritage feature or item on cultural heritage.

(b) Landscape, visual and cultural effects

Any disturbance of the landscape or the cultural heritage of an area has the potential to impact on human beings and their enjoyment of the surrounding area. These matters are dealt with in the decision of the planning authority to grant planning permission for the developments on site and are not controlled by the Agency. The planning authority has considered the impacts to be acceptable.

The existing inert waste recovery facility at Huntstown Quarry is located on the urban fringe of a large city. The current Fingal County Development Plan designates all of the North Quarry and part of the West Quarry as part of a rural zoned area, with the western side of the West Quarry designated as suitable for 'heavy industry'.

The entire application site is also designated as a Nature Development Area, i.e. an area with potential for biodiversity enhancement in the CDP. However, notwithstanding this, the principle of backfilling the Huntstown quarries was previously approved under planning permissions.

An assessment of landscape impact determined that the sensitivity of the low-lying landscape character surrounding the quarry complex at Huntstown is low. It was also concluded that there will be no additional landscape impact over and above what is already extant arising as a result of the development.

It is not envisaged that emissions from the operation of the activity will impact on the site's surrounding landscape and culture of the area.

The proposed retention of all boundary hedgerows and of the existing wildlife areas, as well as the ultimate restoration of the application site to agricultural use and replanting of boundary hedgerows which were previously removed will ensure that

the biodiversity currently present on site will be maintained and enhanced in the long term. This is in compliance with the provisions made under the current Fingal County Development Plan for Nature Development Areas.

Overall Conclusions in relation to effects on landscape, material assets and cultural heritage from the activity

I am satisfied that there will not be significant effects on landscape, material assets and cultural heritage from the operation of the activity.

Accordingly, if the activity is carried out in accordance with the RD and the conditions attached, the operation of the activity will not cause environmental pollution.

15.2 Interaction of effects

I have considered the interaction between human beings, flora and fauna, soil, water, air, climate, landscape, material assets, cultural heritage and the interaction of the likely effects identified throughout this report.

The interaction between factors as a result of the operation of the facility are summarised below:

Interaction of effects

	Human Beings	Flora and Fauna	Soil	Water	Air	Climate	Material assets, landscape, cultural heritage
Human Beings		✓	✓	✓	✓	✓	✓
Flora and Fauna			✓	✓	✓	✓	
Soil				✓	✓	✓	
Water						✓	✓
Air						✓	
Climate							
Material assets, landscape, cultural heritage							

The most significant interactions, as addressed in the earlier parts of this report, are as follows:

Human beings and groundwater and soil

In the event of waste acceptance criteria not being adhered to, and the acceptance of contaminated waste, filling such waste may impact directly on quality of groundwater and soil and indirectly on surface water quality if polluted groundwater discharges into a surface waterbody.

Based on the assessment carried out throughout this report, and the mitigation measures proposed (including the relevant conditions in the RD), I do not consider that the interactions identified are likely to cause or exacerbate any potentially significant environmental effects of the activity.

16. Reasoned Conclusion on Environmental Impact Assessment

Having regard to the effects (and interactions) identified, described and assessed throughout this report, I consider that the mitigation measures proposed will enable the activity to operate without causing environmental pollution. I also consider that the potential effects on the environment identified above, even if they occur, are unlikely to damage the environment, and the risk of them occurring is not unacceptable.

Accordingly, if the activity is carried out in accordance with the RD and the conditions attached, the operation of the activity will not cause environmental pollution. The conditions of the RD and the mitigation measures proposed will significantly reduce the likelihood of accidental emissions occurring and limit the environmental consequences of an accidental emission should one occur.

17. Appropriate Assessment

There are eleven European Sites in the vicinity of the facility:

- Baldoyle Bay SAC (Site Code: 000199)
- Malahide Estuary SAC (Site Code: 000205)
- North Dublin Bay SAC (Site Code: 000206)
- Rogerstown Estuary SAC (Site Code: 000208)
- South Dublin Bay SAC (Site Code: 000210)
- Rye Water Valley/Carton SAC (Site Code: 001398)
- North Bull Island SPA (Site Code: 004006)
- Rogerstown Estuary SPA (Site Code: 004015)
- Baldoyle Bay SPA (Site Code: 004016)
- South Dublin Bay and River Tolka Estuary SPA (Site Code: 004024)

- Malahide Estuary SPA 004025 (Site Code: 004025)

