

This Report has been cleared for submission to the Director by Programme Manager, Marie O'Connor

Signed: *Marie O'Connor* **Date: 30th May 2022**



OFFICE OF ENVIRONMENTAL SUSTAINABILITY

INSPECTOR'S REPORT ON AN WASTE LICENCE APPLICATION, LICENCE REGISTER NUMBER W0301-01

TO: GERARD O'LEARY, DIRECTOR

FROM: MICHELLE REDDY

DATE: 30 MAY 2022

Applicant: GLV Bay Lane Limited
CRO number: 626428
Location/address: Bay Lane Quarry, Bay Lane, St. Margaret's, Dublin
Application date: 05 April 2019

Classes of Activity (under Waste Management Act 1996 as amended): Principle Activity: R5 Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials.

R13 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).

Main BAT Note: EPA Guidance Note on Best Available Techniques for the Waste Sector: Landfill Activities (2011) (insofar as it relates to the backfill activities at this facility)

All relevant legislation and National BAT notes are listed in Appendix 2 of this report.

Activity description/background:

The applicant proposes to restore a quarry through the recovery of waste inert soil and stone. The proposed maximum annual intake is 532,800 tonnes of waste inert soil and stone. The proposed total volume of material required to restore the quarry is 1,332,084 tonnes (including material required for final profiling). Accordingly, 1,332,084 tonnes is proposed in the RD as the total quantity of soil and stone permitted for backfill at the facility over the lifetime of the quarry.

Types of waste sought for acceptance and recommended to be authorised in the Recommended Decision (RD).

- Soil and stones other than those mentioned in 17 05 03* (LoW code 17 05 04)
- Soil and stone (LoW code 20 02 02)

Additional information received:	Unsolicited information (11 November 2019 and 11 February 2020), Regulation 14 Reply (8 October 2020). Unsolicited information (17 February 2021, 18 March 2021, 16 July 2021)	
No of submissions received:	One	
Environmental Impact Assessment required: Yes	Stage 2 Appropriate Assessment required: Yes	
Environmental Impact Assessment Report submitted (EIAR): 05 April 2019	Natura Impact Statement (NIS) submitted: 05 April 2019	
Site visit: No site visit undertaken due to Covid-19 restrictions ¹ .	Site notice check: 16 April 2019	

¹Condition 11.3 of the RD requires the applicant to notify the Agency one month in advance of the commencement of the scheduled activity. In accordance with section 41(6) of the Waste Management Act as amended, prior to coming into force of the waste licence the Agency shall inspect the facility concerned in order to ensure that it complies, or is capable of compliance, with the relevant conditions attached to the waste licence.

1. Introduction

GLV Bay Lane Limited has applied to the Agency for a Waste licence, to recover and use 1,332,084 tonnes of imported inert materials to restore a rock quarry to previous, pre-quarry condition and topography. This activity will be carried out on a phased basis, recovering approximately 532,800 tonnes of material per annum.

The site was previously operated by Irish Asphalt Ltd. Quarrying activities began in 2001 and ceased in 2009 as the rock was found to contain pyrite.

On 17 February 2021 the applicant notified the Agency that Fingal County Council granted GLV Bay Lane Limited a Class 5 Waste Facility Permit (WFP-FG-19-003-01) on the 13 March 2020, which allows for a maximum intake of 200,000 tonnes of soil and stone and topsoil material for recovery at the site. It is noted that approximately 35,873m³ of soil and stone has been recovered at Bay Lane under the Waste Facility Permit since 22 November 2020. Any material recovered under the waste facility permit will be accounted for in the total tonnage permitted for recovery under this waste licence. Schedule A.1 sets out this requirement within the recommended determination.

The applicant also notified the Agency of their intention to utilise Article 27 of the European Communities (Waste Directive) Regulations 2011, as amended, in relation to by-product notification, to facilitate the acceptance of soil and stone by-product in correspondence received 17 July 2021. It is noted that the applicant ruled out the acceptance of Article 27 soil and stone in the Environmental Impact Assessment Report submitted as part of the licence application.

Ten Article 27 notifications as listed below have been received to date by the Agency in relation to the acceptance of soil and stone by-product at Bay Lane Quarry. No determination has been reached by the Agency in respect of these notifications.

Notification Reference No.	Notification received	Excavation Quantity ^{Note 1}
ART27-2416	31/08/2021	20,000
ART27-2418	01/09/2021	900
ART27-2469	28/09/2021	500
ART27-2484	06/10/2021	2,000
ART27-2510	19/10/2021	5,000
ART27-2526	02/11/2021	13,000
ART27-2534	04/11/2021	25,000
ART27-2536	05/11/2021	72,000
ART27-2548	12/11/2021	10,000
ART27-2565	29/11/2021	20,000
Total tonnage		168,400

Note 1: The quantities stated in the notifications are not necessarily quantities accepted at Bay Lane Quarry.

2. Description of activity

The facility is located on Bay Lane, St Margaret's, Dublin to the north of Blanchardstown, about 3km south west of the village of St. Margaret's, 3km northeast of Mulhuddart and 2.8km west of Dublin Airport. It is situated approximately 1km

southwest of Exit 2 on the M2 motorway and approximately 4km northwest of Exit 5(N2) on the M50 motorway. The facility application boundary covers an area of 13.67 hectares as shown in Figure 1. Of this, 8.59 hectares consists of the quarry void to be backfilled. The original ground level lies approximately 59m above Ordnance Datum and the backfilling of the quarry void will facilitate the restoration of the site to 59mOD, and its return to agricultural use.

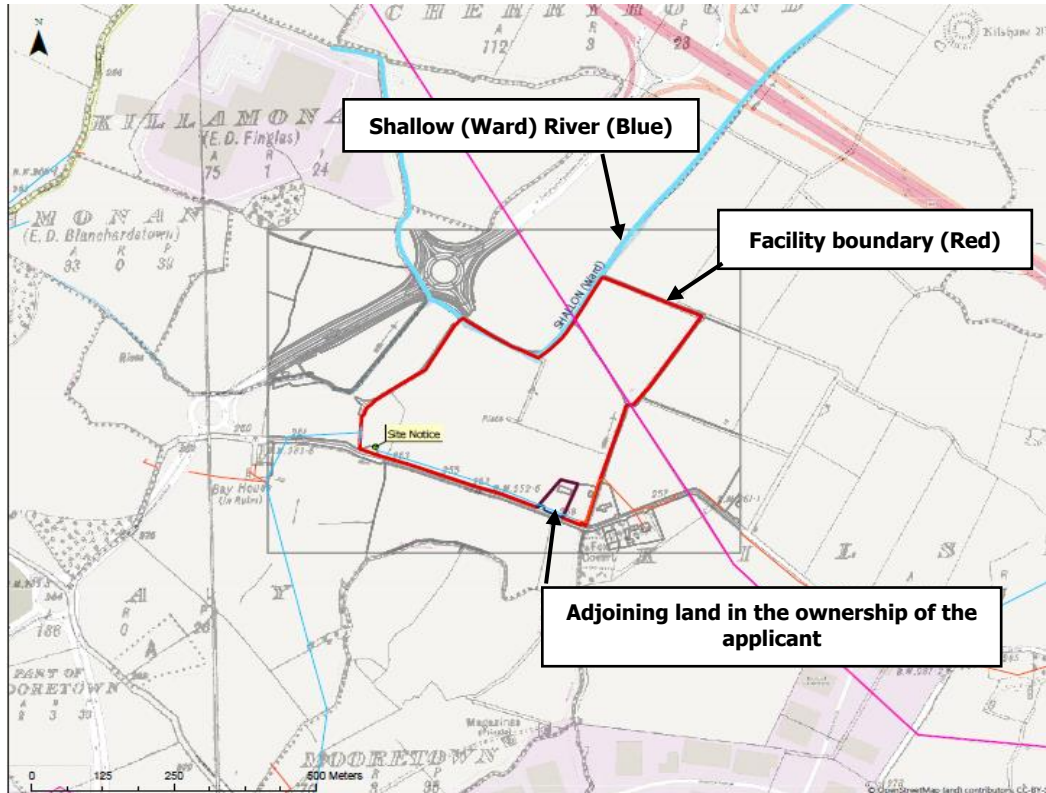


Figure 1. Location and extent of facility. [from Application: Attachment Site Map-MDR1499Arcp002D01 Map 1 (Drawing No. Arcp002) April 2019].

To facilitate the backfilling and restoration work, the quarry pit floor will need to be drained of water. Surface water channels will direct the flow path of the standing water within the quarry pit to the existing sump located on the north-west section of the site. From there, it will be pumped to the settlement and separator tank, prior to discharge through an outfall pipe (W2) to an adjacent unnamed stream to the east of the site, which is a tributary of the Ward River as shown in Figure 2. The unnamed stream is not a waterbody under the Water Framework Directive and there is no waterbody code for this unnamed stream.

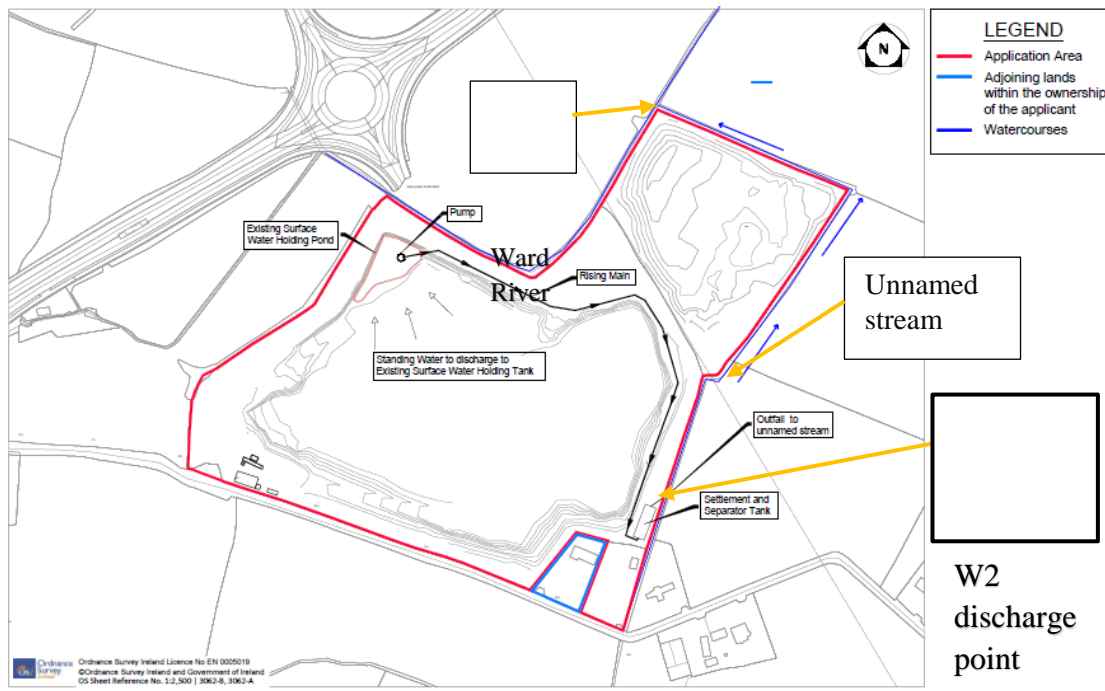


Figure 2. Drainage System Layout and W2 discharge point. [from application: Drawing 14C Drainage 'C' Site Drainage Systems Layout (Drg. No. DG0014-C) April 2019].

The applicant was granted an Effluent Discharge Licence (Reference number: WPW/F/081) on 28 June 2019 in respect of effluent arising from the quarry operations and discharged at W2 discharge point into the unnamed stream which is a tributary of the Ward River. In the event that a licence is been granted by the Agency, the discharge from the facility will be controlled by the licence.

