

**This Report has been cleared for submission to the Director by Programme Manager David Flynn**

Signed: Breda Foye Date: 06/12/2018



**OFFICE OF ENVIRONMENTAL  
SUSTAINABILITY**

**INSPECTOR'S REPORT ON A WASTE LICENCE APPLICATION, LICENCE  
REGISTER NUMBER W0293-01**

**TO: DIRECTOR**

**FROM: Ewa Babiarczyk**

**DATE: 6<sup>th</sup> December 2018**

Applicant: Roadstone Limited  
CRO number: 11035 (status: normal)  
Location/address: Calary Quarry, Killough Upper and Glencap Commons Upper, Kilmacanogue, Co. Wicklow.  
The facility is located in a semi-rural area.  
Application date: 8<sup>th</sup> July 2016

Classes of activity (under Waste Management Act 1996 as amended) applied for and proposed in Recommended Decision (RD):

R 5 Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials;  
R 13 Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).

Classes of activity (under Waste Management Act 1996 as amended) applied for but recommended for refusal:

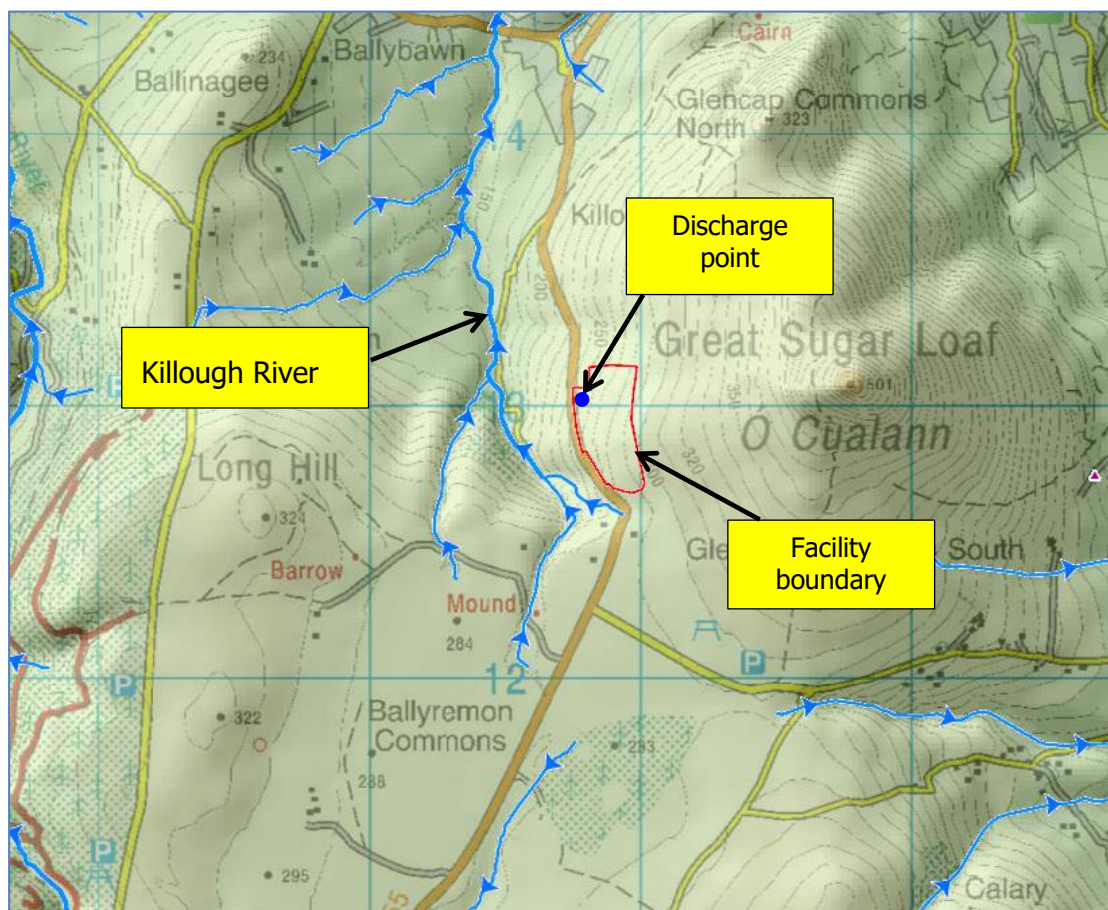
R 3 Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolysis using the components as chemicals.  
Reason for proposed refusal: This class of activity is not relevant or necessary to authorise the activities proposed to be carried out at the facility.

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

Activity description/background:  The applicant proposes to restore a quarry through the recovery of waste soil & stone. The proposed maximum annual intake is 300,000 tonnes of waste soil & stone. Accordingly, the proposed total volume of material required to restore the quarry is 3,280,000 tonnes.	
Types of waste sought for acceptance and recommended to be authorised in the RD:  (a) soil and stones from construction sites (LoW codes 17 05 04); (b) dredging spoil (LoW code 17 05 06); and (c) soil and stones from gardens and parks, incl. cemetery waste (LoW code 20 02 02).	
Additional information received:	Article 14 Reply (5 <sup>th</sup> December 2017); and, Unsolicited Information (3 <sup>rd</sup> August 2018)
No of submissions received:	Five
EIS submitted: Yes (8 <sup>th</sup> July 2016)	NIS submitted: No
Site visit: 5 <sup>th</sup> January 2017	Site notice check: 5 <sup>th</sup> September 2016

