

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

Signed: *Naire O'Connor* **Date:** 15/12/2020



**OFFICE OF ENVIRONMENTAL
SUSTAINABILITY**

**INSPECTOR'S REPORT ON AN WASTE LICENCE APPLICATION, LICENCE
REGISTER NUMBER W0307-01**

TO: EIMEAR COTTER

FROM: JIM JOHNSON

DATE: 15 DECEMBER 2020

Applicant:	Roadstone Limited
CRO number:	11035
Location/address:	Castleredmond, Midleton, Cork
Application date:	18 December 2019
Classes of Activity (under Waste Management Act 1996 as amended):	R05 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 BREF document/CID/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 CIDs, BREF documents and National BAT notes are listed in the appendix of this report.
Activity description/background:	Backfilling of a quarry void with inert soil and stone material and returning the site to agricultural use.
Additional information received:	Yes (31 st July 2020)
No of submissions received:	2
Environmental Impact Assessment required: Yes	Stage 2 Appropriate Assessment required: Yes
Environmental Impact Assessment Report submitted (EIAR): Yes 18-Dec-2019	Natura Impact Statement (NIS) submitted: Yes (31 st July 2020)
Site visit: No site visit due to COVID-19 restrictions*	Site notice check: 21 st Dec 2019

*Condition 11.3 of the RD requires the license to notify the Agency one month in advance of the commencement of the Scheduled Activity. In accordance with section 41(6) of the 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

This is an assessment of an application for a licence to carry on an activity under Part V of the Waste Management Act 1996, as amended. Roadstone Limited has applied to the Agency for a waste licence for a waste soils recovery facility at Castleredmond, Midleton, Co. Cork. It is proposed to import approximately 1,400,000 m³ (2,520,000 tonnes) of inert soil and stone to backfill a quarry void. The material will be deposited to tie in with the surrounding landscape and upon completion the site will be restored to agricultural use.

Roadstone Limited manufactures and supplies building materials for the retail and construction sectors in Ireland. It was founded in 1949 and in 1970 merged with Irish Cement Ltd to form Cement Roadstone Holdings (CRH).

2. Description of activity

The operation is at Midleton Quarry which is 2.1 km southwest of Midleton, Co. Cork (Figure 1). Midleton Quarry includes parts of three townlands: Carrigshane, Castleredmond and Coppingerstown.