The proposed site infrastructure will comprise of a weighbridge, wheel wash, waste inspection area, waste quarantine area, site office, canteen and staff welfare facilities, refuelling area, car parking area and silt trap and interceptor. No fuel or oil will be stored on site. A double skinned mobile fuel tanker will be brought to site as required, with all refuelling onsite to take place in the designated refuelling area connected to the oil interceptor. The refuelling area will be underlain by a sealed concrete slab. All oil and lubricant changes and routine servicing of wheeled or tracked plant will be undertaken on the concrete slab at the refuelling area. All surface water run-off over this slab will be captured by gullies and drains which will carry it to a hydrocarbon interceptor (fitted with silt trap) for treatment prior to discharge at discharge point W2.

The total quantity of material to be imported to the site shall not exceed 1,400,000 tonnes (planning reference: FW19A/0207 Fingal County Council). The proposed total quantity of material required to restore the quarry by the applicant is 1,332,084 tonnes (including material required for final profiling) [from application: Waste Activity Calculations (4.3-2.1 Waste Capacity F011) April 2019]. Accordingly, 1,332,084 tonnes is proposed in the RD as the total quantity of soil and stone permitted for backfill at the facility over the lifetime of the quarry, which will include any waste material already deposited (i.e. under the waste facility permit granted by Fingal County Council in 2020), any waste material for recovery and any by-product.

This backfill material will primarily come from excavations associated with housing developments and construction sites. Material will be accepted from both greenfield and non-greenfield sites subject to waste acceptance procedures. Condition 8.6 of the RD requires the applicant to have regard to the Environmental Protection Agency "Guidance on waste acceptance criteria at authorised soil recovery facilities" (2020) when establishing suitable trigger levels for non-greenfield soil and stone proposed for acceptance at the facility.

Material will be deposited to tie in with surrounding contours and then subsoil and topsoil will be added to enable landscaping and a return to agricultural use. Restoration will take place on a phased basis as shown below in Figure 3.

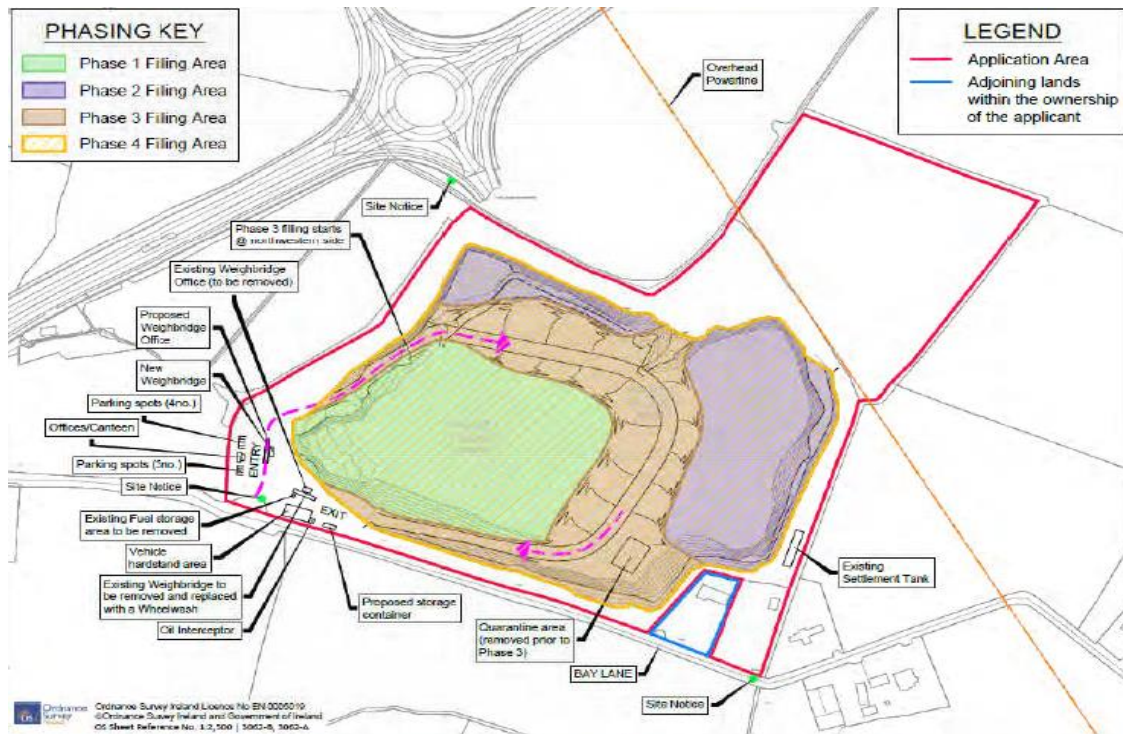


Figure 3. Phasing of Backfilling and Restoration [from application: Phase 4 Phasing Plan (Drg. No DG0006C) April 2019].

Working hours for the backfill operation will be 08.00 to 18.00 hours Monday to Friday, and 08.00 to 13.00 hours on Saturday. No operations shall take place on Sundays or Bank Holidays.

3. Planning Status

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

Planning reference	Purpose of planning application	Date of grant
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<p>Fingal County Council (FCC) F00A/0862</p> <p>An Bord Pleanála PL.06F.125541</p>	<p>Development of a quarry and associated primary crushing facilities, offices, weighbridge, wheelwash, water treatment facility, all associated landscaping and development works and the restoration of the quarry on its completion to existing ground levels.</p>	<p>FCC: Granted 19 June 2001. (appealed to An Bord Pleanála (ABP) by a third party)</p> <p>APB: Granted 04 June 2002. (following the appeal process)</p>
<p>Fingal County Council FW19A/0207</p>	<p>A soil and stone recovery facility that allows the full restoration of the lands that currently constitute a disused quarry.</p>	<p>FCC: Granted 19 March 2020.</p>

The applicant has submitted the EIAR associated with the planning permission granted by Fingal County Council, Ref: FW19A/0207.

Having reviewed the planner's reports for previous planning permissions, it is considered that the EIAR submitted with the licence application, along with the licence application and further information received, contains adequate information to inform the Agency's assessment and the EIARs relating to previous planning permissions are not required for the Agency's assessment.

The Agency has had regard to the reasoned conclusions reached by the planning authority in undertaking its environmental impact assessment of the activity.

4. 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 activity is likely to have a significant effect on the environment, and accordingly is carrying out an assessment for the purposes of EIA.

The activity exceeds the following threshold in Schedule 5 of the Planning and Development Regulations 2001, as amended: 11 (b) 'Installations for the disposal of waste with an annual intake greater than 25,000 tonnes not included in Part 1 of this Schedule'.

An EIAR was submitted to the Agency as part of the application on 05 April 2019. This is dealt with in the EIA Section later in this report.

5. Best Available Techniques

Although the facility is not a landfill (i.e. it is a backfilling project which is a waste recovery activity, not a waste disposal activity) the applicable BAT for the activity is 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. Emissions

6.1 Emissions to Air

This section addresses emissions to air from the facility and the environmental impact of those emissions.

The receiving environment is generally rural in character and residential housing consists of mainly one-off detached residential properties. The land immediately surrounding the north-western, northern and western boundaries of the site is undeveloped and is utilised for agricultural practices. The south-eastern boundary is bounded by road frontage.

The closest residential dwellings to the application area include a dwelling located at the south east corner of the site boundary, which is unoccupied and owned by the applicant and three occupied residential properties within 250m of the site's eastern boundary.

In addition, a number of commercial and industrial operations are located within the area, including a cement company (Halton concrete) located 200m to the west of the facility, a commercial bus yard (Butlers Bus Tours) located 250m to the east of the site, a food wholesale suppliers (Pallas Foods) located 350m northwest of the facility and the Northwest Business Park approximately 600m to the south east of the facility.

Dublin airport is located approximately 7km east of the facility with the western end of the existing runway 3.5km from the site's eastern boundary. The site is also located beneath the flight path.

6.1.1 Channelled Emissions to Air

There are no channelled emissions to air.

6.1.2 Fugitive Emissions

There will be no significant fugitive emissions.

6.1.3 Dust

Dust generation is associated mainly with vehicle movements during dry weather, machinery movements on site, importation of the inert soil and stone, earth moving and backfilling activities.

Dust from the facility is the main potential emission to air that could affect air quality

Minimising of dust formation is mainly a function of good housekeeping at the facility and keeping the road surfaces in a clean condition. The applicant has proposed/highlighted the following mitigation/control measures to minimise dust arising:

- Preparation of a dust minimisation plan as part of an Environmental Management Plan;
- Concrete surfaces will be used at the site entrance to minimise dust generation in this area;
- Physical characteristics of the site. The site being below ground level will act as a natural barrier, containing the dust within the void;
- Material handling systems will be designed and laid out to minimise exposure to wind;
- Active tipping area will be restricted in location and area;
- Dust control equipment to be used to control dust levels;
- Regular cleaning and maintenance of site roads including sweeping of hard surfaces and restricted use of unsurfaced roads to essential site traffic;
- Any site roads with the potential to give rise to dust will be regularly watered, with a mobile water bowser on site for deployment;
- Water misting, or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods;
- All vehicles exiting the site will make use of a wheel wash facility prior to exiting onto public roads;
- Transport of very fine soils in covered vehicles;
- Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary.

The RD requires that dust control measures are employed to minimise the emission of dust at the facility. Condition 5.3 of the RD requires that dust emissions do not impair amenities or the environment beyond the facility boundary. Condition 4.4 requires that dust from the activity shall not give rise to deposition levels that exceed the limit value specified in Schedule B.5. The licence also requires monthly monitoring of ambient dust deposition in Schedule C.6.

Condition 3.18 requires that all vehicles leaving the facility shall use the wheel cleaner. Condition 6.12 requires that dust control measures are employed to minimise the emission of dust at the facility during dry periods. Specifically, Condition 6.12 requires

that in dry weather all stockpiles, site roads and any other areas used by vehicles shall be sprayed with water as and when required to minimise airborne dust nuisance.

6.1.4 Odour

Odour is not expected to be an issue due to the fact that no odourous waste will be accepted at the facility. Only inert soil and stone will be accepted which is not odorous. Accordingly, no site specific measures are proposed outside of the following conditions:

- Condition 8.12 of the RD will require the implementation of waste acceptance procedures to prevent the acceptance of unauthorised wastes (including contaminated waste) at the facility.
- Condition 8.12.8 of the RD requires that the rejected waste moved to the quarantine area is stored under appropriate conditions to avoid odour nuisance or objectionable condition.
- Condition 5.3 of the RD requires that no emissions, including odour, shall result in the impairment of, or an interference with amenities or the environment beyond the facility boundary.

6.2 Emissions to Water/Ground

6.2.1 Emissions to Surface Waters

There are no process emissions to surface waters.

6.2.2 Emissions to ground/groundwater

There are no process emissions to ground/groundwater.

6.2.3 Emissions to Sewer

There are no process emissions to sewer at the facility.

6.2.4 Other emissions to ground/groundwater

The wastewater from welfare facilities will be discharged to a packaged treatment plant with treated effluent percolated to ground.

The RD includes a standard condition which requires the applicant to provide and maintain a wastewater treatment plant for the treatment of sanitary effluent, and requires the waste water treatment system and percolation area to satisfy the criteria set out in the Code of Practice Domestic Waste Water Treatment Systems (Population Equivalent ≤ 10).

In the unlikely event of the wastewater treatment plant failing, the impact in the percolation area would be localised and groundwater would not be impacted significantly. It is therefore considered that direct impacts of sewage emissions to ground/groundwater are considered to be neither likely nor significant.

Accidental polluting emissions could occur to ground/groundwater if contaminated infill is imported or there are spillages of fuel or chemical products from the vehicles and machinery onsite potentially causing an adverse impact on the quality of the groundwater.

The site is located within the Swords Groundwater Body (IE_EA_G_011). The Groundwater WFD status 2013-2018 is 'Good', therefore this waterbody is considered 'Not at Risk'.