## 1. Activity description/background

Roadstone Limited is the owner of the site. The facility is a former quarry located on a western slope of Great Sugar Loaf mountain in townlands of Killough Upper and Glencap Commons Upper in Co. Wicklow as shown in Figure 1. The application boundary covers an area of 9.1 hectares. The quarry was originally operated by Wicklow County Council. The quarry has been operated by Roadstone Limited since 1973. Quarrying was suspended in 2010. The site layout is shown in Figure 2. The main infrastructure will comprise a weighbridge, wheel-wash and office. The backfilling of the quarry void will facilitate the restoration of the site and its return to a heathland/grassland habitat. Some limited progressive restoration of the southern quarry slopes was undertaken by Roadstone in the years 2007 to 2009 using imported inert soil and stone, at a time when the quarry was still operational. These activities were controlled by a waste facility permit (Ref No. ESS/15/8/12) issued by Wicklow County Council in 2007. The permit allowed a maximum of 50,000 tonnes of soil and stone waste per annum to be imported for recovery at the quarry. This permit expired in 2010. The backfilling of the quarry void will facilitate the restoration of the site to original ground levels of 290mOD on the eastern side of the quarry and 250mOD on the western side.



**Figure 1: Location and extent of facility**

To facilitate the backfilling and restoration work, the quarry will need to be drained of water. The facility discharges into an on-site culvert pipe which discharges into an off-site pipe which discharges into an unnamed stream which flows into the Killough River (waterbody code: IE\_EA\_10D010100) 630m downstream of the discharge from the facility.

The proposed site infrastructure will comprise of weighbridge, wheel wash, fuel storage facilities, site office, waste inspection area and quarantine area and settlement ponds. Proposed wastes to be accepted are soil and stones for restoration works. Accordingly, it is proposed to refuse the applied for Class R3 due to the fact that no organic waste will be imported to the facility. No re-fuelling of HGV trucks will be taking place on site. Oil and lubricant changes for wheeled or tracked plant will be undertaken on-site at a hardstanding area. During the site visit on 5<sup>th</sup> January 2017, an oil tank observed in the quarry pond, as shown in Figure 3. Condition 3.18 requires that all unauthorised waste be removed from the site within three months of grant of the licence.

The applicant was granted a discharge licence and planning permissions for activities within the site, as detailed in Sections 2 and 4 of this report.





***Figure 2: Groundwater and storm water on the quarry floor***



***Figure 3: Oil tank and other materials in the quarry pond***

## 2. Licence/Permit History

Licence/Permit	Details	Grant Date	Status
Wicklow County Council Ref. WPL87 ABP Ref. 27.WW.0378	Effluent Discharge Licence from Wicklow County Council	15 <sup>th</sup> September 2009	Active
ESS/15/8/12	Waste Facility Permit for recovery of non-hazardous waste at the facility	20 <sup>th</sup> September 2007	No longer in force

The Effluent Discharge Licence was granted in respect of discharge of effluent arising from the quarry operations to the tributary of the Killough River. In the event that a licence is been granted by the Agency, the discharge from the facility will be controlled by the licence.

## 3. Best Available Techniques

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

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

## 4. Planning Permission, EIS and EIA Requirements

### 4.1 EIA Screening

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

## 4.2 Planning Status

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

Planning reference	Purpose of planning application	Date of grant
Wicklow County Council Ref. 16/574 ABP Ref. 27.248297	Backfilling and restoration of the quarry.	1 <sup>st</sup> August 2018. The appeal to ABP related to an alternative use of the quarry.
Wicklow County Council Ref. 06/6189 ABP Ref. 27.22440	Continued operation of the quarry and retention of site office/canteen, sanitary facilities, welfare facilities and ESB sub-station.	15 <sup>th</sup> February 2008
Wicklow County Council Ref. 93/638	Permission for retention of existing toilet facilities and septic tank	18 <sup>th</sup> February 1994

Wicklow County Council required an Environmental Impact Statement (EIS) in support of planning applications ref. 06/6189 and 16/574. The applicant has, with the licence application, submitted the EIS that relates to planning application reference 16/574. Having reviewed the reports for the previous planning permission, it is considered that the EIS submitted with the licence application, along with the licence application, adequately identifies, describes and assesses the direct and indirect effects of the entire activity and that the EIS relating to 06/6189 planning permission is not required for the Agency's assessment.

## 4.3 Content of EIS and licence application

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

## 4.4 Environmental Impact Assessment Directive

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

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

the range of predicted significant effects arising from the activity have been outlined. This Inspector's Report proposes conclusions to the Agency in relation to such effects.

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

- the licence application, Register Number: W0293-01;
- the EIS associated with the most recent planning permission, Planning Authority reference: 16/574;
- the planning documentation (Planning Authority reference: 16/574, An Bord Pleanála reference: 27.248297);
- submissions received on this application; and,
- responses to consultations.

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

Table of Environmental Factors

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

#### **4.5 Consultation with Competent Authorities**

The Agency consulted with Wicklow County Council and An Board Pleanála under the relevant section of the Waste Management Act.

The County Council's response was received on 2<sup>nd</sup> December 2016 and refers to the planning application 16/574. No specific observations in relation to the licence application are contained the County Council's response.