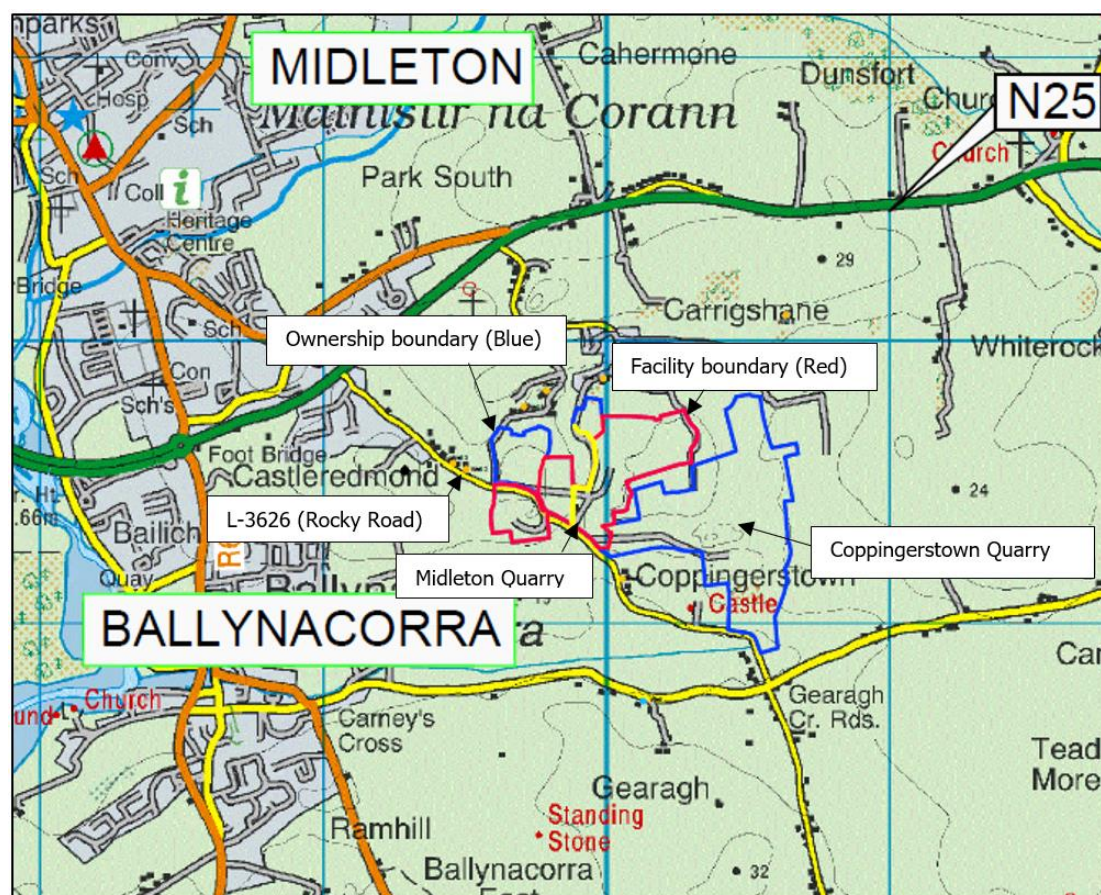


Figure 1 Location and extent of facility [from Application: Attachment 3-2-1 Site Plans (drawing no. CP17028 WL0001) Dec 2019].

The quarry has an area of about 15.7 Ha. Of this, 9 Ha consist of quarry voids to be backfilled. Much of the quarry has already been worked out with only a few years of extraction material remaining. The facility boundary is shown in Figure 2. Ongoing quarrying activities include blasting, processing, crushing and screening. Condition 4 of the RD requires the licensee to ensure noise, off-site vibration and air over

pressure do not exceed the limits specified in Schedule B.4. Condition 6.12 requires noise, vibration and air overpressure surveys be carried out according to Schedule C.5.

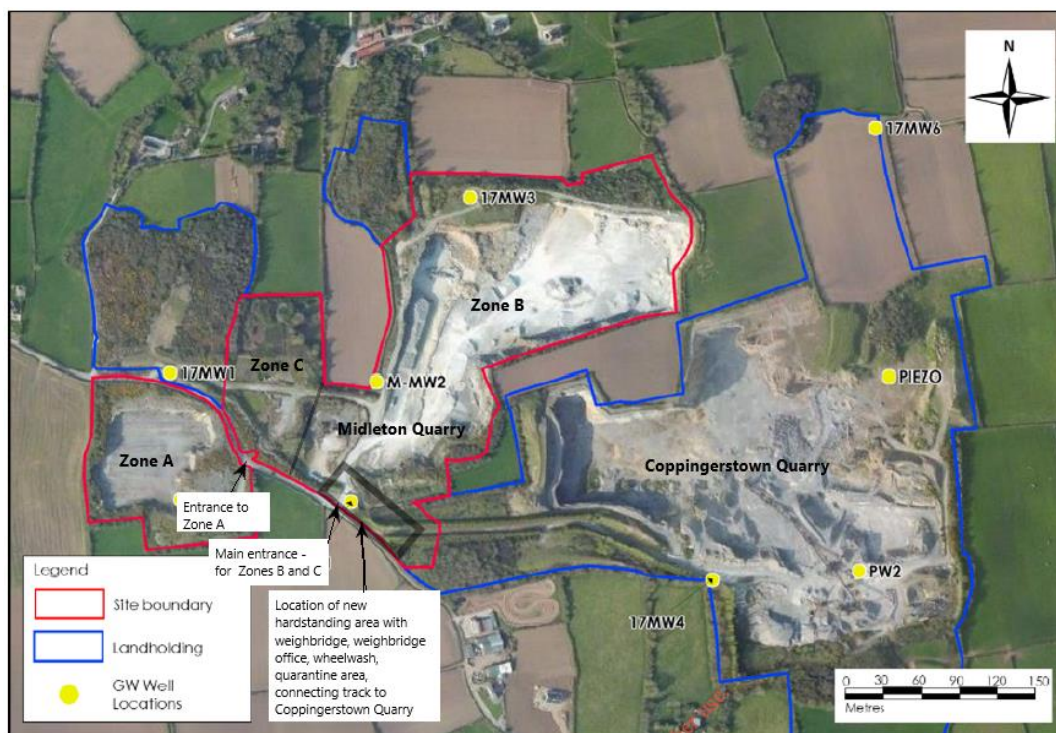


Figure 2 Layout of Middleton quarry. Facility boundary (red). Ownership boundary (blue). [adapted from Application Attachment-4-8-1-Operational Report. Figure B: 'Location of Quarry On-site Monitoring Wells' (07th Dec 2019)]

For ease of reference the backfill area has been divided into three zones: A, B and C, which are at various stages of quarrying completion.