The site of the proposed development and surrounding area are within an area of groundwater that is a source of drinking water. There are a number (8) of groundwater wells and springs in the vicinity of the site. It is noted that the wells that are within 2km of the site are in active use as domestic water supply. The nearest Groundwater Drinking Water Protection Area is 7km to the west. Schedule C.7 requires monitoring of groundwater. The RD requires that additional groundwater monitoring wells are installed up gradient and downgradient of the activity to allow for the assessment of potential impacts on groundwater quality from the activity.

The RD includes a range of requirements which will ensure that groundwater is not contaminated while licensed activities are being carried out. Only soil and stone that meets the appropriate waste acceptance criteria will be used for backfilling. Condition 8.10 requires that all vehicle and machinery refuelling and maintenance is carried out in designated areas protected against spillage and run-of. 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.

6.3 Discharge to water

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

Discharge point details					
Emission Reference	Potential contamination	Abatement	Drainage areas	Discharging to	Trigger levels established (Y/N)
W2 (discharge point)	<p>Discharge of polluted water could cause contamination to the receiving waterbody.</p> <p>There is a risk of fuel and oil spillages arising from the operation of vehicles and machinery within the facility. This may cause storm water pollution.</p>	Settlement tank, silt trap and Class I full retention interceptor required by RD.	Quarry, all hard standing areas including buildings, site roads, car parks and refuelling area.	An unnamed stream which flows into the Ward River (waterbody code: IE_EA_08W010300)	No Trigger levels established. Required by RD.

	Also contaminated waste could cause contamination of storm water.				
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Surface water run-off and minor groundwater inflows have created a pond within the existing quarry void. Dewatering of the quarry void will be required prior to importation of the fill material.

The dewatering phase will consist of constructed surface water channels to direct the flow path of standing water and surface water run-off within the open pit to discharge to the existing sump located on the north-west section of the site, where it will be pumped to the settlement and separator tank and a hydrocarbon interceptor for treatment, prior to discharge to the adjacent unnamed stream through an outfall pipe with peak flow restricted to greenfield run-off rate (45.74l/s). Accumulated settled solids from the settlement tank will be periodically removed by draining down the tank and pumping out the solids using a sludge pump. It is noted that all discharges from the site will be sent to the settlement and separator tank, prior to discharge.

The proposed drainage arrangement for the open pit during the operational period will consist of varying drainage arrangements for the three phases of the backfill operation. The first phase will consist of contouring the backfill in the south west area of the pit towards surface water channels, which direct the flow of standing water and surface water runoff to discharge to the existing sump in the north west of the quarry where it will be pumped (rate 0.05m³/s) to the settlement and separator tank.

The second phase consists of an additional surface water channel constructed along the access track to convey combined surface water run-off and groundwater discharge to a sump located at the south east corner of the open pit where it will be pumped to the settlement and separator tank. The backfilling will take place in the north east of the pit and will include backfilling of the existing sump.

The final phase will consist of backfilling the access road and the second sump. As the land is raised it will be sloped towards the existing drainage ditches along the boundary of the site to allow the surface water and groundwater to discharge back into the existing ditches to replicate the drainage of the site prior to the excavation of the quarry. As the pit is backfilled it will be compacted during all phases to limit the infiltration of the surface water to allow groundwater to rebound to its natural state.

A storm water management system will be provided to cater for storm water generated by the hard stand associated with the paved site entrance road, car parking and associated areas through a gully and pipe network. A hard stand with drainage to an oil interceptor will be provided as a designated refuelling area. The refuelling area will be underlain by a sealed concrete slab which will fall towards a central drain/gully. All surface water run-off over this slab will be captured by gullies and drains which will carry it to a hydrocarbon interceptor fitted with a silt trap for treatment prior to discharge.

The facility discharges through an outfall pipe into an unnamed stream to the east of the site which is a tributary of the Ward River. The unnamed stream is not a waterbody under the Water Framework Directive and there is no waterbody code for this unnamed stream.

The flow direction of the Ward River is generally to the north east towards Swords, where it confluences with the Broadmeadow River and enters the Malahide Estuary approximately 13km downstream.

The WFD status 2013-2018 for the Ward River adjacent to the site (IE_EA_08W010300) is 'Moderate', however as the river approaches Swords, the status becomes 'Poor', therefore this waterbody is considered to be 'At Risk' of not meeting its environmental objectives. It is also noted that the Ward River at Chapelmidway Bridge (RS08W010100) located ~ 6km from the site has been assigned a Q value of Poor. It is further noted that the quarry is not identified as being a significant pressure on the Ward River.

There is potential for aggregate piles at the base of the quarry to contain enough pyrite to cause sulphate-containing leachate. Water monitoring results (2019-2021) of the standing water within the quarry void have shown elevated levels of SO₄. Having reviewed surface water monitoring data upstream and downstream of the facility in the Ward River as seen in Table 1. below it has been noted that there is an increase in sulphates between the upstream and downstream monitoring locations of the facility. The extent of the impact is reducing over time with monitoring results showing an improvement trend. Backfilling the quarry will reduce the leachate potential of the aggregate piles.

Table 1. Water Monitoring Data Ward River

Date	Parameter	Upstream	Downstream
17 July 2019	Sulphates as SO ₄	118	624
25 November 2020	Sulphates as SO ₄	130	477
29 January 2021	Sulphates as SO ₄	121	232

[Source: Unsolicited additional information 16 July 2021]

There is no sulphate limit in the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (S.I. 272 of 2009). The Ward River is not used for water abstractions but as there are elevated levels of sulphates and drinking water wells within 2km of the quarry the RD will include an ELV of 250mg/l for sulphate in accordance with the European Union (Drinking Water) Regulations 2014 (S.I. No. 122 of 2014).

The existing Effluent Discharge Licence (WPW/F/081) requires monitoring of discharges to water at W2 for the following parameters: BOD, COD, suspended solids, nitrates, sulphates as SO₄, ammonia, phosphates and mineral oils. Monitoring data submitted from Q1 of 2019 to Q1 of 2021 has shown all parameters to be below their respective emission limit values, with the exception of sulphates. The RD requires that these parameters are continued to be monitored, however the RD sets the Environmental Quality Standards (EQS) as emission limit values on the discharge via W2 in Schedule B.2, with the exception of sulphates as outlined above. Table 2. below reflects the ELV's as per the existing Effluent Discharge Licence (WPW/F/081) and the proposed RD and monitoring data submitted by the applicant demonstrates that the proposed ELVs in the RD can be achieved. The limits and controls set out in the RD will ensure the discharge will not cause a deterioration in water quality or compromise the achievement of good status in the Ward River.

Table 2. Emission Limit Values

Parameters	Existing Effluent Discharge Licence ELVs	Parameters	Proposed ELVs
BOD	3 mg/l	BOD	2.6 mg/l
Suspended solids	20 mg/l	Suspended solids	15 mg/l
Ammonia	1 mg/l	Ammonia	0.140 mg/l
Phosphates	0.3 mg/l	Orthophosphate	0.075 mg/l
Sulphates	100 mg/l	Sulphates	250 mg/l

In relation to sulphates, monitoring data submitted from Q1 of 2019 to Q1 of 2021 shows that exceedances were recorded in all monitoring results when compared to the existing effluent discharge licence ELV (395, 738, 817, 535, 337 v's 100mg/l). It is considered however that sulphates within the discharge will reduce as the quarry void is backfilled.

Condition 3.11 requires that all storm water, other than from roofs, from the facility shall pass through the settlement tank and oil separators in advance of discharge.

Deposit of non-conforming waste in the fill area could potentially affect the quality of the soil and groundwater. Condition 8.12 requires waste acceptance procedures to prevent the acceptance of unauthorised (including contaminated) waste at the facility.

Stormwater has the potential to be contaminated by spillages from plant refuelling and other oil/fluid leaks from machinery on site. In addition to the drainage system outlined above, the applicant has proposed the following:

- No storage of fuels on site;
- All refuelling to take place from a mobile double skinned fuel bowser and in a designated hardstanding are draining to an oil interceptor;
- Regular inspections of plant and machinery for leaks.

The RD requires the applicant to maintain the storm water drainage system. The RD also requires that the surface water discharge is visually inspected daily and monitored for pH, BOD, Suspended solids, Ammonia (as N), Orthophosphate (as P), Total Dissolved Solids, Total Petroleum Hydrocarbons and Diesel and Petrol Range Organics in accordance with Schedule C.2.2 *Monitoring of Emissions to Water*.

The RD contains standard conditions in relation to the storage and management of materials and wastes. The RD also requires that accident and emergency response procedures are put in place. The controls pertaining to accidents and emergencies are addressed in Prevention of Accidents section later in this report. These measures will help control any impacts which could occur should any mitigation measures fail.

6.4 Noise

The main sources of noise at the facility will include HGV vehicles in and out of the site, unloading of the material, and plant machinery within the facility spreading and grading the infill material. Given the nature of these operations, impacts from vibrations are not considered likely.

The area is generally rural in character. Much of the land immediately surrounding the site is undeveloped and is utilised for various agricultural practices. There are several commercial and industrial developments in the local area of the Bay Lane Quarry.

Some share the same access road as the site including a cement company (Halton Concrete) located 200m to the west of the site and a commercial bus yard (Butlers Bus Tours) located approximately 250m to the east of the site. Pallas Foods wholesale suppliers is located approximately 350m north northwest of the site. Several business parks are located to the south including Northwest Business Park which is located 600m to the south east of the quarry site.

There is a small amount of low-density residential housing in the area of the facility. The immediate area is rural, and housing consists mainly of one-off detached residential properties located along Bay Lane. The closest sensitive receptor is approximately 100m away.

For noise assessment purposes, standard limits specified in the Agency NG4 Guidance Note for Noise: Licence Applications, Surveys, and Assessments in relation to scheduled activities were used as ambient standards. A baseline study was carried out at 3 locations around the site in February 2019 in accordance with the Agency Guidance. The main noise sources identified in the study area were road traffic noise from the N2-R121 dual carriageway link road and local passing traffic along Bay Lane, aircraft noise from Dublin Airport and agricultural practices within the vicinity of the area. The study determined that the existing environment would not be classified as a 'Quiet Area' or an 'Area of Low Background Noise' and therefore, more stringent emission limit values were not considered necessary.

Baseline noise monitoring in and around the application site indicate that noise levels are elevated and that ambient noise levels in the local area typically range between 66 dBA LAeq and 68 dBA LAeq during the daytime, 61-63 dBA LAeq during the evening and 45-55 dBA LAeq during the nighttime depending on location and proximity to the N2-R121 dual carriageway, local traffic on Bay Lane, agricultural practices and aircraft noise from the flight path of Dublin Airport.

The noise prediction assessment indicates that there will be minimal, if any, increase in noise levels under a worst-case scenario where both a tracked bulldozer and a shovel loader operate concurrently 100% of the time. The resultant predicted maximum levels at nearby sensitive receptors are comparable to and only slightly elevated above, existing ambient levels – e.g. 66 dBA LAeq at noise sensitive location ref. No. 3 when compared to the existing baseline noise level of 65 dBA LAeq.

The applicant has proposed the following mitigation/ control measures for noise:

- HGVs will only be allowed to import material to the site during the proposed operational hours;
- All vehicle engines will be switched off when not in use;
- Care should be taken when unloading vehicles to reduce or minimise potential disturbance to local residents;
- All equipment will be regularly maintained to ensure they are operating effectively and not producing additional noise emissions or potential tonal sources;
- The number of machines in simultaneous operation will be minimised;
- All operations will employ the best practicable means to minimise noise emissions.

Noise conditions and emission limit values, which apply at noise sensitive locations, have been included in Schedule B.4 of the RD. Additionally, Condition 2.2 of the RD includes the management of noise emissions to be implemented as part of the Environmental Management System (EMS).