An Bord Pleanála responded on 23<sup>rd</sup> August 2017 and 2<sup>nd</sup> August 2018. The response received on 23<sup>rd</sup> August 2017 refers to the said appeal and states the EIS submitted

to the Agency contains the same information as the EIS submitted to An Bord Pleanála. The response includes also a summary of the planning history of the site.

The response received on 3<sup>rd</sup> August 2018 notifies of grant planning permission ref. 16/574 and includes a copy of this permission.

## 5. Submissions

Five submissions were received on this application.

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

The issues raised in the submissions are noted and addressed in this Inspector's Report and the submissions were taken into consideration during the preparation of the Recommended Decision.

### Submission No. 1

<b>Name &amp; Position:</b>	<b>Organisation:</b>	<b>Date received:</b>
Ms. Joanna Troughton, Environmental Health Officer	Health Service Executive (HSE)	6 <sup>th</sup> September 2016
<b>Issues raised:</b>	<b>Agency response:</b>	
<p><u>Dust</u></p> <p>The HSE requests that static sprinkler systems are provided on site, if the limit for dust deposition of 350 mg/m<sup>2</sup> (Schedule B.4 of the RD) is exceeded to ensure no nuisance caused to neighbours.</p>	<ul style="list-style-type: none"> <li>- Condition 6.11 requires measures for dust and noise control. Specifically, Condition 6.11.2 requires that in dry weather all stockpiles, site roads and any other areas used by vehicles shall be sprayed with water.</li> <li>- Condition 5.4 requires that the licensee shall ensure that dust 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.</li> </ul> <p>It is considered the above measures are adequate to control dust at the facility.</p>	
<p><u>Noise</u></p> <p>The HSE requires noise monitoring to be carried out during the operation of the facility. The HSE states that any increase in ambient noise should trigger further noise attenuation</p>	<p>The RD includes conditions in relation to noise and emission limit values, which will apply at the noise sensitive locations.</p> <ul style="list-style-type: none"> <li>- Condition 6.11.1 requires implementation of adequate measures of the control of noise from the facility.</li> <li>- Schedule B.3 specifies noise emissions and requires that there shall be no clearly</li> </ul>	



<p>measures to ensure no noise nuisance is caused to neighbours.</p>	<p>audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location.</p> <ul style="list-style-type: none"> <li>- Schedule C.2 requires noise monitoring at noise sensitive locations.</li> </ul>
<p><u>Discharge from the facility</u></p> <p>The submission states that it is not clear if water discharge and de-watering of the quarry will be carried out subject to the discharge licence (Ref. 27.WW.378) or subject to a waste licence.</p> <p>The submission further states that an order issued by ABP requires installation, and calibration of pH and suspended solids meters on settlement ponds and that the EIS states intention not to retain these on site.</p> <p>The submission further states that there is no information on the size of the settlement ponds, retention time or rate of pumping.</p>	<p>If a licence is granted, the discharge from the facility will be controlled by the waste licence. Monitoring for pH and suspended solids is proposed in Schedule C.1.2.</p> <p>Condition 6.4 requires that all treatment/abatement and emission control equipment shall be calibrated and maintained in accordance with the instructions issued by the manufacturer/supplier or installer.</p> <p>It is considered that measures for control and monitoring of discharge from the facility, as imposed in the RD, are adequate.</p> <p>The information on the size of the settlement ponds, retention time and the rate of pumping was provided in correspondence from the applicant received on 5<sup>th</sup> December 2017.</p>
<p><u>Public health</u></p> <p>HSE states that the following information is required in relation to a septic tank and percolation area:</p> <ul style="list-style-type: none"> <li>- Capacity of the septic tank;</li> <li>- Proposed loading;</li> <li>- Integrity of percolation area;</li> <li>- Distance from proposed wells; and,</li> <li>- Proposed water supply to staff facilities.</li> </ul>	<p>The RD includes a standard condition which requires the applicant to provide and maintain a wastewater treatment plant for the treatment of sanitary effluent. The waste water treatment system is to satisfy the requirements of Condition 3.20 of the RD.</p>
<p><u>Quarantine area</u></p> <p>The submission states that the provision regarding quarantine of suspect loads, as specified in EIS, be incorporated into the licence.</p>	<p>Requirements in relation to the quarantine area are specified in Condition 3.9.</p>
<p><u>Hours of operation</u></p> <p>The submission specifies the hours when the facility should be operational.</p>	<p>Condition 1.7 specifies hours of the facility operation and waste acceptance. The specified times are in accordance with planning permission (Wicklow County Council Ref. 16/574 and ABP Ref. 27.248297).</p>

## **Submission No. 2**

<b>Name &amp; Position:</b> Mr. Simon Dolan	<b>Organisation:</b> Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs	<b>Date received:</b> 6 <sup>th</sup> September 2016
<b>Issues raised:</b>	<b>Agency Response:</b>	
The submission states that no risk of contamination by invasive plant species was considered in the application and expresses concern that there is a very high risk of contamination with invasive species.	Condition 2.2.2.9 requires an invasive species prevention and eradication plan, to cover at least, Japanese Knotweed, Giant Knotweed, Bohemian Knotweed and any other relevant invasive species.	