Appendix 1 lists the European Sites assessed, their associated qualifying interests and conservation objectives.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activities, individually or in combination with other plans or projects are likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Sites at Baldoyle Bay SAC (Site Code: 000199), Malahide Estuary SAC (Site Code: 000205), North Dublin Bay SAC (Site Code: 000206), Rogerstown Estuary SAC (Site Code: 000208), South Dublin Bay SAC (Site Code: 000210), Rye Water Valley/Carton SAC (Site Code: 001398), North Bull Island SPA (Site Code: 004006), Rogerstown Estuary SPA (Site Code: 004015), Baldoyle Bay SPA (Site Code: 004016), South Dublin Bay and River Tolka Estuary SPA (Site Code: 004024) and Malahide Estuary SPA 004025 (Site Code: 004025).

The activities are not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, that it can be excluded, on the basis of objective information, that the activities, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the activities was not required.

The reasons for which the Agency determined that an Appropriate Assessment of the activities is not required are as follows:

- The monitoring results of the discharge from the facility to the Ballystrahan Stream show that this discharge is within the limits as set out in the existing licence Reg. No. W0277-02.
- The status of River Ward, downstream of the confluence with the Ballystrahan Stream, is good.

18. Fit & Proper Person Assessment

The Fit & Proper Person test requires three elements of examination:

Technical Ability

The licensee has provided details of the qualifications, technical knowledge and experience of key personnel. The licence application also includes information on the on-site management structure. It is considered that the licensee has demonstrated the technical knowledge required.

Legal Standing

Neither the licensee nor any relevant person has relevant convictions under the Waste Management Act 1996, as amended, or under any other relevant environmental legislation.

Financial Provision

The licence category and proposed facility was assessed for the requirements of Environmental Liabilities Risk Assessment (ELRA), Closure, Restoration and Aftercare

Management Plan (CRAMP) and Financial Provision (FP), in accordance with Agency guidance. Under this assessment it has been determined that ELRA, CRAMP and FP were required.

The applicant submitted an ELRA and CRAMP as part of the licence application. The costs were estimated at €1,584,300 and €621,115 respectively. A review of both ELRA and CRAMP, as well as approval of Financial Provision, is required under the RD.

Fit & Proper Conclusion

It is my view, and having regard to the provisions of Section 40(7) of the Waste Management Act 1996 as amended, and the Conditions of the RD, that the applicant can be deemed a Fit & Proper Person for the purpose of this review.

19. Cross Office Consultation

In preparing this report and Recommended Decision, the following technical and sectoral advisors were consulted:

Inspector	Assistance provided
Leo Sweeney (OES)	Matters related to Environmental Impact Assessment
Cathal Gahan (OEE)	Enforcement of and compliance with the existing licence

20. Charges

The annual enforcement charge recommended in the RD is €7,812, which reflects the anticipated enforcement effort required and the cost of monitoring. This represents an increase when compared to the Agency's 2017 enforcement charge of €7,269. This is due to the additional enforcement support required in respect of the proposed C&D waste recovery facility.

21. Recommendation

The RD specifies the necessary measures to provide that the facility shall be operated in accordance with the requirements of Section 40(4) of the Waste Management Act 1996 as amended, and has regard to the AA screening and EIA. The RD gives effect to the requirements of the Waste Management Act 1996 as amended.

I recommend that a Proposed Decision be issued subject to the conditions and for the reasons as drafted in the RD.

Signed



Ewa Babiarczyk

Procedural Note

In the event that no objections are received to the Proposed Decision on the application, a licence will be granted in accordance with Section 43(1) of the Waste Management Act 1996 as amended, as soon as may be after the expiration of the appropriate period.

Appendix 1

List of European Sites assessed, their associated qualifying interests and conservation objectives.

European Site (site code)	Distance and direction from the facility	Qualifying interests (* denotes a priority habitat)	Conservation objectives
Baldoye Bay SAC (Site Code: 000199)	13 km east of the facility	Habitats: <ul style="list-style-type: none"> • 1140 Mudflats and sandflats not covered by seawater at low tide • 1310 Salicornia and other annuals colonizing mud and sand • 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) • 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>) Species: None	As per NPWS (2012) Conservation objectives for Baldoye Bay SAC [000199]. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 19 November 2012).
Malahide Estuary SAC (Site Code: 000205)	10.4 km north east of the facility	Habitats: <ul style="list-style-type: none"> • 1140 Mudflats and sandflats not covered by seawater at low tide • 1310 Salicornia and other annuals colonising mud and sand • 1320 Spartina swards (<i>Spartinion maritima</i>) • 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) • 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>) • 2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) • 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* Species: None	As per NPWS (2013) Conservation Objectives for Malahide Estuary SAC [000205]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 27 May 2013).
North Dublin Bay SAC (Site Code: 000206)	12 km south east of the facility	Habitats: <ul style="list-style-type: none"> • 1140 Mudflats and sandflats not covered by seawater at low tide 	As per NPWS (2013) Conservation Objectives for North Dublin Bay SAC [000206]. Version 1. National Parks and