7. Waste generation

The operation of the facility will result in the generation of small quantities of non-hazardous wastes which will be segregated at source.

The activity does not produce significant quantities of waste. Some municipal type waste (recyclable and non-recyclable) will be generated from the office and canteen facilities onsite.

Hazardous waste streams will be generated at the facility in small quantities including grease and oils from machinery maintenance and interceptor sludge removal.

Waste that doesn't meet the acceptance criteria for backfill will be removed, segregated and appropriately stored in a skip pending removal off-site. The waste will be transferred off-site for recovery/disposal at an authorised facility.

All waste generated on site will be transported and recovered/disposed of off-site in accordance with national and European Legislation.

- The RD requires that waste sent off-site for recovery or disposal shall be transported only by an authorised waste contractor, in a manner that will not adversely affect the environment and in accordance with National and European Legislation (Condition 8.3).
- There are standard conditions in the RD pertaining to the storage and management of waste generated by the activity.
- The Environmental Management System is required to include the prevention, reduction and minimisation of waste and shall include waste reduction targets.

8. Energy Efficiency and Resource Use

The operation of the facility involves the consumption of fuel, water and electricity. The estimated quantities used when the facility is operational are specified in attachment 4.6.1 of the application form and are given below.

Resource	Quantity per annum
Electricity	20 MWH
Water	1100 m ³ (public supply) 1100 m ³ (extracted from quarry surface water system)
Fuel - Diesel	30 tonnes

The use of natural resources by the activity will not be significant. Water abstraction will be from the quarry surface water system and used for wheel washing and dust suppression, with a small volume of potable water supplied by mains required for

onsite welfare facilities. Diesel, hydraulic and engine oil will be required for the onsite plant and machinery in operation of site spreading and grading the infill material.

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 and the recommendations of the audit to be incorporated into the Schedule of Environmental Objectives and Targets as outlined in Condition 7.2 of the licence.

There is a risk of fuel spillages that could cause groundwater pollution. Condition 8.10 requires that all refuelling and ongoing maintenance of vehicles is carried out in designated areas that are protected against spillage and runoff. No fuels are planned to be stored on site with a refuelling tanker to be deployed to the site as required. These measures address a number of key provisions in the Groundwater Directive (2006/18/EC), namely that hazardous substances should not be allowed to enter groundwater and will ensure compliance with European Communities Environmental Objectives (Groundwater) Regulations 2010, S.I No.9/2010.

9. Prevention of Accidents

A certain amount of accident risk is associated with the licensable activity. Potential accidents and measures to address/prevent them are outlined below.

Potential accidents & measures for prevention/limitation of consequences	
<p>Potential for an accident or hazardous/ emergency situation to arise from activities at the facility</p>	<ul style="list-style-type: none"> • Potential spillage of fuel or hydraulic oil from plant on site; • Spillage/leak due to accident on site • Acceptance of contaminated material for backfill; • Failure of fuel/oil interceptor to intercept hydrocarbons in runoff/discharge; • Dust suppression. <p>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.</p> <p>Risk of Fire is considered low as no fuel or flammable liquids/materials will be stored on site.</p>
<p>Preventative/Mitigation measures to reduce the likelihood of accidents and mitigate the effects of the consequences of an accident at the facility</p>	<ul style="list-style-type: none"> • Implement waste acceptance procedure to prevent acceptance of unauthorised and contaminated waste at the facility (Condition 8.12); • A hard-stand with drainage to oil interceptor will be provided as a designated refuelling area; • No fuel or oil will be stored on site, • Plant/machinery inspected regularly to ensure there are no leakages of fuel or hydraulic fluid; • Provision of spill kits/ containment booms (Condition 3.10);

Potential accidents & measures for prevention/limitation of consequences	
	<ul style="list-style-type: none"> • Dust suppression including water spraying, wheel washing and keeping the road network debris free (Condition 3.18 & 6.12); • Routine inspection of surface water channels and drains (Condition 6.9 & 6.11).
Additional measures provided for in the RD	<ul style="list-style-type: none"> • Accident prevention and emergency response procedure requirements (Condition 9) • Storm water discharge points to be visually monitored daily (Schedule C) • Environmental Management System to be put in place (EMS) (Condition 2.2.1) • Employ a suitably qualified and experienced manager (Condition 2.1.1) • Ensure sufficient staff training (Conditions 2.1.2 & 2.2.2.7) • Integrity of tanks & underground pipes to be assessed every 3 years and maintenance carried out as required. (Condition 6.8)

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.

10. Cessation of Activity

A certain amount of environmental risk is associated with the cessation of any licensable activity (site closure). For this facility, importation of backfill will cease, filled voids will be covered by topsoil and subsoil to restore the site to original ground level. Ancillary services (wheel wash, weighbridge, site office etc.) will be removed as will any plant and machinery.

Planning permission (FW19A/0207) requires that restoration of the site be carried out in accordance with the plans submitted to Fingal County Council on 4 December 2019.

Condition 10 of the RD requires the proper closure of the activity with the aim of protecting the environment. In particular the RD requires that the applicant submits a Closure, Restoration and Aftercare Management Plan.

11. Fit & Proper Person

Technical Ability

The applicant 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 applicant has demonstrated the technical knowledge required.

Legal Standing

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

ELRA, CRAMP and Financial Provision

The 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, costed CRAMP and FP were not required.

Condition 10.2 of the RD requires the review of a Closure, Restoration and After Management Plan (CRAMP) uncosted, within six months of the grant of the licence. In accordance with EPA guidance, there is no apparent need to require the preparation of an Environmental Liabilities Risk Assessment or the making of financial provision. This is based on the fact that only non-hazardous, inert wastes will be deposited at the facility, the environmental risk posed is low and restoration activities will cease, with aftercare expected, within 4 years.

Fit & Proper Conclusion

It is my view, that the applicant can be deemed a Fit & Proper Person for the purpose of this application.

12. Submission

While the main points raised in the submission are briefly summarised in the table below, the original submission should be referred to at all times for greater detail and expansion of particular points.

The issues raised in the submission are noted and addressed in this Inspector's Report and the submission was taken into consideration during the preparation of the Recommended Determination/ Decision (RD).

Submissions			
1.	Name & Position Miss Bernice Martin Principal Environmental Health Officer	Organisation: Health Service Executive (HSE) - Fingal	Date received: 03 June 2019
Issues Raised:		Agency Response:	
That the public are informed of the proposal to develop a waste soil and stone recovery facility at the GLV Bay Lane		Site notices were erected at 3 locations as shown in Drawing 3 Site Outline (Drawing No: DG0003) and a notice published in the Irish Daily Star 5 April 2019 in accordance with	

Submissions	
Quarry. Meaningful public consultation should be undertaken.	Article 5 of the Waste Management (Licensing) Regulations 2004, as amended. All documents related to the application are also publicly available on the Agency's website.
A system for recording and responding to public complaints and for communication with the local community should be put in place.	<p>Condition 11.7 of the RD requires the applicant to record all complaints of an environmental nature related to the operation of the activity and to keep a record of the response made in the case of each complaint.</p> <p>Condition 2.2.2.8 requires the applicant to establish, maintain and implement a Public Awareness and Communications Programme to ensure that members of the public can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility.</p>
Bi-annual monitoring of 8 private wells identified in the EIAR should be undertaken to ensure that drinking water quality has not been compromised as a result of site activities.	<p>It is not possible to attribute changes in water quality at private wells to the proposed activities as there are a number of other influences on water quality in the area.</p> <p>Only clean soil and stone is recommended to be authorised for acceptance as the backfill material.</p> <p>Schedule C.7 requires monitoring of groundwater. It is considered that the monitoring frequencies set out in this schedule are adequate.</p> <p>The RD requires groundwater monitoring be carried out at 3 boreholes (wells) at the facility on a quarterly basis (Schedule C.7). The wells are located up gradient and downgradient of the activity which allows for an assessment of potential impacts on ground water quality from the activity.</p> <p>Condition 6.19.2 requires that groundwater monitoring data be assessed against the requirements of the European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. 9/2010) as amended, on an annual basis.</p>
Noise monitoring to be undertaken twice every year at the nearest inhabited properties.	<p>Condition 4.3 requires that noise levels from the facility do not exceed standard noise emission limit values at noise sensitive locations.</p> <p>Condition 6.13 requires a noise survey to be carried out as required by the Agency at noise</p>

Submissions	
	sensitive locations and any additional locations decided by the Agency
Mitigation measures to minimise the risk of nuisance from dust on nearby residents.	<p>Condition 5.3 requires the applicant to ensure that dust associated with the activity does not impair or interfere with, amenities or the environment beyond the facility boundary.</p> <p>Condition 4.4 requires that dust from the activity shall not give rise to deposition levels which exceed the limit value specified in Schedule B.5.</p> <p>The licence also requires monthly monitoring of ambient dust deposition (Schedule C.6). Condition 6.12 requires measures for dust control.</p>
Visual inspections to check the cleanliness of the public road outside the site should be carried out on a daily basis.	<p>The RD specifies environmental controls in order to minimise the risk of environmental pollution and nuisance to the public arising from the activities at the facility. These include:</p> <p>Condition 6.14 requires removal of all loose litter or other waste present in the vicinity of the facility.</p> <p>Condition 5.5 requires that the applicant shall ensure that mud and litter associated with the activity does not result in an impairment of, or an interference with, amenities beyond the facility boundary or any other legitimate uses of the environment beyond the facility boundary.</p>

13. Consultations

13.1 Cross Office Consultation

I consulted with Ann Marie Donlon (OES Licensing), Alan Stephens (ORM Environmental Monitoring and Surveillance) and Shane O' Boyle (OEA, Water Management Programme) in relation to parameters for discharges to water.

13.2 Transboundary Consultations

There were no transboundary consultations undertaken as there were no transboundary impacts identified.

14. Appropriate Assessment

Appendix 1 lists the European Sites assessed, their associated qualifying interests and conservation objectives along with the assessment of the effects of the activity on the European Sites.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity, individually or in combination with other plans or projects is 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), Rogerstown Estuary SAC (Site Code:000208), North Dublin Bay SAC (Site Code:000206), South Dublin Bay SAC (Site Code:000210), Rye Water Valley/Carton SAC (Site Code:001398), North Bull Island SAC (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 (Site Code:004025).

The activity is 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 cannot be excluded, on the basis of objective information, that the activity, 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 activity was required. This determination is based on the hydrological connection to the Malahide Estuary SAC (Site Code: 000205) and the Malahide Estuary SPA (Site Code: 004025).

A Natura Impact Statement was received by the Agency on 09 April 2019.