## **Submissions No. 3, No. 4 and No. 5**

<b>Name &amp; Position:</b> Mr. Albert Kerr A representative of a "group of concerned local activity, adventure and sporting groups"	<b>Date received:</b> Submission No. 3 - 25 <sup>th</sup> October 2018 Submission No. 4 - 12 <sup>th</sup> November 2018 Submission No. 5 – 23 <sup>rd</sup> November 2018
<b>Issues raised:</b>	<b>Agency Response:</b>
Mr. Kerr believes that the licence application should be rejected due to the following: <ul style="list-style-type: none"><li>- The quarry is a scenic lake that has the potential to become a recreational facility for swimming, scuba diving and other activities.</li></ul>	Planning permission was granted for the backfilling and restoration of the quarry. Please see Section 4.2 of this report for details.
The site is located within a rural landscape which is designated as a "Mountain and Lakeshore Area of Outstanding Natural Beauty" (ML-AONB) and near SACs, SPAs and a proposed Natural Heritage Area (pNHA). Mr. Kerr requests that EPA carefully considers whether such a receiving environment is appropriate for the activity.	Environmental Impact Assessment of the activity has been carried out. Please see Sections 6, 7, 8, 9, 10, 13 and 14 of this report for detail. Appropriate assessment screening of the activity has also been carried out. Please see Section 15 of this report. The RD includes numerous measures preventing the facility from causing negative impacts on the environment.

<p>Dust and noise associated with the activity will interfere with the natural receiving environment.</p>	<ul style="list-style-type: none"> <li>- Condition 6.11.1 requires implementation of adequate measures for dust and noise control.</li> <li>- Condition 6.11.2 requires that in dry weather all stockpiles, site roads and any other areas used by vehicles shall be sprayed with water.</li> <li>- Condition 5.5 requires that the licensee shall ensure that dust 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.</li> <li>- Schedule B.3 specifies noise emissions and requires that there shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location.</li> <li>- Schedule C.2 requires noise monitoring at noise sensitive locations.</li> </ul> <p>It is considered the above measures are adequate to control dust and noise at the facility.</p>
<p>An increase in traffic associated with the operation of the facility is inappropriate for an area of Outstanding Natural Beauty.</p> <p>The road which will be used for purposes of the facility's operation leads also to tourist attractions. Therefore, this road is unsuitable for the use associated with the activity.</p> <p>Heavy duty vehicles associated with the activity would cause damage to this road, traffic congestion and delays, danger and accidents, and dirt, mud, dust, air pollution and noise.</p>	<p>Matters relating to traffic outside of the facility and its impact are matters for the planning authority.</p> <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> <ul style="list-style-type: none"> <li>- Condition 6.13.1 requires removal of all loose litter or other waste present in the vicinity of the facility.</li> <li>- Condition 6.13.2 requires all waste vehicles to be covered.</li> <li>- Condition 5.5 requires that the licensee shall ensure that mud, dust 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.</li> </ul>

<p>The submission states that establishment of any waste disposal site requires a "Centre of Gravity" analysis. This is to prove that the assessment of the waste to be "dumped" at the facility is in fact available and within "appropriate travel time from the (source) location".</p>	<p>Planning permission was granted for the backfilling and restoration of the quarry at this location.</p> <p>It is considered that the measures for waste acceptance, as set out in the RD, are adequate.</p> <ul style="list-style-type: none"> <li>- Only clean soil and stone will be authorised for acceptance at the facility.</li> <li>- Condition 8.13 requires waste acceptance procedures to prevent the acceptance of unauthorised (including contaminated) waste at the facility.</li> <li>- Schedule A.2 specifies waste acceptance criteria.</li> </ul>
<p>The submission requests that EPA assesses an impact of the activity on flora and fauna.</p>	<p>Impact on flora and fauna was assessed as part of Environmental Impact Assessment carried out for the activity. Please see Sections 6, 7, 8, 9 and 13 of this report for detail.</p> <p>Appropriate assessment screening of the activity has also been carried out. Please see Section 15 of this report.</p>
<p>Is EPA is satisfied that the applicant has carried out a comprehensive review of all similar sites and concluded that this particular location best serves the needs of the region for waste disposal.</p>	<p>The location for the facility was considered as part of EIS.</p> <p>Planning permission was granted for the backfilling and restoration of the quarry at this location.</p>
<p>To grant a licence for the activity would be detrimental to the expected increase of tourism from cruise ships coming into Dublin Port.</p>	<p>Matters related to tourism lie outside of the remit of the Agency.</p>
<p>The submission states that protected frogs mating, frog spawn, tadpoles, newts and birds of prey were observed in the quarry lake. The submission includes statements from the people who observed the frogs mating, frogspawn and tadpoles.</p>	<p>The quarry and the quarry pond have been created as a result of human activities. The backfilling of the quarry will serve the reinstatement of the habitats that were existing on the site prior to the quarrying operation.</p> <p>The species referred to in the submission are found throughout the country.</p> <p>It is considered that the activity will not unfavourably impact these species.</p>

## **6. Emissions to Air**

This section addresses the following:

- greenhouse gases and climate impact
- dust
- odour

### **6.1 Greenhouse gases and Climate Impact**

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

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

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

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

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

- The facility is located in a semi-rural area with residences in close proximity to the site.
- A licensed facility comprising of a closed landfill and an active C&D waste recovery activity is operated by Marrakesh Limited (Waste Licence Ref. No W0048-01) at Kilmurry South 1.8km to the east of the Calary Quarry.

The facility operated by Marrakesh Limited and residences would use modest amounts of energy and will not be significant contributors of climate altering substances. Therefore significant cumulative effects on the environment from the use of energy by this facility and other developments are not likely.