European Site (site code)	Distance and direction from the facility	Qualifying interests (* denotes a priority habitat)	Conservation objectives
		<ul style="list-style-type: none"> • 1210 Annual vegetation of drift lines • 1310 Salicornia and other annuals colonising mud and sand • 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) • 1395 Petalwort <i>Petalophyllum ralfsii</i> • 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>) • 2110 Embryonic shifting dunes • 2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) • 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* • 2190 Humid dune slacks <p>Species: None</p>	Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 6 November 2013).
Rogerstown Estuary SAC (Site Code: 000208)	13.5 km north/east of the facility	<p>Habitats:</p> <ul style="list-style-type: none"> • 1130 Estuaries • 1140 Mudflats and sandflats not covered by seawater at low tide • 1310 Salicornia and other annuals colonising mud and sand • 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) • 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>) • 2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) • 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* <p>Species: None</p>	As per NPWS (2013) Conservation Objectives for Rogerstown Estuary SAC [000208]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 14 August 2013).
South Dublin Bay SAC	12.2 km south east	Habitats:	As per NPWS (2013) Conservation

European Site (site code)	Distance and direction from the facility	Qualifying interests (* denotes a priority habitat)	Conservation objectives
(Site Code: 000210)	of the facility	<ul style="list-style-type: none"> • 1140 Mudflats and sandflats not covered by seawater at low tide Species: None	Objectives for South Dublin Bay SAC [000210]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 22 August 2013).
Rye Water Valley/Cartron SAC (Site Code: 001398)	11.5 km south west of the facility	Habitats: <ul style="list-style-type: none"> • 7220 Petrifying springs with tufa formation (Cratoneurion)* Species: <ul style="list-style-type: none"> • 1014 Narrow-mouthed Whorl Snail <i>Vertigo angustior</i> • 1016 Desmoulin's Whorl Snail <i>Vertigo moulinsiana</i> 	As per NPWS (2016) Conservation objectives for Rye Water Valley/Cartron SAC [001398]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (dated 15 August 2016).
North Bull Island SPA (Site Code: 004006)	9.6 km south east of the facility	Habitats: <ul style="list-style-type: none"> • A999 Wetlands Species: <ul style="list-style-type: none"> • A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i> • A048 Shelduck <i>Tadorna tadorna</i> • A052 Teal <i>Anas crecca</i> • A054 Pintail <i>Anas acuta</i> • A056 Shoveler <i>Anas clypeata</i> • A130 Oystercatcher <i>Haematopus ostralegus</i> • A140 Golden Plover <i>Pluvialis apricaria</i> • A141 Grey Plover <i>Pluvialis squatarola</i> • A143 Knot <i>Calidris canutus</i> • A144 Sanderling <i>Calidris alba</i> • A149 Dunlin <i>Calidris alpina alpina</i> • A156 Black-tailed Godwit <i>Limosa limosa</i> • A157 Bar-tailed Godwit <i>Limosa lapponica</i> • A160 Curlew <i>Numenius arquata</i> • A162 Redshank <i>Tringa totanus</i> • A169 Turnstone <i>Arenaria interpres</i> 	As per NPWS (2015) Conservation Objectives for North Bull Island SPA [004006]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 9 March 2015).