An Inspector's Appropriate Assessment has been completed and has determined, based on best scientific knowledge in the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive, that the activity, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site, in particular; Baldoyle Bay SAC (Site Code:000199), Malahide Estuary SAC (Site Code:000205), Rogerstown Estuary SAC (Site Code:000208), North Dublin Bay SAC (Site Code:000206), South Dublin Bay SAC (Site Code:000210), Rye Water Valley/Carton SAC (Site Code:001398), North Bull Island SAC (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 (Site Code:004025), having regard to their conservation objectives and will not affect the preservation of these sites at favourable conservation status if carried out in accordance with this recommended decision and the conditions attached hereto for the following reasons:

- Condition 5 of the RD requires that no specific emissions from the facility shall exceed the emission limit values set out in *Schedule B: Emission Limits*, of this licence. *Schedule C: Control and Monitoring*, of this licence also sets out monitoring requirements for emissions to air and water.
- The RD as drafted requires the applicant to comply with conditions that protect habitat, groundwater and surface water under normal operating conditions and in the unlikely event of an accident/emergency.
- Condition 8.12 of the RD as drafted requires the applicant to implement waste acceptance procedures to prevent the acceptance of unauthorised (including contaminated) waste at the facility.
- Condition 6.12 requires measures for dust control. Specifically, Condition 6.12.2 requires that in dry weather all stockpiles, site roads and any other areas used

- by vehicles shall be sprayed with water.
- No indirect impacts on water quality at the European sites are expected from the activity due to the use of inert material for infill and the requirement to follow pollution prevention and control measures. Licence conditions to protect water quality include:
 - Waste acceptance procedures to prevent importation of unauthorised (including contaminated) waste (Condition 8.12). Imported material will be subject to the waste acceptance criteria in *Schedule A.2. Waste Acceptance Criteria for Backfill Material* of this licence.
 - Runoff from a hardstanding area used for parking and refuelling must pass through a silt trap and full retention fuel/oil interceptor prior to discharge.
 - A visual examination of storm water discharges to be carried out daily (Condition 6.11). Monitoring of the storm water discharge and suitable trigger levels for the monitored parameters (Condition 6.11.2)
 - An emergency spill kit with oil boom, absorbers etc. is to be kept on site for use in the event of an accidental spill (Condition 3.10).
 - The potential for impact arising from accidental emissions is low due to the inert nature of the material being imported, the infrastructure and storm water management and conditions on fuel handling and storage outlined in the licence. Condition 9.1 requires an Accident Prevention Procedure to be put in place that addresses all hazards on-site, particularly in relation to the prevention of accidents with possible impacts on the environment. Condition 9.2 requires an Emergency Response Procedure to address any emergency which may originate on site.
 - Condition 10 requires the proper closure of the activity with the aim of protecting the environment upon cessation of activity.

In light of the foregoing reasons no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of those European Sites; Baldoyle Bay SAC (Site Code:000199), Malahide Estuary SAC (Site Code:000205), Rogerstown Estuary SAC (Site Code:000208), North Dublin Bay SAC (Site Code:000206), South Dublin Bay SAC (Site Code:000210), Rye Water Valley/Carton SAC (Site Code:001398), North Bull Island SAC (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 (Site Code:004025).

15. Environmental Impact Assessment

15.1 EIA Introduction

This assessment is being undertaken in accordance with the requirements of Directive 2014/52/EU amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment. The application was accompanied by an Environmental Impact Assessment Report (EIAR):

- *Environmental Impact Assessment Report: Restoration of Bay Lane Quarry. Prepared for GLV Bay Lane Limited by RPS Group Ltd, Ref: MDR1499 (March 2019).*

As part of this environmental impact assessment, I have carried out an examination, analysis and evaluation of all the information provided by the applicant (including the EIAR), information received through consultation, the documents associated with the assessments carried out by Fingal County Council and the issues that interact with the matters that were considered by that authority and which relate to the activity, written submissions, as well as considering any supplementary information, where appropriate. All of the documentation received was examined and I consider that the EIAR complies with the provisions of Article 5 of the 2014 EIA Directive when considered in conjunction with the additional material submitted with the application.

I am satisfied that the information contained in the EIAR has been prepared by competent experts and that the environmental effects arising as a consequence of the activity have been satisfactorily identified, described and assessed.

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 activity on the environment, as respects the matters that come within the functions of the Agency, for each of the following environmental factors: population and human health, biodiversity, land, soil, water, air and climate, the landscape, material assets and cultural heritage.

This Inspector's report addresses the interaction between those effects. The cumulative effects, with other developments in the vicinity of the activities have also been considered, as regards the combined effects of emissions. In addition, the vulnerability of the activity to risks of major accidents and/or disasters has been considered. The mitigation measures proposed to address the range of predicted significant effects arising from the activity have been outlined. This Inspector's report provides conclusions to the Agency in relation to such effects.

A summary of the submissions made by third parties has been set out above in the Submissions Section of this report.

I am satisfied that the public have been given early and effective opportunity to participate in the environmental decision-making process.

15.2 Consultation with Planning Authorities in relation to EIA

Consultation was carried out between Fingal County Council and the Agency under the relevant section of the Waste Management Act 1996 as amended on 9 April 2019, with a reminder that issued on the 10 February 2020.

Fingal County Council did not provide any observations to the Agency on the license application and EIAR.

15.3 Alternatives

The matter of alternatives is addressed in Chapter 4 of the EIAR. Alternatives relating to site location, layout, size and scale, type of waste to be accepted and do nothing scenario were considered.

In terms of location, the main reason for choosing this site is the fact that it comprises of an existing quarry void suitable for accepting soil and stone and facilitating site restoration. The reinstatement of the void using inert material, and the environmental gain derived therefrom, constitutes the principal qualification of the application site. The applicant has detailed the regional shortages of available areas for soil and stone recovery.

In addition, the applicant assessed the advantageous and strategic location of the site, which is 1km west of the N2 that links to Dublin City Centre and Dublin Airport and can therefore meet growing demand for soil and stone recovery from infrastructure and construction projects in Dublin City and County.

The size and scale of the activity is determined by the volume of the quarry void that needs to be filled in order to tie in the site with the surrounding landscape. The acceptance of waste material other than inert soil and stone is not feasible given the potential for environmental impact and existing demand for recovery of inert soil and stone.

The 'do nothing scenario' was not considered a viable option. Under a 'do nothing' scenario the quarry void would remain unfilled. Site restoration would proceed in any case, as per planning conditions for the quarry (Planning Ref: F00A/0862 and An Bord Pleanála Ref: PL06F.125541) that restoration be undertaken using dry inert fill.

In this regard I consider that the matter of the examination of alternatives has been satisfactorily addressed.

15.4 Likely Significant Direct and Indirect Effects

The likely significant direct and indirect effects of the activities on the following factors as set out in Article 3 of the EIA Directive are considered in this section:

- (a) population and human health;*
- (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;*
- (c) land, soil, water, air and climate;*
- (d) material assets, cultural heritage and the landscape;*
- (e) the interaction between the factors referred to in points (a) to (d).*

15.4.1 Population & Human Health

Identification, Description and Assessment of Effects

Population and human health are addressed in Chapters 6 & 7 of the EIAR. The potential direct and indirect effects on population and human health are associated with dust, noise emissions, emissions to water, and accidental emissions. Should emissions exceed environmental quality standards this could have implications for population and human health.

The effects identified and described above have been assessed in the following section of this report: Emissions to Air (Section 6.1), Stormwater/ Water discharges (Section 6.3) and Noise (Section 6.4).

Dust arising from the activity has the potential to cause nuisance beyond the facility boundary. Noise emissions have the potential to cause nuisance for those living in the area with three residences located within 150m of the facility.

There is also the potential for accidental emissions to the environment, due to e.g. fire, explosion, or spillages etc. Accidental emissions to ground/groundwater could occur in the event of contaminated material being deposited in the quarry or from spillage of diesel fuel or hydraulic oil from plant and machinery. This is addressed in Prevention of Accidents section of this report.

Cumulative effects of the activity in relation to population and human health have been assessed and it is considered that there is not likely to be a significant cumulative effect from the activity and other activities/developments. There are no likely significant direct, indirect or cumulative effects identified.

Mitigation and Monitoring

Mitigation measures and monitoring in relation to population and human health are detailed in the following sections of this report: Emissions to Air (Section 6.1), Emissions to Water, Stormwater discharges (Section 6.3), Noise (Section 6.4), Prevention of Accidents (Section 9).

Conclusions

I have examined all the information on population and human health, provided by the applicant, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the Recommended Decision. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of population and human health.

15.4.2 Biodiversity

Identification, Description and Assessment of Effects

Biodiversity is addressed in Chapter 8 of the EIAR. The EIAR describes the habitats and species at and in the vicinity of the facility.

The site is an existing rock quarry which is almost entirely screened by hedge and tree dominated vegetation. The quarry has an area of 13.67 ha, of this approximately 8.59 ha will be backfilled.

Ecological surveys were carried out by the applicant on 9 October 2018, 18 December 2018 and 11 January 2019 to map habitats and key flora and fauna. Breeding Bird and Bat Activity Surveys, Licenced Amphibian Survey and Raptor Activity and Breeding Surveys were also carried out.

Habitats present included spoil and bare ground, recolonising bare ground, exposed calcareous rock, buildings and artificial surfaces, other artificial lakes and ponds, hedgerows, treelines and scrub. Protected species recorded at the site included

badgers, foraging bats, peregrine falcon, hedgehog and frog. No evidence of roosting bats was recorded at the site.

A number of bird species of High or Moderate Conservation concern (Red or Amber listed respectively) were identified during site surveys. The two key red listed species observed were small flocks of Yellowhammer and Herring Gull overflying the site. Four Amber listed species including Stock Dove, Sparrowhawk, Robin and Lesser Black backed Gull were recorded.

The applicant also submitted a Natura Impact Statement, (Refer to the Appropriate Assessment, Section 13, of this report).

The potential direct and indirect effects on biodiversity are related to effects on aquatic flora and fauna and their habitats due to effects on water quality, disturbance to fauna due to noise emissions, and effects due to air emissions (dust, traffic exhaust). The effects identified and described above have been assessed in the following sections of this report: Emissions to Air (Section 6.1), Storm Water Discharges (Section 6.3) and Noise (Section 6.4).

There is potential for the proposed works to cause the spread of invasive plant species. Potential impacts on fauna are temporary indirect impacts on badger. During the phased backfilling the sett would be within 30 metres of the edge of the quarry void and the proximity to the works could be a disturbance to the breeding sett. No significant effects on foraging bats are anticipated.

There is also the potential for accidental emissions to the environment, due to e.g. fire, explosion, or spillages etc. Accidental emissions to ground/groundwater and surface water could occur in the event contaminated material being deposited in the quarry or from spillage of diesel fuel or hydraulic oil from plant and machinery. These could adversely impact aquatic habitats. These are addressed in Section 9 (Prevention of Accidents).

Cumulative effects of the activity in relation to biodiversity have been assessed and it is considered that there is not likely to be a significant cumulative effect from the activity and other activities/developments. There are no likely significant direct, indirect or cumulative effects identified.

Mitigation and Monitoring

Mitigation measures and monitoring in relation to biodiversity are detailed in the following sections of this report: Section 6.1 Emissions to Air, Section 6.3 Storm Water Discharges, Section 6.4 Noise, Section 7 Waste Generation, Section 9 Prevention of Accidents.

Mitigation and monitoring measures specific to biodiversity are as follows:

- Appointment of a Retained Ecologist or Ecological clerk of Works as necessary to oversee and advise on ecological mitigation and monitoring as required by planning permission;
- An invasive species management plan will be developed and implemented to address invasive species at the site;
- The applicant has stated no scrub clearance or other removal of vegetation will occur during the bird breeding season from 1st March to 31st August;

- The applicant will time and manage the licensed translocation of frog spawn (January to March),
- Two hedgehog hibernation boxes will be installed by the ecological consultant and the location of the boxes notified to Fingal Biodiversity Officer and NPWS for their records;
- The active badger sett will be retained along the perimeter of the site and an exclusion zone of 30 metres shall be maintained around the sett in summer season (extended to 50m during the breeding season November to June inclusive), any works carried out within the exclusion zone will be supervised by a suitably qualified ecologist.

Conclusions

I have examined all the information on biodiversity, provided by the applicant, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the Recommended Decision. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of biodiversity.

15.4.3 Land and Soil

Identification, Description and Assessment of Effects

Land and soil are addressed in Chapter 9 of the EIAR. The site consists of a rock quarry located approximately 3km southwest of the village of St Margaret's, 3 km northeast of Mulhuddart and 2.8km west of Dublin Airport at Bay Lane, St Margaret's, County Dublin. Land use is predominantly agriculture with a number of commercial and industrial operations located in the area.

The site is situated within an area designated as "Extreme groundwater vulnerability" with localised areas of rock outcrops. There are bedrock outcrops to the northwest of the site and the quarry itself is a manmade outcrop. There are no karst features recorded in the region. There is a stockpile in the northeast corner of the site which comprises of the soil and overburden that was removed during the excavation of the quarry which will be used in the backfilling of the quarry. The site has a history of quarrying rock for aggregate production. The aggregate produced was found to contain pyrite. The bedrock at the site and the aggregate piles at the base of the quarry pit may contain reactive pyrite.