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

### **6.2 Fugitive Dust**

Dust generation during dry weather is associated mainly with the operation of vehicles arriving at and departing from the facility and the filling activity.

Dust from the facility is the main potential emission to air that could affect air quality. The RD provides for the processing of construction and demolition waste to take place in a dedicated building, which will contain any dust as may arise. This is provided for in the RD.

The mitigation measures proposed by the applicant include:

- spraying water on haul roads and waste stockpiles during dry weather;
- providing vegetation on restored areas; and,
- routing HGVs through the wheelwash.

The RD requires that dust control measures are employed to minimise the emission of dust at the facility during dry periods (Conditions 5.5 and 6.11). Schedule B.4 of the RD sets a limit on ambient dust deposition at the facility boundary while Schedule C.3 requires bi-annual monitoring of ambient dust deposition. Condition 3.8.2 requires that all vehicles leaving the facility shall use the wheel cleaner.

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

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

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

- There are no sources of significant dust emissions in the general vicinity of the site. A licensed facility comprising of a closed landfill and an active C&D waste recovery activity is operated by Marrakesh Limited (Waste Licence Ref. No W0048-01) at Kilmurry South 1.8km to the east of the quarry and on the other side of the Great Sugar Loaf mountain.

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

### **6.3 Odour**

There will be no odorous waste accepted at the facility. Accordingly, there is no potential for odour emissions from waste activities.

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

Odour is not expected to be an issue due to the fact that no odorous waste will be accepted at the facility. Accordingly, no specific mitigation measures are proposed. The applicant will be required to implement waste acceptance procedures to prevent the acceptance of unauthorised (including contaminated) waste at the facility (Condition 8.12).

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

- There are no sources of significant odour emissions in the general vicinity of the site. A licensed facility comprising of a closed landfill and an active C&D waste recovery activity is operated by Marrakesh Limited (Waste Licence Ref. No W0048-01) at Kilmurry South 1.8km to the east of the quarry and on the other side of the Great Sugar Loaf mountain.



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

#### **6.4 Overall Conclusions in relation to effects of air emissions from the activity on the environment**

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

### **7. Discharges to Water and Ground**

This section addresses the following:

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

#### **7.1 Discharges to Waters**

##### 7.1.1 Direct Process Emissions to Waters

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

##### 7.1.2 Direct storm water discharges to waters

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

Emission Reference	Potential contamination	Abatement	Receiving water
SW1 (discharge point)	Discharge of polluted water could cause contamination to the receiving waterbody.  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.	There will be settlement ponds, a screen and a hydrocarbon interceptor installed.	The unnamed stream which flows into the Killough River (waterbody code: IE_EA_10D010100).

	Also, contaminated waste could cause pollution of storm water.		
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The facility discharges into on-site culvert pipe which discharges into an off-site ditch. This ditch discharges into an unnamed stream which flows into the Killough River 330m downstream of the discharge from the facility (see Figure 3 below). The unnamed stream flows into the Killough River 630m downstream of the discharge from the facility. There are no EPA monitoring stations on the Killough River. WFD ecological status of Killough River for 2010 – 2015 is good.

The Killough River discharges to the Dargle River approximately 3.8 km downstream of the facility. WFD ecological status of Dargle River for 2010 – 2015 is good. The water quality of the Dargle River at the location 4.2 km upstream (monitoring station code: RS10D010010) of the confluence with the Killough River was recorded in 2015 to be of high status (Q 4-5). The water quality downstream of this confluence was recorded as good (Q 4) in 2015 at a location 2.7km downstream of the confluence (monitoring station code RS10D010100).

Natural drainage, through rainfall and surface run-off has resulted in the water levels in the quarry void gradually rising, from a floor level of approximately 220mOD to 240mOD at present. Dewatering of the quarry void will be required prior to importation of the fill material.

The results of the surface water quality tests from the quarry are compliant with the European Communities (Environmental Objectives) (Surface Water Regulations 2009 (S.I. No 272 of 2009) and the Drinking Water Regulations 2014 (S.I. 122 of 2014).



**Figure 7: Discharge canal**

Condition 3.14.1 requires that all storm water, other than from roofs, and groundwater discharge from the facility shall pass through the settlement pond, screening barrier and oil separators in advance of discharge.

There is no flow present in the unnamed stream for most of the year. The RD sets the Environmental Quality Standards as emission limit values on the discharge via SW1.

The monitoring results 2017 demonstrate that the parameters in the quarry pond water are well below the proposed ELVs.

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

Deposit of non-conforming waste in the fill area could potentially affect the quality of soil and groundwater. Condition 8.13 requires waste acceptance procedures to prevent the acceptance of unauthorised (including contaminated) waste at the facility.

The RD requires the licensee to maintain the storm water/rainwater collection system and the separation of storm waters that have the potential to become contaminated through contact with any unsuitable waste, from storm waters that do not have the potential to become contaminated through contact with this unsuitable waste. Schedule C.1.2 requires that the discharge from settlement ponds is visually inspected and monitored for total petroleum hydrocarbons and other parameters.

The RD contains standard conditions in relation to the storage and management of materials and waste. The RD also requires that accident and emergency response procedures are put in place. The controls pertaining to accidents and emergencies are addressed in Section 11 below. These measures will help to control any impacts which could occur should any mitigation measures fail.