- Zone A: Extraction has been completed.
- Zone B: Extraction ongoing but largely complete.
- Zone C: Extraction has yet to be completed. Part of Zone C is also used for general circulation/storage.

Backfilling will begin in Zone A and then proceed to Zones B and C once quarrying has been completed there.

It is proposed to import approximately 1.4M m³ (2.52M tonnes) of inert soil and stone (List of Waste (LoW) category 17 05 04). This material will come from excavations associated with large infrastructural projects and other construction works. Material will be accepted from both greenfield and non-greenfield sites subject to waste acceptance procedures. Condition 8 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.

The applicant has planning permission for a duration of 18 years, which allows for approximately 15 year of importation and 3 years of monitoring. The rate of import is limited by the permitted number of truck movements for both backfill and extraction. The proposed scenario is to import 300,000 tonnes of material per annum, which would take approximately 8.4 years. This would be achieved by using some of the trucks removing extracted material to import infill. In a worst-case scenario, where

there is no overlap in truck movements, the backfill would take approximately 15.3 years with 164,610 tonnes imported per annum.

Material will be deposited to tie in with surrounding contours and then subsoil and topsoil will be added to enable landscaping and return to agricultural use. Restoration will take place on a phased basis – starting in Zone A and then proceeding to Zones B and C once backfilling is complete.

The quarry boundary is currently secured with a combination of chain link and stockproof fencing, hedgerows and sod and stone walls. There is also CCTV, security gates, a site office and welfare facilities. These will be retained for the duration of the activity and removed as part of the final restoration.

It is proposed to put in place ancillary facilities at a hardstanding area near the main entrance (Zone B). These include a wheelwash, weighbridge, weighbridge office, quarantine area and carparking/refuelling area. It is also proposed to put in place an internal track to allow vehicles from a neighbouring quarry (Coppingerstown Quarry), also under the ownership of the applicant, to access these services.

The proposed hardstanding area includes a drainage system. Runoff from the carparking/refuelling area will pass through a silt trap and a full retention oil interceptor and then discharge to a percolation area (soakaway). Runoff from the site entrance, office roof and connecting track will pass through a silt trap and then discharge to the soakaway.

Water for welfare facilities, dust suppression and the wheelwash will be provided by a well already on site, which is already in use for this purpose. Wastewater from welfare facilities will be collected by a licensed operator.

It is proposed to put a second wheelwash in Zone A, which would be supplied from the public water supply. As there is only one weighbridge, trucks depositing material in Zone A will need to drive to Zone B to use the weighbridge there.

The quarry is accessed via the L-3626 (Rocky Road), 800m from the N25 (Figure 1). There are two vehicular entrances: one to Zone A, the second to Zones B and C (the main quarry entrance) (Figure 2). Within the site, internal haul roads on the rock surface will be used for the backfill activity.

Working hours for the backfill operation will be. Monday to Friday 07.00 to 18.00, and 07.00 to 14.00 on Saturday. These are the same hours for the extraction activity (planning CCC Ref 06/10088 and ABP Ref 04.224250). No operations shall take place on Sundays or Public Holidays.

3. Planning Status

A number of planning applications have been made by the applicant for the area within the facility boundary since 1992. Details of these relevant planning applications and permissions have been provided in the application form and are summarised in the table below.

Extraction began at the site pre 1963 prior to the need for formal planning permission. Extraction activity at Middleton Quarry is permitted under planning CCC 06/10088 and ABP 04224250. The soil recovery activity is permitted under CCC 19/4719. Permission was granted for continuation of quarrying activities at the neighbouring quarry (Coppingerstown) in 2019 (CCC 18/7131). The planning for Coppingerstown quarry includes the area within the facility boundary subject to waste authorisation that has the main entrance, hardstanding area with ancillary services and internal track.