The bedrock consists of low permeability limestone with occasional faulting (crushed zones). The site lies on the contact between the Rush Conglomerate Formation to the north and the Tober Colleen Formation to the south. These formations consist of visian limestone and calcareous shale of Missipian Age. The bedrock is overlain by approximately 1 m of gravel (high permeability) which is overlain by approximately 3 m of sandy, gravelly clay (low permeability). The soils are glacial till derived from the underlying limestone. The gravel and clay layer is overlain by topsoil which is classified as 'Straffan' a fine loamy drift with limestone. The drainage is classified as poorly drained.

The quarry site is approximately 13.76 ha within which 8.59 ha of extraction area will be backfilled. Approximately 740,000m³ (1.4 million tonnes) of inert soil and stone

(LoW category 17 05 04 and 20 02 02) will be imported. The infill material will be unwanted material from housing development/construction sites and when fully backfilled the site will be covered in topsoil and returned to agricultural use.

The potential direct and indirect effects on land and soil are associated with emissions to air, emissions to water, accidental emissions etc. Should emissions exceed environmental quality standards this could have implications for land and soil. The effects identified and described above have been assessed in the following section of this report: Emissions to Air, Storm Water Emissions and Prevention of Accidents.

The main effect on land and soil will be a change in the depth and type of overburden (soil and subsoil above bedrock) than is currently present. Currently the aquifer vulnerability rating is 'Extreme' due to the exposed rock. The backfilling will provide soil cover to the bedrock which will provide a positive effect by providing greater protection to groundwater. Potential negative effects could occur if contaminated material is imported which could impact soil and groundwater. The activity will result in a change of land use post restoration, returning the land to agricultural use, which may be seen as a positive effect.

There is the potential for the aggregate piles at the base of the quarry to contain enough pyrite to cause sulphate-containing leachate. Backfilling the quarry will reduce the exposure of the aggregate piles to air which will have a positive impact reducing the leachate potential of aggregate piles as the exposure to air will be reduced permanently.

There is also the potential for accidental emissions to the environment due to e.g. fire, explosion, or spillages etc. Accidental emissions to ground/groundwater could occur in the event of contaminated material being deposited in the quarry or from spillage of diesel fuel or hydraulic oil from plant and machinery. This is addressed in Prevention of Accidents, Section 9, of this report.

Cumulative effects of the activity in relation to land and soil have been assessed and is considered that there is not likely to be significant cumulative effects from the activity and other activities/developments.

Mitigation and Monitoring

Mitigation measures and monitoring in relation to land and soil are detailed in the following sections of this report: Emissions to Air (Section 6.1), Storm water discharges (Section 6.3), Waste generation (Section 7) and Prevention of Accidents (Section 9).

Conclusion

I have examined all the information on land and soil, provided by the applicant, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the Recommended Decision. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects on land and soil.

15.4.4 Water (including Storm Water Emissions to Ground)

Identification, Description and Assessment of Effects

Water is addressed in Chapter 10 of the EIAR. The site area is approximately 13.67ha in total and the regional topography surrounding the site is generally flat. The river that flows along the northern boundary of the site is the Ward River (part of the Shallon River Network-IE_EA_08W010300). The flow direction of the Ward River is generally to the north east and flows towards Swords where it confluences with the Broadmeadow River and enters the Malahide Estuary approximately 13km downstream.

The WFD status 2013-2018 for the Ward River adjacent to the site (IE_EA_08W010300) is 'Moderate', however as the river approaches Swords, the status becomes 'Poor', therefore this waterbody is considered to be 'At Risk' of not meeting its environmental objectives. It is also noted that the Ward River at Chapelmidway Bridge (RS08W010100) located ~ 6km from the site has been assigned a Q value of Poor. Given the hydrological connection between the quarry and the European Sites it could not be excluded, that the activities, individually or in combination with other plans or projects, would have a significant effect on these sites and accordingly a Natura Impact Statement was submitted.

The potential direct and indirect effects on water relate to storm water emissions/discharges etc. Should the emissions cause an exceedance of Water Quality Standards in the receiving water this could have potential effects on water quality, aquatic biodiversity and human health. The effects identified and described above have been assessed in the following section of this report: Section 6.3 Storm water discharges to surface water.

Surface water quality of the standing water in the open pit, and upstream and downstream of the facility on the Ward River was assessed. The surface water monitoring results indicated that the samples obtained were compliant with the European Communities (Environmental Objectives Surface Water) Regulations 2009.

There is the potential for aggregate piles at the base of the quarry to contain enough pyrite to cause sulphate-containing leachate. Water monitoring results (2019-2021) of the standing water within the quarry void have shown elevated levels of SO_4 . Having reviewed surface water monitoring data upstream and downstream of the facility it has been noted that there is an increase in Sulphates as SO_4 between upstream and downstream of the facility. The extent of the impact is reducing over time with monitoring results showing an improvement in trends. Backfilling the quarry will reduce the exposure of the aggregate piles to air reducing the leachate potential of the aggregate piles.

There is also the potential for accidental emissions to groundwater, through the importation of contaminated infill or spillages of petroleum or chemical products from vehicles/machinery on site, potentially causing an adverse impact on the quality of the connected surface water or aquifer. However, the likelihood of accidental emissions to water is considered low in light of the measures outlined in the "Prevention of Accidents" section above and in light of conditions in the RD. This is addressed in the Prevention of Accidents section of this report.

Cumulative effects of the activity in relation to water have been assessed and it is considered that there is not likely to be a significant cumulative effect from the activity and other activities/development. There are no likely significant direct, indirect or cumulative effects identified.

Mitigation and Monitoring

Mitigation measures and monitoring in relation to water are detailed in the following sections of this report: Section 6.3 Storm water discharges.

Conclusions

I have examined all the information on water (including Storm Water Emissions to Surface Water) provided by the applicant, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the Recommended Decision. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects on water.

15.4.5 Noise and Vibration

Identification, Description and Assessment of Effects

Noise and vibration are addressed in Chapter 12 of the EIAR. The site consists of a rock quarry located approximately 3km southwest of the village of St Margaret's, 3 km northeast of Mulhuddart and 2.8km west of Dublin Airport at Bay Lane, St Margaret's, County Dublin. Land use is predominantly agriculture with a number of commercial and industrial operations located in the area. There is a small amount of low-density residential housing in the area of the facility with the nearest noise sensitive receptor approximately 100m away.

A baseline noise survey at three monitoring points indicated that noise levels are elevated in and around the site with ambient noise levels ranging between 66 dBA LAeq and 68 dBA LAeq, depending on location and proximity to the N2-R121 dual carriageway, local traffic on Bay Lane, agricultural practices and aircraft noise from the flight path of Dublin Airport.

The applicant did not consider it necessary to undertake baseline vibration monitoring as there was no evidence to suggest that existing receptors are currently affected by appreciable environmental vibration.

The potential direct and indirect effects of noise and vibration associated with the operation of the activity are road traffic noise, site traffic and plant and machinery on site. Noise arising from the facility could have the potential to cause nuisance for those living near the activity or to affect noise sensitive species. The effects have been addressed in the noise section of this report.

The likelihood of accidental noise emissions is considered low taking account of the measures and conditions discussed in the noise section of this report and the measures outlined in Section 9 Prevention of Accidents.

Cumulative effects of the activity in relation to noise and vibration have been assessed and is considered that there is not likely to be a significant cumulative effect from the activity and other activities/developments.

The likelihood of accidental noise and vibration emissions occurring is considered low.

Mitigation and Monitoring

Mitigation measures and monitoring in relation to noise and vibration are detailed in the following section of this report: Section 6.4 Noise.

Conclusions

I have examined all the information on noise and vibration provided by the applicant, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the Recommended Decision. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of noise and vibration.

15.4.6 Air (including Dust and Odour)

Identification, Description and Assessment of Effects

Air is addressed in Chapter 11 of the EIAR. The potential direct and indirect effects on air, including dust and odour are associated with vehicle movements to and from the facility during dry weather, machinery movements on site, stockpiling, unloading, levelling and grading activities. Should emissions exceed Air Quality Standards this could have implications for air quality, population and human health and biodiversity within and beyond the facility boundary. General site dust and odour emissions have the potential to impact human health and cause nuisance. The effects identified and described above have been assessed in the following section of this report: Section 6.1 Emissions to Air.

The likelihood of accidental fugitive dust emissions is considered low in light of the measures outlined in the "Prevention of Accidents" section and the proposed conditions discussed in Section 6.1 Emissions to Air.

Cumulative effects of the activity in relation to air have been assessed and it is considered that there is not likely to be a significant cumulative effect from the activity and other activities/developments. There are no likely significant direct, indirect or cumulative effects identified.

Mitigation and Monitoring

Mitigation measures and monitoring in relation to air are detailed in the following sections of this report: Section 6.1 Emissions to Air.

Conclusions

I have examined all the information on Air (including Dust) provided by the applicant, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the Recommended Decision. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of Air (including Dust).

15.4.7 Climate

Identification, Description and Assessment of Effects

Chapter 11 of the EIAR addresses Climatic Factors. Climate change is a significant global issue which affects weather and environmental conditions (air, water and soil)

which consequently affects population and human health, material assets, cultural heritage, the landscape and biodiversity. Climate change is caused by warming of the climate system by enhanced levels of atmospheric greenhouse gases (GHG) due to human activities. GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF₃) and sulphur hexafluoride (SF₆).

The potential direct and indirect effects on climate are Greenhouse Gas Emissions from heavy goods vehicles (HGVs) travelling to and from the facility, and plant and machinery at the site. HGV movements associated with the activity have the potential to generate an estimated 7,897 CO₂ equivalent over the duration of the activity.

The proposed activities are not listed in Schedule 1 of the European Communities (Greenhouse Gas Emissions Trading) Regulations 2012 and this activity will not require a GHG Emissions Permit.

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.

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

Therefore, there are no likely significant direct, indirect or cumulative effects identified.

Mitigation and Monitoring

Mitigation measures and monitoring in relation to climate are detailed in the following sections of the licence assessment part of this report: Section 8 Energy Efficiency and Resource Use. The applicant has proposed several measures to minimise CO₂ emissions including:

- Implementation of a Traffic Management Plan;
- Reducing engine idle times by providing an efficient material handling plan that minimises the waiting times for loads and unloads;
- Turning off engines when not in use for more than five minutes;
- Implementation of an Energy Management System including the use of sensors on light fittings, use of thermostatic controls on all space heating systems, adequate insulation of building structures, use of solar/thermal power to heat water for on-site welfare facilities and the use of low energy equipment.

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.

Conclusions

I have examined all the information on climatic factors provided by the applicant, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the Recommended Decision. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable effects in terms of air and climatic factors.

15.4.8 Material Assets, Cultural Heritage and the Landscape

15.4.8.1 Material Assets (including resource use and waste generation)

Identification, Description and Assessment of Effects

Chapter 14 of the EIAR addresses Material Assets. The potential direct and indirect effects on material assets are the use of natural resources and potential impacts on transport infrastructure, utilities, quarry material and generation of waste. The use of natural resources by the activity will not be significant. The effects on resource use and waste generation have been assessed in Section 7 Waste Generation and Section 8 Energy Efficiency and Resource Use.

Material assets such as roads and traffic and built services are dealt with in the decision of the Planning Authority to grant permission for the development. The Planning Authority has considered the effect to be acceptable.

The quarry will be restored to natural levels, capped and landscaped resulting in an improved material asset value for the area.

No significant cumulative effects on material assets have been identified. Therefore, there are no likely significant direct, indirect or cumulative effects identified. There are no specific mitigation measures or monitoring proposed in the RD.