It is therefore considered that direct or indirect impacts as a result of storm water emissions through SW1 are considered to be neither likely nor significant.

- There are no significant discharges to the unnamed stream or the Killough River from other developments.

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

## **7.2 Emissions to Sewer (Indirect Discharges to Water)**

### **7.2.1 Process emissions to sewer (Indirect process emissions to waters)**

There are no process emissions to sewer at the facility.

## **7.3 Discharges to ground/groundwater**

The bedrock underlying the site comprises of a sequence of greywacke, sandstones and shales overlain by indurated quartzite from the Bray Head Formation. Much of the soil which previously occurred across the site has been removed by quarrying activities. The soils around the site are classified as predominantly shallow soils derived from non-calcareous rock or gravel, with or without a peaty surface horizon. The aquifer beneath the site is a poor aquifer (PI). Across the quarry footprint, all overburden cover has been removed and bedrock is exposed. The groundwater vulnerability at and around the site is extreme. The majority of the groundwater flow occurs in the upper few metres, mainly in the weathered zone, in a lateral direction towards rivers.

### **7.3.1 Direct process emissions to ground/groundwater**

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

### **7.3.2 Storm water discharges to ground**

There are no storm water discharges to ground. Rain water falling on the site is collected on the quarry floor and discharges into on-site culvert pipe which discharges into an off-site ditch. This ditch discharges into an unnamed stream which flows into the Killough River 630m downstream of the discharge from the facility.

### **7.3.3 Other emissions to ground/groundwater**

#### Septic tank

The wastewater from welfare facilities will discharge to a septic tank and associated percolation area.

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

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

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

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

#### Groundwater quality

Sampling results of well GW2 show that groundwater beneath Calary Quarry complies with the environmental quality standards set by the European Communities (Environmental Objectives) Groundwater Regulations 2010, as amended. The sampling results also show that concentration of chloride (recorded at 50 mg/l), even though it exceeds the EPA Interim Guideline Values (IGV) for groundwater, it is within the limit of 250 mg/l set for this parameter in Drinking Water Regulations 2014 (S.I. 122 of 2014). The sampling results show also non-compliance with Drinking Water Regulations 2014 (S.I. 122 of 2014) in respect of faecal coliforms (detected at 10 CFU/100ml) and e-coli (detected 18 CFU/100ml). It is considered however, that the presence of faecal coliforms and e-coli is caused by sheep grazing and slurry spreading across the higher ground around the Great Sugar Loaf mountain, up-gradient of the application site. Condition 6.18 requires the annual assessment of groundwater monitoring results against the requirements of the European Communities Environmental Objectives (Groundwater) Regulations 2010, as amended.

### **7.4 Overall Conclusions in relation to effects of emissions to water and ground on the environment**

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

### **8. Noise**

The main sources of noise at the facility include HGV trucks, the tipping of the material, the bulldozer placing and grading the infill material.

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

Noise monitoring in and around the application site indicates that average ambient noise levels across the application site range between 45dBA  $L_{Aeq}$  and 64dBA  $L_{Aeq}$ , depending on location and proximity to the R755 Regional Road and time of day. Noise prediction assessments indicate that there will be minimal, if any, increase in noise levels arising at nearby residences under a worst case scenario when both a bulldozer and HGV trucks are generating noise 100% of the time at the application site boundary.

Some of measures that will be utilised to mitigate the noise impact include:

- Retention and reinforcement of existing perimeter screening berms;
- Maintenance of plant and fitting plant silencers;
- Maintenance of road surfaces; and
- Switching vehicle engines where possible.

The RD includes standard noise conditions and emission limit values, which apply at the noise sensitive locations. It is therefore considered that direct significant impacts as a result of noise are unlikely.

- There are no other developments or activities in the vicinity that are likely to generate noise to an extent that could lead to likely or significant cumulative effects beyond the site boundary.

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

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

## **9. Waste Generation**

The activity does not produce significant quantities of waste and is limited to municipal type waste from office and welfare facilities onsite. Only operators and haulage firms authorised under waste collection permits will be engaged to transfer these waste streams to waste disposal or recovery facilities.

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

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

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

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

- Most of the developments in the vicinity of the facility are dwelling houses and agricultural lands, all of which would not generate significant amounts of waste. Also there will be no waste generated by the aforesaid facility operated by Marrakesh Limited (Waste Licence Reg. No. W0048-01). Therefore, significant cumulative effects on the environment from the generation of waste by this facility and other developments are not likely.

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

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



## 10. Use of Resources

The operation of the facility will involve consumption of electricity and diesel fuel. Electricity will be used for lighting, heating, weighbridge, office and welfare facilities. Fuel will be used for powering the plant and equipment used for placing and compacting the imported soil and stone. Water will be supplied from an on-site groundwater well.

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

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

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

### Water abstraction

Water will be supplied from an on-site groundwater well.

### Hazardous Materials

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

- The applicant, the nearby developments or the aforesaid facility operated by Marrakesh Limited (Waste Licence Reg. No. W0048-01) do not use resources to an extent that could lead to likely or significant cumulative effects beyond the site boundary.