Planning ID	Applicant	Purpose	Grant Date
CCC 19/4719	Roadstone Ltd	Midleton Quarry Soils recovery facility	30/09/2019 (valid for 18 years)
CCC 18/7131	Roadstone Ltd	Coppingerstown Quarry Continuation of quarrying activities	26/07/2019
CCC 06/10088 and ABP 04224250	John A Wood	Midleton Quarry Continuation of quarrying activities	01/05/2008 (Expiry date 01/05/2023)
CKQY 025	John A Wood	Midleton Quarry S161A quarry examination Midleton	14/08/2012
CCC 91/712 (ABP 4/5/87305)	Healy Brothers Ltd.	Midleton Quarry Quarry facility at Coppingerstown and Carrigshane Co. Cork	13/08/1992
67-518	Wm Ellis & Sons Ltd.	Midleton Quarry	11/09/1967

The applicant has submitted the EIAR associated with planning permission 19/4719. 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 (Part 2) 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 18th December 2019. This is dealt with in the EIA Section later in this report.

5. 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.

6. Emissions

Potential significant emissions from the activity are associated with dust, noise and stormwater discharge to ground.

6.1 Emissions to Air

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

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, backfilling activities, material stockpiles and quarrying activities. Dust arises predominantly from inert soil and rock materials.

Average dust levels at four locations around Midleton Quarry were submitted as part of the EIAR Air section (see map Appendix 3). Dust levels at each location were below the recommended exceed the threshold limit. The proposed backfill activity is similar to the current permitted activity and it is not expected that dust emissions will change significantly.

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 the following mitigation/control measures to minimise dust arising:

- Preparation of a dust minimisation plan as part of an Environmental Management Plan
- A fixed water spraying system will be used on access roads and storage and deposition areas during dry weather or windy conditions. Use of mobile bowsers (tank on a trailer) in areas where fixed system is not available
- Regular cleaning and maintenance of site roads including sweeping of hard surfaces and restricted use of unsurfaced roads to essential site traffic.
- Use of a wheel wash to remove mud from vehicles exiting onto public roads.
- Regular inspection of public roads outside the site and cleaning where necessary
- Early seeding of restored areas
- Material handling to minimise exposure to wind
- Transport of very fine soils in covered vehicles

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 (Schedule C.6).

Condition 3.19.2 requires that all vehicles leaving the facility shall use the wheel cleaner. Condition 6.11 requires that dust control measures are employed to minimise the emission of dust at the facility during dry periods. 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 as and when required to minimise airborne dust nuisance.

6.1.4 Odour

Odour is not expected to be an issue as only inert soil and stone will be accepted which is not odorous. As such no specific mitigation measures are proposed.

- Condition 8.11 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 8.11.8 of the RD requires that rejected waste moved to the quarantine area is stored under appropriate conditions to avoid putrefaction, odour nuisance, the attraction of vermin and any other 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 Other emissions to ground/groundwater

There are no other emissions to ground/groundwater.

6.3 Storm water discharges to ground/groundwater

There is no storm water drainage network currently on site, all rainwater percolates to groundwater through the soil/subsoil and limestone rock.

The proposed hardstanding area at the main entrance in Zone B includes a drainage system to collect runoff [Drawing Number CP17028WL0008, Rev P03, July 2020]. The proposed drainage system has two components:

- stormwater from the carparking/refuelling area will pass through a silt trap and a full retention fuel/oil interceptor and discharge to a percolation area (soakaway) (emission ref. GW3)
- stormwater from the paved entrance, office roof and connecting track will pass through a silt trap and then discharge to the soakaway (emission ref. GW2)

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 or oils on site. Fuel will be stored at an existing bunded store at the neighbouring Coppingerstown Quarry.
- All refuelling to take place from a mobile double skinned fuel bowser and in a designated hardstanding area draining to an oil interceptor
- Servicing of plant and machinery off site
- Regular inspections of plant and machinery for leaks

- Runoff from the carpark and refuelling area to drain through a silt trap and full retention oil interceptor before discharging to a soakaway.

A Tier 2 hydrogeological risk assessment for the stormwater discharge to ground was submitted with the application (18-Dec-2019). The risk assessment included trial pits and infiltration tests on site to assess the infiltration capacity of the soakaway.

Loading calculations were carried out for a worst-case scenario – with a total petroleum hydrocarbon (TPH) concentration (5 mg/l) from the oil interceptor and daily rainfall from the wettest month of the year. Under these conditions the total petroleum hydrocarbon concentration at the nearest downstream assessment point (a private well) was below the groundwater threshold value (GTV) of 7.5 µg/l and in compliance with the Groundwater Regulations (2016).

The original drainage design submitted with the licence application included a constructed wetland in addition to the soakaway. This was not included in the planning application (CCC 19/4719) and has been excluded from the Recommended Decision (RD). To ensure compliance with the Groundwater Regulations (2016) in the absence of the constructed wetland, a trigger level of 3 mg/l has been set for TPH from the oil interceptor (Schedule B.6).