Mitigation and Monitoring

Mitigation measures and monitoring in relation to material assets are detailed in the following sections of the licence assessment part of this report: Section 7 Waste Generation, Section 8 Energy Efficiency and Resource Use and Section 9 Prevention of Accidents.

Material Assets Conclusions

I have examined all the information on Material Assets provided by the applicant, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the Recommended Decision. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of Material Assets.

15.4.8.2 Cultural Heritage

Identification, Description and Assessment of Effects

Chapter 15 of the EIAR addresses cultural Heritage. An archaeological and architectural assessment was completed by the applicant. There are no recorded monuments, protected structures, architectural conservation areas, National Inventory of Architectural Heritage (NIAH) structures or NIAH historic gardens within the proposed development area. There are two NIAH structures located over 1km to the northwest and 1.3km to the west of the development.

There is the potential that the proposed development may impact upon previously unrecorded archaeological sites which may exist subsurface within the north-eastern part of the site, below the original ground surface which is overlain by stockpile material.

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 the planning authority has considered the effect to be acceptable.

It is very difficult to envisage any pathway by which emissions from the operation of the activity could impact any feature which might be present.

No significant cumulative effects on the cultural heritage have been identified. Therefore, there are no likely significant direct, indirect or cumulative effects identified.

Mitigation and Monitoring

There are no specific mitigation measures or monitoring proposed in the RD.

Cultural Heritage Conclusions

The planning authority has identified, described and assessed the likely significant direct and indirect effects of the development on cultural heritage concluding that "the applicant /developer shall employ a qualified Archaeologist to monitor all groundworks in the north-eastern section of the site to ensure that there is no disturbance of the original ground level" to safeguard any potential (previously unrecorded) below ground archaeological sites. The Recommended Decision does not propose to include any additional mitigation measures in relation to material assets and cultural heritage.

15.4.8.3 The Landscape

Identification, Description and Assessment of Effects

Chapter 16 of the EIAR addresses Landscape and Visual Impact.

The site is located approximately 0.7km south-west of exit 2 of the M2 motorway on the western fringes of Dublin. The site is a former quarry with signs of previous rock working, excavation and crushing evident in the central and southern portions. The north-eastern portion of the site has not been excavated for quarrying purposes and has been used for the storage of overburden material. All boundaries of the site are well defined by tall hedgerows with mature trees which effectively screen the previous use within the surrounding landscape. The landscape immediately surrounding the site is primarily agricultural in nature, with residential and industrial development to the south and west of the facility. The Landscape Character Assessment identified that the site is directly located within the Low-Lying Landscape Type and is considered to have a low sensitivity to change.

The potential direct and indirect effects on the landscape are associated with:

- site preparation/enabling works and operations, including temporary stockpiles;
- topographical and final restoration works;
- site compound location;
- lorry/ haulage traffic on local roads;
- vehicular and

- plant movements and earthwork modifications within the site.

These impacts are relatively minor and short lived. The predicted impact of the proposed development is localised, and small as internal operations will largely be screened by existing boundary vegetation. The creation of new hedgerows and pastoral fields on the site will restore the quarry site to its former appearance within the landscape.

A total of 4 viewpoints were assessed for construction/operational and restoration phase impacts. None of the assessed viewpoints are predicted to experience significant visual impacts.

Any disturbance of the landscape has the potential to impact on human beings and their enjoyment of the surrounding area due to visual impacts. These matters are dealt with in the decision of the planning authority to grant planning permission for the developments on site and the planning authority has considered the effects to be acceptable.

No significant cumulative effects on the landscape have been identified

Therefore, there are no likely significant direct, indirect or cumulative effects identified.

Mitigation and Monitoring

There are no specific mitigation measures or monitoring proposed in the RD.

The Landscape Conclusions

The Recommended Decision does not propose to include any additional mitigation measures in relation to landscape and visual impact.

Overall Conclusions for Material Assets, Cultural Heritage and the Landscape

I have examined all the information on material assets, cultural heritage and the landscape provided by the applicant, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of Material Assets, Cultural Heritage and the Landscape.

15.4.9 Interactions Between Environmental Factors

Interactions of effects are considered in Section 17 of the EIAR. The most significant interactions between the factors as a result of the activity are summarised below:

Population, Human Health, Material Assets, Cultural Heritage and Landscape and Visual Assessment – impact of truck movements generating dirt and dust, increased vehicular traffic and the infilling of the quarry void has the potential to cause a negative impact on material assets and cultural heritage. Positive impacts of the backfilling and quarry will include improved human health, material assets and landscape, improving social, amenity and tourism assets.

Human Health, Air Quality and Climate, Noise and Vibration and Traffic - impact of truck movements on air quality (dust and noise) and possible negative implications on human health.

Human health, Soil, Geology, Hydrogeology and Water – in the event of contaminated infill or fuel/oil leaks/spills impacting soil, subsoil, groundwater/surface water. Potential positive impact to surface water drainage by reducing the vulnerability of the underlying aquifer and reducing run-off rate.

Biodiversity, Soil, Geology and Hydrogeology, Water and Air Quality and Climate - quality of land, water and air quality may impact on biodiversity. Monitoring and mitigation measures put in place to minimise land, water and air quality impacts will support existing and future biodiversity.

Biodiversity, Landscape and Visual Assessment – the development has the potential to disturb existing biodiversity. The restoration of the quarry void for future use and to blend the site with the surrounding natural environment will provide suitable habitats and a long-term improved biodiversity through improving the existing landscape.

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

Conclusions

I have considered the interaction between population and human health, biodiversity, land, soil, water, air, climate, landscape, material assets, cultural heritage and the interaction of the likely effects identified throughout this report. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the Recommended Decision. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects in terms of the interaction between the foregoing environmental factors.

15.4.10 Vulnerability of the Project to Risks of Major Accidents and or Disasters

The EIAR describes the expected effects deriving from the vulnerability of the activity to risks of major accidents and/or disasters that are relevant to the activity.

The Seveso Directive and Regulations are not applicable at the facility. The risk of fire and explosion is low given the inert nature of the material to be imported and the storage of fuels off site. The main risk is from fuel and hydraulic oil spillages and importation of contaminated material. The risks of accidents are dealt with in Section 9 of this report.

The vulnerability of the facility to natural disasters has been examined. Flooding was considered to be the only potential natural disaster relevant to the facility. Climate change impacts such as heat waves, droughts, extreme rainfall, storms and winds, landslides and rising sea levels could impact negatively on populations and human health, biodiversity, land, soil, water, air, material assets, cultural heritage and

landscape. The only potential impact of climate change on the facility is the potential of flooding to occur.

A flood risk assessment was submitted with the EIAR. The OPW Flood Risk Assessment Maps show that the proposed development site is not located within any fluvial flood zone and there have been no reoccurring flood incidents in the area of the proposed site. The nearest single flood event listed is approximately 1.5km south east of the site occurring at the N2 in November 2002, with flooding attributed to runoff from adjacent grasslands. The EIAR states there is a risk of pluvial flooding (i.e. Rainfall ponding) for the site, however this can be attributed to the quarry pit being open and potential rainwater gathering there. As the pit will be restored to existing ground levels the risk of pluvial flooding will be reduced to greenfield runoff. No mitigation measures have been proposed in the RD.

Conclusions

I have examined all the information on major accidents and/or disasters provided by the applicant, received through consultations, written submissions, as well as considering any supplementary information, where appropriate. I am satisfied that the potential effects identified will be avoided, managed and mitigated by the measures identified and through the proposed conditions of the Recommended Decision. I am, therefore, satisfied that the operation of the activity is not likely to have any unacceptable direct or indirect effects as a result of major accidents and/or disasters.

15.5 Reasoned Conclusion on the significant effects

Having regard to the examination of environmental information contained above, and in particular to the content of the EIAR and supplementary information provided by the applicant, and the submission from third parties in the course of the application, it is considered that the potential significant direct and indirect effects of the activity on the environment are as follows:

- Stormwater emissions to surface water
- Emissions to air (dust)
- Noise
- Accidental leakages or spillages and importation of contaminated material

Having assessed those potential effects, I have concluded as follows:

- Emissions to surface water will be mitigated through operation of abatement equipment, monitoring, maintenance and control measures; compliance with European Communities Environmental (Surface Waters) Regulations 2009 as amended;
- Dust emissions will be mitigated through imposing dust deposition values at the boundary and implementing monitoring, maintenance and control measures;
- Noise emissions will be mitigated through imposing daytime, evening-time and night-time noise limits at noise sensitive locations and implementation of monitoring, maintenance and control measures; and
- Accidental leakages or spills will be mitigated through inspection and maintenance of plant and machinery, bunds, tanks and pipework inspections and accident and emergency requirements specified in the licence.

Having regard to the effects (and interactions) identified, described and assessed throughout this report, I consider that the monitoring, mitigation and preventative measures proposed will enable the activity to operate without causing environmental pollution, subject to compliance with the Recommended Decision. 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.

16. EPA Charges

The annual enforcement charge recommended in the RD is €5,088, which reflects the anticipated enforcement effort required and the cost of monitoring.

17. Recommendation

The Agency, in considering an application for a licence or the review of a licence, shall have regard to Section 40 of the Waste Management Act 1996, as amended. The Agency shall not grant a licence or revised licence unless it is satisfied that emissions comply with relevant emission limit values and standards prescribed under regulation. In setting such limits and standards, the Agency must ensure they are established based on the stricter of both the limits and controls required under BAT, and those required to comply with any relevant environmental quality standard.

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 and EIA. The RD gives effect to the requirements of the Waste Management Act 1996, as amended and has regard to submissions made.

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

Signed



Michelle Reddy

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.

Appendices

Appendix 1 Appropriate Assessment

Appendix 1 Assessment of the effects of the activity on European sites and proposed mitigation measures.

Site Name	Distance	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
Malahide Estuary SAC 000205	12km northeast of the facility	Habitats 1140 Mudflats and sandflats not covered by seawater at low tide 1310 Salicornia and other annuals colonising mud and sand 1330 Atlantic salt meadows (Glauco- Puccinellietalia maritimae) 1410 Mediterranean salt meadows (Juncetalia maritimi) 2120 Shifting dunes along the shoreline with Ammophila arenaria (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)*	<i>NPWS (2013) Conservation objectives: Malahide Estuary SAC 000205. Version 1. Department of Arts, Heritage, Regional, Rural and Gaeltacht. [27 May 2013]</i>	The Malahide Estuary SAC is located downstream of the facility with a hydrological connectivity via the Shallon/ Ward River. Potential impacts on the SAC include impacts due to stormwater emissions. The main potential from impact would arise from accidents and unplanned releases from the facility resulting in contaminated discharges that could affect the habitats and species directly or could affect the water dependant prey on which the qualifying species depend. Mitigation measures to ensure the activity will not adversely impact the integrity of the European site include: <ul style="list-style-type: none"> • implementation of waste acceptance and characterisation procedures (Condition 8.12); • local groundwater water monitoring • a documented waste recording procedure for all material entering the site (Condition 11.12) • machinery refuelling, and maintenance to be carried out in designated area protected against spillage and run-off (Condition 3.9); • emergency spill kit with oil boom, absorbers etc. to be kept on site for use in the event of an accidental spill (Condition 3.10); • runoff from parking and refuelling area to pass through a silt trap and full retention fuel/oil interceptor prior to discharge(Condition 3.11); • weekly inspection of the storm water drainage system including silt traps and oil separators, which will be desludged as necessary and properly maintained at all times (Condition 6.9) • visual examination of storm water discharges to be carried out daily (Condition 6.11.1) • Storm water discharge to be monitored in accordance with Schedule C.2.2 with appropriate trigger levels established
Rye Water Valley/ Carton SAC 001398	11km southwest of the facility	Habitats 7220 Petrifying springs with tufa formation (Cratoneurion)*	<i>NPWS (2021) Conservation objectives for Rye Water Valley/Carton SAC [001398]. Generic Version 8.0</i>	There is no hydrological connectivity between the facility and Rye Water Valley/ Carton SAC.