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

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

## 11. Prevention of Accidents

### Measures to be taken to prevent accidents and limit consequences

**Table 1**      **Summary of potential accidents and prevention/mitigation measures**

Potential for an accident or hazardous or emergency situation to arise at the facility	Due to the non-hazardous and inert nature of the waste to be accepted at the facility, the risk of adverse effects on human beings and the environment as a result of an accident is low.
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	The risk of fire is low due to the absence of flammable waste at the facility.
Preventative and mitigation measures to reduce the likelihood of accidents and mitigate the effects of the consequences of an accident at the facility	<p>Provision and maintenance of adequate bunding. The RD requires the licensee to:</p> <ul style="list-style-type: none"> <li>• implement waste acceptance procedures to prevent the acceptance of unauthorised (including contaminated) waste at the facility (Condition 8.12);</li> <li>• employ a suitably qualified and experienced facility manager (Condition 2.1.1);</li> <li>• put in place a documented Accident Prevention Procedure which addresses all hazards on-site (Condition 9.1);</li> <li>• put in place an Emergency Response Procedure which will ensure any effects of an emergency on-site are minimised (Condition 9.2);</li> <li>• implement a preventative maintenance programme (Condition 2.2.2.7); and</li> <li>• implement procedures to ensure corrective and preventative action is taken should the specified requirements of the licence not be fulfilled (Condition 2.2.2.4).</li> </ul>
Additional measures provided for in the RD	Integrity of tanks to be assessed every 3 years and maintenance carried out as required (Condition 6.7).

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

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

## 12. Cessation of activity

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

- Removal of all plant, machinery and site infrastructure;
- Breaking up and transport off site to authorised waste recovery facilities of concrete surfaces; and
- ‘Closure, Restoration and Aftercare Management Plan’ as submitted with the application (see Section 15 of this report for further details).

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

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

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

### **13. Other matters relating to EIA**

#### **13.1 Effects on landscape, material assets and cultural heritage**

- Disturbance of archaeology and architecture from the operation of the activity

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

- Landscape, visual and cultural effects

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

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

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

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

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

#### **13.2 Interaction of effects**

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

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

#### Interaction of effects

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

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

Human beings and groundwater and soil

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

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

**14. Reasoned Conclusion on Environmental Impact Assessment**

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

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

## **15. Appropriate Assessment**

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

- Ballyman Glen SAC (Site Code: 000713)
- Bray Head SAC (Site Code: 000714)
- Carriggower Bog SAC (Site Code: 000716)
- Glen of The Downs SAC (Site Code: 000719)
- Knocksink Wood SAC (Site Code: 000725)
- Wicklow Mountains SAC (Site Code: 002122)
- The Murrough Wetlands SAC (Site Code: 002249)
- Wicklow Mountains SPA (Site Code: 004040)
- The Murrough SPA (Site Code: 004186)

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

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the 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 Ballyman Glen SAC (Site Code: 000713), Bray Head SAC (Site Code: 000714), Carriggower Bog SAC (Site Code: 000716), Glen of The Downs SAC (Site Code: 000719), Knocksink Wood SAC (Site Code: 000725), Wicklow Mountains SAC (Site Code: 002122), The Murrough Wetlands SAC (Site Code: 002249), Wicklow Mountains SPA (Site Code: 004040) and The Murrough SPA (Site Code: 004186).

The proposed 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 can 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 not required.

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

The facility does not have the potential for significant effects on any European site due to the nature of this inert waste recovery facility. In particular the only potential source-pathway receptor link between the facility and any of the European sites is via the hydraulic pathway created through a discharge of dewatered groundwater and surface water run-off from the quarry site to the Killough River, a tributary of the Dargle River, which outflows into the Southwestern Irish Sea - Killiney Bay.

## **16. Fit & Proper Person Assessment**

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

### Technical Ability

The licensee has provided details of the qualifications, technical knowledge and experience of key personnel. The licence application also includes information on the

on-site management structure. It is considered that the licensee has demonstrated the technical knowledge required.

#### Legal Standing

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

#### Financial Provision

The licence category and proposed facility was assessed for the requirements of Environmental Liabilities Risk Assessment (ELRA), Closure, Restoration and Aftercare Management Plan (CRAMP) and Financial Provision (FP), in accordance with Agency guidance. Under this assessment it has been determined that ELRA, costed CRAMP and FP are not required.

Condition 10.2 of the RD requires the review of a Closure, Restoration and Aftercare Management Plan (CRAMP), uncosted, within six months of the grant of the licence. In accordance with EPA policy, 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, aftercare excepted, within 12 to 15 years.

#### Fit & Proper Conclusion

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

### **17. Cross Office Consultation**

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

<b>Inspector</b>	<b>Assistance provided</b>
Leo Sweeney (OES)	Matters related to Environmental Impact Assessment.
Rebecca Quinn (OEA)	Matters related to discharge from the quarry and the receiving water.

### **18. Charges**

The annual enforcement charge recommended in the RD is **€7,710**, which reflects the anticipated enforcement effort required and the cost of monitoring.