Dr Conor Quinlan (Scientific Officer, EPA Hydrometric and Groundwater Section) was consulted to assess the adequacy of the stormwater design. Based on the information provided and the conservative nature of the calculations, the design was deemed sufficiently robust to treat stormwater and ensure compliance with groundwater standards.

The RD specifies a number of conditions in relation to storm water as follows:

- Condition 3.9 requires that all vehicle and machinery refuelling, and maintenance is carried out in designated areas protected against spillage and run-off.
- Condition 3.21 requires that storm water infrastructure be maintained and at a minimum be capable of preventing contaminated water discharging to ground. This condition requires that runoff from the car park and refuelling area pass through a silt trap and Class I full retention interceptor prior to discharge to the soakaway.
- Condition 6.8 requires that the storm water drainage system (i.e., gullies, manholes, any visible drainage conduits and such other aspects as may be required by the Agency), bunds, silt traps and oil separators shall be inspected weekly, desludged as necessary and properly maintained at all times.
- Condition 6.10.1 requires a visual examination of stormwater discharge daily. Schedule C.2.3 requires that storm water be monitored prior to discharge to the soakaway as outlined in the table below and that suitable trigger values be established for parameters listed (Condition 6.10.2).
- Condition 6.16.1 requires that groundwater be monitored upgradient and down gradient of the proposed soakaway prior to the commencement of operations.
- Schedule C.7 specifies groundwater monitoring be carried out on a quarterly basis at 6 boreholes within the facility. Condition 6.16.2 requires the results be assessed against the requirements of the European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. 9/2010) as amended, on an annual basis.

The RD also contains standard conditions in relation to the storage and management of materials and wastes. The RD also requires that accident prevention 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.

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

Stormwater discharge (to ground) details:			
		Emission Reference	
		GW3	GW2
Monitored parameters	<i>Parameter</i>	<i>Frequency</i>	<i>Frequency</i>
	visual	daily	daily
	pH	weekly	weekly
	conductivity	weekly	weekly
	total suspended solids	weekly	weekly
	diesel range organics	monthly	
	petrol range organics	monthly	
	total petroleum hydrocarbons	monthly	
	mineral oils	monthly	
Abatement		Silt trap, Class I Full retention oil interceptor, Soakaway (<i>required by RD</i>)	Silt trap, Soakaway
Drainage areas		Car park and refuelling area	Roof and site entrance road
Discharging to		Ground via soakaway	Ground via soakaway
Trigger levels established (Y/N)		Yes – 3 mg/l for total petroleum hydrocarbons, others required by RD	No - required by RD
Automatic diversion in place:		No	No

6.4 Noise

The main sources of noise from the facility will be truck movements on internal site roads, machinery (track machines, dozers etc) depositing material on site and ongoing quarrying activities including blasting, crushing, processing and screening. The closest sensitive receptor to the quarry is about 100 m to the northwest.

A daytime noise survey was carried out at 4 locations around the site in 2018. Average noise levels at each location did not exceed the daytime noise threshold (55 dB LAeq (30 minute)). The main noise sources were from quarrying activities in the Midleton and Coppingerstown quarries, traffic on the L-3626 (both local traffic and quarry trucks) and N25, and agricultural activities.

The machinery used and the nature of the work would not be considered dissimilar to the current permitted extraction activities (without blasting). As such, no new significant noise impacts are expected from the activity.

A noise prediction exercise was used to assess the level of noise under a worst-case scenario where both a vibration roller and dozer operate concurrently 80% of the

time at a sensitive receptor 10m away. Predicted noise levels were within the NRA guidelines for construction activities and did not exceed the permitted threshold 55 dB LAeq (1 hour) at the nearest sensitive receptors.

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

- All machinery will be CE certified for compliance with EU noise control limits
- All vehicle engines will be switched off when not in use
- HGVs will only be allowed to import material during the proposed operational hours.
- Internal haul road gradients to be kept as low as possible to reduce engine/brake noise from heavy vehicles
- Contractors to employ best practicable means to minimise noise emissions

Condition 2 of the RD includes the reduction of noise emissions to be implemented as part of the Environmental Management System (EMS).

Condition 4 of the RD requires the licensee to ensure noise, off-site vibration and air over pressure do not exceed the limits specified in Schedule B.4. Condition 6.12 requires noise, vibration and air overpressure surveys be carried out according to Schedule C.5.

Condition 6.12 requires noise surveys be carried out according to Schedule C.5.