Site Name	Distance	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
		Species 1016 Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>) 1014 Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>)	<i>Department of Housing, Local Government and Heritage [23 March 2021]</i>	
Rogerstown Estuary SAC 000208	12.7km northeast of the facility	Habitats 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>Glaucopuccinellietalia maritimae</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)*	<i>NPWS (2013) Conservation Objectives: Rogerstown Estuary SAC 000208. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht [14 August 2013]</i>	There is no hydrological connectivity between the facility and the Rogerstown Estuary SAC.
North Dublin Bay SAC 000206	13.4km southeast of the facility	Habitats 1140 Mudflats and sandflats not covered by seawater at low tide 1210 Annual vegetation of drift lines 1310 Salicornia and other annuals colonising mud and sand 1330 Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)	<i>NPWS (2013) Conservation Objectives: North Dublin Bay SAC 000206. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. [06 November 2013]</i>	There is no hydrological connectivity between the facility and North Dublin Bay SAC.

Site Name	Distance	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
		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 Species 1395 Petalwort (<i>Petalophyllum ralfsii</i>)		
South Dublin Bay SAC 000210	13.5km southeast of the facility	Habitats 1140 Mudflats and sandflats not covered by seawater at low tide 1210 Annual vegetation of drift lines 1310 Salicornia and other annuals colonising mud and sand 2110 Embryonic shifting dunes	<i>NPWS (2013) Conservation Objectives: South Dublin Bay SAC 000210. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. [22 August 2013]</i>	There is no hydrological connectivity between the facility and South Dublin Bay SAC.
Baldoyle Bay SAC 000199	13.5km east of the facility	Habitats 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>Glaucopuccinellietalia maritimae</i>) 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)	<i>NPWS (2012) Conservation Objectives: Baldoyle Bay SAC 000199. Version 1.0 National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. [19 November 2012]</i>	There is no hydrological connectivity between the facility and the Baldoyle Bay SAC.

Site Name	Distance	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
Malahide Estuary SPA 004025	12 km northeast of the facility	<p>Species</p> <p>A048 Shelduck (<i>Tadorna tadorna</i>) A054 Pintail (<i>Anas acuta</i>) A067 Goldeneye (<i>Bucephala clangula</i>) A130 Oystercatcher (<i>Haematopus ostralegus</i>) A162 Redshank (<i>Tringa totanus</i>) A143 Knot (<i>Calidris canutus</i>) A157 Bar-tailed Godwit (<i>Limosa lapponica</i>) A156 Black-tailed Godwit (<i>Limosa limosa</i>) A140 Golden Plover (<i>Pluvialis apricaria</i>) A046 Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) A149 Dunlin (<i>Calidris alpina</i>) A141 Grey Plover (<i>Pluvialis squatarola</i>) A069 Red-breasted Merganser (<i>Mergus serrator</i>) A005 Great Crested Grebe (<i>Podiceps cristatus</i>)</p> <p>Habitats</p> <p>Wetlands</p>	<p><i>NPWS (2013) Conservation Objectives: Malahide Estuary SPA. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. [16 August 2013]</i></p>	<p>The Malahide Estuary SPA is located downstream of the facility with a hydrological connectivity via the Shallon/ Ward River. Potential impacts on the SPA include impacts due to stormwater emissions. The main potential impact would arise from accidents and unplanned releases from the facility resulting in contaminated discharges and could affect the habitats and species directly or could affect the water dependant prey on which the qualifying species depend.</p> <p>Mitigation measures to ensure the activity will not adversely impact the integrity of the European site include:</p> <ul style="list-style-type: none"> • implementation of waste acceptance and characterisation procedures (Condition 8.12); • local groundwater water monitoring • a documented waste recording procedure for all material entering the site (Condition 11.12) • machinery refuelling, and maintenance to be carried out in designated areas protected against spillage and run-off (Condition 3.9); • emergency spill kit with oil boom, absorbers etc. to be kept on site for use in the event of an accidental spill (Condition 3.10); • runoff from parking and refuelling area to pass through a silt trap and full retention fuel/oil interceptor prior to discharge (Condition 3.11); • weekly inspection of the storm water drainage system including silt traps and oil separators, which will be desludged as necessary and properly maintained at all times (Condition 6.9) • visual examination of storm water discharges to be carried out daily (Condition 6.11.1) • Storm water to be monitored prior to discharge to the soakaway, with appropriate trigger levels established <p><u>Noise</u></p>

Site Name	Distance	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
				<p>Noise levels from the facility will not impact on the qualifying interests within a European Site when operating in accordance with the RD.</p> <p>The RD, as drafted, specifies noise emission limit values of 55 dB(A) LAr,T (daytime), 50dB(A) LArT (evening) and 45dB(A) LAeq,T (night-time) at any noise sensitive location.</p> <p><u>Air</u></p> <p>Dust will be mitigated through imposing emission limit values and regular monitoring, as per the schedule for dust deposition limits of the RD.</p>
South Dublin Bay and River Tolka Estuary SPA 004024	10.8km southeast of the facility	<p>Species</p> <p>A144 Sanderling (<i>Calidris alba</i>)</p> <p>A157 Bar-tailed Godwit (<i>Limosa lapponica</i>)</p> <p>A149 Dunlin (<i>Calidris alpina</i>)</p> <p>A162 Redshank (<i>Tringa totanus</i>)</p> <p>A179 Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</p> <p>A143 Knot (<i>Calidris canutus</i>)</p> <p>A192 Roseate Tern (<i>Sterna dougallii</i>)</p> <p>A046 Light-bellied Brent Goose (<i>Branta bernicla hrota</i>)</p> <p>A141 Grey Plover (<i>Pluvialis squatarola</i>)</p> <p>A130 Oystercatcher (<i>Haematopus ostralegus</i>)</p> <p>A194 Arctic Tern (<i>Sterna paradisaea</i>)</p> <p>A193 Common Tern (<i>Sterna hirundo</i>)</p> <p>A137 Ringed Plover (<i>Charadrius hiaticula</i>)</p> <p>Habitats</p> <p>Wetlands</p>	<p>NPWS(2015) Conservation Objectives: South Dublin Bay and River Tolka Estuary SPA 004024. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. [09 March 2015]</p>	<p><u>Noise</u></p> <p>Noise levels from the facility will not impact on the qualifying interests within a European Site when operating in accordance with the RD.</p> <p>The RD, as drafted, specifies noise emission limit values of 55 dB(A) LAr,T (daytime), 50dB(A) LArT (evening) and 45dB(A) LAeq,T (night-time) at any noise sensitive location.</p> <p><u>Air</u></p> <p>Dust will be mitigated through imposing emission limit values and regular monitoring, as per the schedule for dust deposition limits of the RD.</p>

Site Name	Distance	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
North Bull Island SPA 004006	13.4km southeast of the facility	<p>Species</p> <p>A160 Curlew (<i>Numenius arquata</i>) A149 Dunlin (<i>Calidris alpina</i>) A157 Bar-tailed Godwit (<i>Limosa lapponica</i>) A162 Redshank (<i>Tringa totanus</i>) A179 Black-headed Gull (<i>Chroicocephalus ridibundus</i>) A144 Sanderling (<i>Calidris alba</i>) A156 Black-tailed Godwit (<i>Limosa limosa</i>) A143 Knot (<i>Calidris canutus</i>) A169 Turnstone (<i>Arenaria interpres</i>) A054 Pintail (<i>Anas acuta</i>) A046 Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) A048 Shelduck (<i>Tadorna tadorna</i>) A052 Teal (<i>Anas crecca</i>) A141 Grey Plover (<i>Pluvialis squatarola</i>) A056 Shoveler (<i>Anas clypeata</i>) A130 Oystercatcher (<i>Haematopus ostralegus</i>) A140 Golden Plover (<i>Pluvialis apricaria</i>)</p> <p>Habitats</p> <p>Wetlands</p>	<p>NPWS(2015) Conservation Objectives: North Bull Island SPA 004006. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. [09 March 2015]</p>	<p><u>Noise</u></p> <p>Noise levels from the facility will not impact on the qualifying interests within a European Site when operating in accordance with the RD.</p> <p>The RD, as drafted, specifies noise emission limit values of 55 dB(A) LAr,T (daytime), 50dB(A) LArT (evening) and 45dB(A) LAeq,T (night-time) at any noise sensitive location.</p> <p><u>Air</u></p> <p>Dust will be mitigated through imposing emission limit values and regular monitoring, as per the schedule for dust deposition limits of the RD.</p>
Rogerstown Estuary SPA 004015	10km northeast of the facility	<p>Species</p> <p>A046 Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) A141 Grey Plover (<i>Pluvialis squatarola</i>) A043 Greylag Goose (<i>Anser anser</i>) A143 Knot (<i>Calidris canutus</i>)</p>	<p>NPWS(2013) Conservation Objectives: Rogerstown Estuary SPA 004015. Version 1. National Parks and Wildlife Service, Department of Arts,</p>	<p><u>Noise</u></p> <p>Noise levels from the facility will not impact on the qualifying interests within a European Site when operating in accordance with the RD.</p>

Site Name	Distance	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
		A137 Ringed Plover (<i>Charadrius hiaticula</i>) A130 Oystercatcher (<i>Haematopus ostralegus</i>) A048 Shelduck (<i>Tadorna tadorna</i>) A056 Shoveler (<i>Anas clypeata</i>) A149 Dunlin (<i>Calidris alpina</i>) A162 Redshank (<i>Tringa totanus</i>) A156 Black-tailed Godwit (<i>Limosa limosa</i>) Habitats Wetlands	<i>Heritage and the Gaeltacht. [20 May 2013]</i>	The RD, as drafted, specifies noise emission limit values of 55 dB(A) LAr,T (daytime), 50dB(A) LArT (evening) and 45dB(A) LAeq,T (night-time) at any noise sensitive location. <u>Air</u> Dust will be mitigated through imposing emission limit values and regular monitoring, as per the schedule for dust deposition limits of the RD.
Baldoyle Bay SPA 004016	13.5km east of the facility	Species A137 Ringed Plover (<i>Charadrius hiaticula</i>) A048 Shelduck (<i>Tadorna tadorna</i>) A140 Golden Plover (<i>Pluvialis apricaria</i>) A157 Bar-tailed Godwit (<i>Limosa lapponica</i>) A141 Grey Plover (<i>Pluvialis squatarola</i>) A046 Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) Habitats Wetlands	<i>NPWS(2013) Conservation Objectives: Baldoyle Bay SPA 004016. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. [27 February 2013]</i>	<u>Noise</u> Noise levels from the facility will not impact on the qualifying interests within a European Site when operating in accordance with the RD. The RD, as drafted, specifies noise emission limit values of 55 dB(A) LAr,T (daytime), 50dB(A) LArT (evening) and 45dB(A) LAeq,T (night-time) at any noise sensitive location. <u>Air</u> Dust will be mitigated through imposing emission limit values and regular monitoring, as per the schedule for dust deposition limits of the RD.

Appendix 2 Relevant Legislation & National BAT Notes

The following European instruments are regarded as relevant to this application assessment and have been considered in the drafting of the Recommended Determination.
Environmental Impact Assessment (EIA) Directive (2011/92/EU as amended by 2014/52/EU)
Habitats Directive (92/43/EEC) & Birds Directive (79/409/EC)
Water Framework Directive [2000/60/EC]
Waste Framework Directive (2008/98/EC)
Groundwater Directive (80/68/EEC) and 2006/118/EC
Air Quality Directives (2008/50/EC and 2004/107/EC)
Energy Efficiency Directive (2018/2002/EU)
Environmental Liability Directive (2004/35/CE)
EPA Guidance Note on Best Available Techniques for the Waste Sector: Landfill Activities (2011)