## **19. Recommendation**

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

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

Signed



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Ewa Babiarczyk

### **Procedural Note**

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

## Appendix 1

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

<b>European Site (site code)</b>	<b>Distance and direction from the facility</b>	<b>Qualifying interests</b> (* denotes a priority habitat)	<b>Conservation objectives</b>
Ballyman Glen SAC (Site Code: 000713)	5.5 km north of the facility	<b>Habitats:</b> <ul style="list-style-type: none"> <li>• 7220 Petrifying springs with tufa formation (Cratoneurion)*</li> <li>• 7230 Alkaline fens</li> </ul> <b>Species:</b> None	As per NPWS Conservation objectives for Ballyman Glen SAC [000713]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (dated 15/08/2016).
Bray Head SAC (Site Code: 000714)	5.3 km north-east-east of the facility	<b>Habitats:</b> <ul style="list-style-type: none"> <li>• 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts</li> <li>• 4030 European dry heaths</li> </ul> <b>Species:</b> None	As per NPWS Conservation Objectives: Bray Head SAC [000714]. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (dated 11/04/2017).
Carriggower Bog SAC (Site Code: 000716)	4.8 km south of the facility	<b>Habitats:</b> <ul style="list-style-type: none"> <li>• 7140 Transition mires and quaking bogs</li> </ul> <b>Species:</b>	As per NPWS Conservation objectives for Carriggower Bog SAC [000716]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural

European Site (site code)	Distance and direction from the facility	Qualifying interests (* denotes a priority habitat)	Conservation objectives
		None	and Gaeltacht Affairs (dated 15/08/2016).
Glen of the Downs SAC (Site Code: 000719)	2.3 km south-east-east of the facility	<b>Habitats:</b> <ul style="list-style-type: none"> <li>• 91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</li> </ul> <b>Species:</b> None	As per NPWS Conservation objectives for Glen of the Downs SAC [000719]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. (dated 15/08/2016).
Knocksink Wood SAC (Site Code: 000725)	4.6 km north-north-west of the facility	<b>Habitats:</b> <ul style="list-style-type: none"> <li>• 7220 Petrifying springs with tufa formation (Cratoneurion)*</li> <li>• 91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)*</li> </ul> <b>Species:</b> None	As per NPWS Conservation objectives for Knocksink Wood SAC [000725]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (dated 15/08/2016).
Wicklow Mountains SAC (Site Code: 002122)	3.3 km west of the facility	<b>Habitats:</b> <ul style="list-style-type: none"> <li>• 3110 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)</li> <li>• 3160 Natural dystrophic lakes and ponds</li> <li>• 4010 Northern Atlantic wet heaths with <i>Erica tetralix</i></li> <li>• 4030 European dry heaths</li> </ul>	As per NPWS Conservation objectives for Wicklow Mountains SAC [002122]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (dated 15/08/2016).

European Site (site code)	Distance and direction from the facility	Qualifying interests (* denotes a priority habitat)	Conservation objectives
		<ul style="list-style-type: none"> <li>• 4060 Alpine and Boreal heaths</li> <li>• 6130 Calaminarian grasslands of the <i>Violetalia calaminariae</i></li> <li>• 6230 Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)*</li> <li>• 7130 Blanket bogs (* if active bog)</li> <li>• 8110 Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)</li> <li>• 8210 Calcareous rocky slopes with chasmophytic vegetation</li> <li>• 8220 Siliceous rocky slopes with chasmophytic vegetation</li> <li>• 91A0 Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles</li> </ul> <p><b>Species:</b></p> <ul style="list-style-type: none"> <li>• 1355 Otter <i>Lutra lutra</i></li> </ul>	
The Murrough Wetlands SAC (Site Code: 002249)	8.8 km south-east of the facility	<p><b>Habitats:</b></p> <ul style="list-style-type: none"> <li>• 1210 Annual vegetation of drift lines</li> <li>• 1220 Perennial vegetation of stony banks</li> <li>• 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)</li> <li>• 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</li> </ul>	As per NPWS Conservation objectives for The Murrough Wetlands SAC [002249]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (dated 15/08/2016).

European Site (site code)	Distance and direction from the facility	Qualifying interests (* denotes a priority habitat)	Conservation objectives
		<ul style="list-style-type: none"> <li>• 7210 Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion davallianae*</li> <li>• 7230 Alkaline fens</li> </ul> <p><b>Species:</b> None</p>	
Wicklow Mountains SPA (Site Code: 004040)	3.3 km west of the facility	<p><b>Habitats:</b> None</p> <p><b>Species:</b></p> <ul style="list-style-type: none"> <li>• A098 Merlin <i>Falco columbarius</i></li> <li>• A103 Peregrine <i>Falco peregrinus</i></li> </ul>	As per NPWS Conservation objectives for Wicklow Mountains SPA [004040]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (dated 15/08/2016).
The Murrough SPA (Site Code: 004186)	9.5 km south-east of the facility	<p><b>Habitats:</b></p> <ul style="list-style-type: none"> <li>• A999 Wetland</li> </ul> <p><b>Species:</b></p> <ul style="list-style-type: none"> <li>• A001 Red-throated Diver <i>Gavia stellata</i></li> <li>• A043 Greylag Goose <i>Anser anser</i></li> <li>• A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i></li> <li>• A050 Wigeon <i>Anas penelope</i></li> <li>• A052 Teal <i>Anas crecca</i></li> <li>• A179 Black-headed Gull <i>Chroicocephalus ridibundus</i></li> </ul>	As per NPWS Conservation objectives for The Murrough SPA [004186]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs (dated 15/08/2016).

European Site (site code)	Distance and direction from the facility	Qualifying interests (* denotes a priority habitat)	Conservation objectives
		<ul style="list-style-type: none"> <li>• A184 Herring Gull <i>Larus argentatus</i></li> <li>• A195 Little Tern <i>Sterna albifrons</i></li> </ul>	



## Appendix 2

### Relevant European (and international) legal instruments

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

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