7. Waste generation

The activity does not produce significant quantities of waste. Some municipal type waste (recyclable and non-recyclable) will be generated at the weighbridge office. This will be removed by a by licenced waste collector to a material recovery facility. Wastewater from welfare facilities will be collected by a licensed operator.

Waste that doesn't meet acceptance criteria for backfill will be separated and placed in a skip pending removal off-site by a suitably licenced contractor. The activity would be expected to also generate sludge at the wheel wash, small quantities of grease and oils from machinery maintenance and sludge from the oil interceptor.

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).

8. Energy Efficiency and Resource Use

The operation of the facility involves the consumption of diesel, water and electricity. Electricity is required for water supply, welfare facilities and security such as CCTV and lighting. Water for dust suppression, wheel wash and welfare facilities will be supplied by an existing production well on site. The new services will require an initial 10m³ to set up initially and then approximately 1m³ daily. Water for a wheel wash in Zone A will be supplied from the public mains that runs along the public road. There is no dewatering needed as the groundwater table is below the quarry floor. The estimated quantities used in 2021 are specified in attachment 4.6.1 of the application and are given below.

Resource	Quantity per annum
Electricity	20,000 kWh
Water	400 m ³ /yr.
Fuel - Diesel	<30 tonnes

In the application of BAT, Condition 7 of the licence provides for the efficient use of resources and energy in all site operations. It 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 2 of the licence.

9. Prevention of Accidents

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

Potential accidents & measures for prevention/limitation of consequences	
Potential for an accident or hazardous/emergency situation to arise from activities at the facility	<ul style="list-style-type: none"> • Potential spillage of fuel or hydraulic oil from plant on site. • Potential importation of contaminated material for backfill. • Failure of fuel/oil interceptor or soakaway to intercept hydrocarbons in runoff • Instability following the placement of materials
Preventative/Mitigation measures to reduce the likelihood of accidents and mitigate the effects of the consequences of an accident at the facility	<ul style="list-style-type: none"> • No storage of fuels or oils on site • Regular inspections of plant and machinery for leaks • Servicing of plant and machinery off site • Refuelling to take place from a mobile double skinned fuel bowser at a designated hardstanding area draining to an oil interceptor • Class I full retention interceptor on storm water drain from car park and refuelling area • Routine inspection of silt-traps and hydrocarbon interceptor • Provision of emergency spill kit with oil boom, absorbers etc. to be kept on site in case of a spill • Implement waste acceptance procedures to prevent unauthorised or contaminated waste arising at the facility
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 (Condition 6.10, Schedule C.2.3). • Integrity of tanks & underground pipes to be assessed every 3 years and maintenance carried out as required (Condition 6.7). • Employ a suitably qualified and experienced manager (Condition 2.1.1). • Ensure sufficient staff training (Condition 2.1.2). • Environmental Management System to be put in place (EMS) (Condition 2.2.1). • Procedures to ensure corrective and preventative action is taken should the specified requirements of the licence not be fulfilled (Condition 2.2.2.5) • Implement a preventative maintenance programme (Condition 2.2.2.8)

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 agricultural use. Ancillary services (wheelwash, weighbridge, site office etc) will be removed as will any plant and machinery.

Planning permission (CC 19/04719) requires that restoration of the site be carried out in accordance with the Restoration Plan submitted to Cork County Council on 7th August 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 licensee submits a Closure, Restoration and Aftercare Management Plan (CRAMP).

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 licensee 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), uncoded, 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, aftercare excepted, within 15 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. Submissions

While the main points raised in the submissions 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 submissions are noted and addressed in this Inspector's Report and the submissions were taken into consideration during the preparation of the Recommended Decision (RD).