European Site (site code)	Distance and direction from the facility	Qualifying interests (* denotes a priority habitat)	Conservation objectives
		<ul style="list-style-type: none"> • A179 Black-headed Gull <i>Chroicocephalus ridibundus</i> 	
Rogerstown Estuary SPA (Site Code: 004015)	14 km north east of the facility	Habitats: <ul style="list-style-type: none"> • A999 Wetlands Species: <ul style="list-style-type: none"> • A043 Greylag Goose <i>Anser anser</i> • A046 Brent Goose <i>Branta bernicla hrota</i> • A048 Shelduck <i>Tadorna tadorna</i> • A056 Shoveler <i>Anas clypeata</i> • A130 Oystercatcher <i>Haematopus ostralegus</i> • A137 Ringed Plover <i>Charadrius hiaticula</i> • A141 Grey Plover <i>Pluvialis squatarola</i> • A143 Knot <i>Calidris canutus</i> • A149 Dunlin <i>Calidris alpina alpina</i> • A156 Black-tailed Godwit <i>Limosa limosa</i> • A162 Redshank <i>Tringa totanus</i> 	As per NPWS (2013) Conservation Objectives for Rogerstown Estuary [SPA 004015]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 20 May 2013).
Baldoyle Bay SPA (Site Code: 004016)	13 km east of the facility	Habitats: <ul style="list-style-type: none"> • A999 Wetlands Species: <ul style="list-style-type: none"> • A046 Brent Goose <i>Branta bernicla hrota</i> • A048 Shelduck <i>Tadorna tadorna</i> • A137 Ringed Plover <i>Charadrius hiaticula</i> • A140 Golden Plover <i>Pluvialis apricaria</i> • A141 Grey Plover <i>Pluvialis squatarola</i> • A157 Bar-tailed Godwit <i>Limosa lapponica</i> 	As per NPWS (2013) Conservation Objectives for Baldoyle Bay SPA [004016]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 27 February 2013).
South Dublin Bay and River Tolka Estuary SPA (Site Code: 004024)	9.6 km south east of the facility	Habitats: <ul style="list-style-type: none"> • A999 Wetlands Species: <ul style="list-style-type: none"> • A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i> • A130 Oystercatcher <i>Haematopus ostralegus</i> • A137 Ringed Plover <i>Charadrius hiaticula</i> • A141 Grey Plover <i>Pluvialis squatarola</i> • A143 Knot <i>Calidris canutus</i> 	As per NPWS (2015) Conservation Objectives for South Dublin Bay and River Tolka Estuary SPA [004024]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. (dated 9 March 2015).

European Site (site code)	Distance and direction from the facility	Qualifying interests (* denotes a priority habitat)	Conservation objectives
		<ul style="list-style-type: none"> • A144 Sanderling <i>Calidris alba</i> • A149 Dunlin <i>Calidris alpina alpina</i> • A157 Bar-tailed Godwit <i>Limosa lapponica</i> • A162 Redshank <i>Tringa totanus</i> • A179 Black-headed Gull <i>Chroicocephalus ridibundus</i> • A192 Roseate Tern <i>Sterna dougallii</i> • A193 Common Tern <i>Sterna hirundo</i> • A194 Arctic Tern <i>Sterna paradisaea</i> 	
Malahide Estuary SPA 004025, also known as Malahide Estuary SPA	10.4 km north east of the facility	<p>Habitats:</p> <ul style="list-style-type: none"> • A999 Wetlands <p>Species:</p> <ul style="list-style-type: none"> • A005 Great Crested Grebe <i>Podiceps cristatus</i> • A046 Brent Goose <i>Branta bernicla hrota</i> • A048 Shelduck <i>Tadorna tadorna</i> • A054 Pintail <i>Anas acuta</i> • A067 Goldeneye <i>Bucephala clangula</i> • A069 Red-breasted Merganser <i>Mergus serrator</i> • A130 Oystercatcher <i>Haematopus ostralegus</i> • A140 Golden Plover <i>Pluvialis apricaria</i> • A141 Grey Plover <i>Pluvialis squatarola</i> • A143 Knot <i>Calidris canutus</i> • A149 Dunlin <i>Calidris alpina alpina</i> • A156 Black-tailed Godwit <i>Limosa limosa</i> • A157 Bar-tailed Godwit <i>Limosa lapponica</i> • A162 Redshank <i>Tringa totanus</i> 	As per NPWS (2013) Conservation Objectives for Malahide Estuary SPA [004025]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht (dated 16 August 2013).

Appendix 2

Relevant European (and international) legal instruments

The following Irish and European and international legal instruments are regarded as relevant to this application assessment and have been considered in the drafting of the Recommended Decision.

Environmental Impact Assessment (EIA) Directive (85/337/EEC, as amended)
Habitats Directive (92/43/EEC) & Birds Directive (79/409/EC)
Environmental Liability Directive (2004/35/CE)
Waste Framework Directive (2008/98/EC)
Energy Efficiency Directive.