Submissions			
1.	Name & Position Mr Shane O'Flynn	Organisation: HSE	Date received: 22 January 2020
Issues raised:		Agency response:	
That the public are informed of the proposal to develop a waste soils recovery facility at the Roadstone quarry at Midleton. Meaningful public consultation should be undertaken		Site notices were erected at the two quarry entrances and a notice published in the Southern Star newspaper (30 th Nov 2019) in accordance with Article 5 of the Waste Management (Licensing) Regulations 2004, as amended.	
A system for recording and responding to public complaints and for communication with the local community should be put in place.		Condition 11.7 of the RD as drafted requires the licensee 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. Condition 2.2.2.7 requires the licensee 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.	
Annual monitoring of a private well identified in the EIAR is undertaken to ensure there is no change in water quality attributable to the site activities.		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. The RD requires groundwater monitoring be carried out at 6 boreholes (wells) at the facility on a quarterly basis (Schedule C.7). The wells are located gradient and downgradient of the activity which allows for an assessment of potential impacts on ground water quality from the activity. Condition 6.16.2 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.	
All noise mitigation measures detailed in the EIAR accompanying the licence application are implemented in full. This is to minimise significant impacts to public health.		Condition 4.3 requires that noise levels from the facility do not exceed standard noise emission limit values noise-sensitive locations. Condition 6.12 requires a noise survey to be carried out annually at locations identified in the application (map Appendix 3) and any additional locations decided by the Agency.	
That mitigation measures to protect public health from the significant impacts of dust, as recommended in the submission are implemented.		Condition 5.3 requires the licensee ensure dust associated with the activity does not impair or interfere with, amenities or the environment beyond the facility boundary. 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. The licence also requires monthly monitoring of ambient dust deposition (Schedule C.6). Condition 6.11 requires measures for dust control.	

2.	Name & Position Mr Connor Rooney	Organisation: Department of Culture, Heritage, and the Gaeltacht	Date received: 11 February 2020
Issues raised:		Agency response:	
The Department of Culture, Heritage and the Gaeltacht notes the site lies partly within the Carrigshane Hill pNHA (001042). A botanical survey and restoration plan were submitted with the planning application and all measures outlined in the Restoration Plan are to be followed in full.		Condition 10 of the licence requires the applicant to submit to the Agency a closure, restoration and aftercare management plan within six months of commencement of the activity.	

13. Consultations

13.1 Cross Office Consultation

I consulted with Dr. Conor Quinlan (OEA Groundwater) in relation to the proposed storm water drainage and discharge to ground, Mr Jim Moriarty (OEE) in relation to financial provisions and Mr. Larry Kavanagh (OEE) in relation to EPA charges.

13.2 Transboundary Consultations

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

14. Appropriate Assessment

Appendix 1/Table 1 lists the European Sites assessed, their associated qualifying interests and conservation objectives along with the assessment of the effects of the activities 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 activities, individually or in combination with other plans or projects are likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Sites at Great Island Channel SAC (Site Code: 001058) and Cork Harbour SPA (Site Code: 004030).

The activities are not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, that it cannot be excluded, on the basis of objective information, that the activities, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the activities was required, and for this reason determined to require the applicant to submit a Natura Impact Statement. This determination has been made based on the following:

- There is potential hydrological connectivity via groundwater to Cork Harbour SPA (Site Code: 004030) and Great Island Channel SAC (Site Code: 001058).

A Natura Impact Statement was received by the Agency on 31st July 2020

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 activities, individually or in combination with other plans or projects, will not adversely affect the integrity of any European

Site, in particular Great Island Channel SAC (Site Code: 001058) and Cork Harbour SPA (Site Code: 004030), 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:

- None of the land designated as part of European sites will be directly impacted or removed by the proposed activities. The facility is over 1km away and the activities will not involve resource requirements (e.g. excavation or abstraction) from the European sites.
- The species of conservation interest in Cork Harbour will not be disturbed or displaced by the activities. The quarry does not support habitats of ecological significance for these species and does not overlook the SPA. There will also be no disturbance of these species by noise or dust from the facility as it is at a sufficient distance that these emissions will not be significant.
- 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 prevent and control measures. Licence conditions to protect water quality include:
 - Waste acceptance procedures to prevent importation of unauthorised (including contaminated) waste (Condition 8.11). Imported material will be subject to the waste acceptance criteria in Schedule A.2.
 - No emissions to water other than stormwater (Condition 5.2). 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 to a percolation area/soakaway (Condition 3.21).
 - A visual examination of storm water discharges to be carried out daily (Condition 6.10.1). Monitoring of the storm water discharge from the fuel/oil interceptor and suitable trigger levels for the monitored parameters (Condition 6.10.2).
 - Condition 6.8 requires that the storm water drainage system (i.e., gullies, manholes, any visible drainage conduits and such other aspects as may be required by the Agency), bunds, silt traps and oil separators shall be inspected weekly, desludged as necessary and properly maintained at all times.
 - Fuels are to be stored in appropriately bunded areas (Condition 3.8) and 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 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 — Great Island Channel SAC (Site Code: 001058) and Cork Harbour SPA (Site Code: 004030).

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): 'Waste Soils Recovery Facility, Midleton, Co. Cork Environmental Impact Assessment Report' (January 2019, CP17028RP0004F01, RPS Group). Following a request from the applicant, the Agency issued a scoping opinion on the scope and level of detail to be included in the EIAR on 18th October 2018.

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 Cork 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 Cork County Council and the Agency under the relevant section of the Waste Management Act 1996 as amended. "The Council's views and opinions in relation to this development are articulated in the relevant technical reports relating to the planning application".

15.3 Alternatives

The matter of alternatives is addressed in Chapter 4 of the EIAR. Alternatives relating to site location, type of waste to be accepted, ancillary facilities, scale of the activity as well as a 'do-nothing scenario' were considered.

In terms of location, the main reason for chosen site is the fact that it comprises existing quarry voids suitable for accepting soil and stone, facilitating site restoration. It would not be possible to achieve the stated aim at an alternative site. An alternative to backfilling the quarry would be to use a greenfield site, which would result in a net land take. The planner's report (27 Sept 2019) noted that Cork County Council receives applications for such facilities on greenfield sites in remote areas and that in comparison the proposed site is in a suitable location close to a national road and strategically located to meet growing demand for soil and stone recovery from infrastructure and construction projects in Cork City and County.

The scale of the activity is determined by the volume of the quarry voids that need to be filled in order to tie in the site with the surrounding landscape. The acceptance of 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.

In terms of site facilities, the inclusion of a second weighbridge in Zone A was considered. However, this was ruled out as it would result in the duplication of onsite facilities. Under the proposed arrangement trucks depositing material in Zone A will need to travel to the main entrance in Zone B to access the weighbridge there before and after they deposit their material. Although this will result in additional traffic on the road, the distance is short (110m) and there are no residential properties along that section.

Under a 'do nothing' scenario quarrying activity would cease, and the quarry voids would remain unfilled. Site restoration would proceed in any case, as per planning conditions for the existing quarry (Reg. Ref. 06/10088, An Bord Pleanála Reference PL04.224250). In this scenario the quarry benches would be fenced off and the quarry floor returned to agricultural use. The current need for construction waste management and resource recovery services in the market would not be met. The habitat restoration works included in current planning permission (Reg. 19/4719) would not be carried out. These were put in place to mitigate habitat loss incurred when a portion of the Carrigshane pNHA was quarried out in in the early 2000's.

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 Chapter 5 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.

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. The haul route directly passes 30 residences and there are a number of residences around the quarry itself, the nearest of which is approximately 100 m to the northwest. Emissions to water have the potential to impact groundwater quality. Nine private wells have been identified within 500m of the site boundary.

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

There is also the potential for accidental emissions to the environment, due to, e.g., fire, explosion, or spillages. 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 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, Storm water discharges, Noise and Prevention of Accidents.

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 12 of the EIAR. The EIAR describes the habitats and species at and in the vicinity of the facility.

The site is an existing limestone rock quarry nearing the end of its quarrying life (expected to be exhausted by 2022/2023). The quarry has an area of 15.7 Ha of this, approximately 9 Ha will be backfilled. A portion of Carrigshane Hill pNHA (001042) that was within the facility boundary was quarried out in the early 2000's. Two further sections remain intact, outside the facility boundary.

Ecological surveys were carried out by the applicant on 23rd May and 22nd August 2018 to map habitats and key flora and fauna. Bat surveys were also carried out.

Habitats present included exposed calcareous rock, scrub, recolonising bare ground buildings and artificial surfaces. Much of the site is bounded by hedgerows. Protected species recorded at the site included foraging bats and badger. No evidence of roosting bats or badger dens was recorded at the site or its' environs. No bird species of High or Moderate Conservation Concern (Red or Amber listed respectively) were identified during site surveys. Raven (a Green listed species) was recorded nesting in the quarry face in two locations.

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

The potential direct and indirect effects on biodiversity are relate to effects on aquatic flora and fauna and their habitats due to effects on water quality, disturbance to fauna due to noise emissions, effects due to air emissions (dust, traffic exhaust). The effects identified and described above in relation to air, water and noise been assessed in sections: Emissions to Air (Section 6.1), Storm water discharges (Section 6.3), Noise (Section 6.4).

There is a potential localised impact due to boundary treatment involving the removal of vegetation at the entrance to Zone A. This is to be done to provide 90m sightlines north and south of the access junction. This will result in the permanent loss of approximately 340m² of vegetation and sod and stone wall to the northwest of Zone A, which is in the ownership of the applicant. The hedgerow to the southeast of the entrance will be lowered in height for the duration of the operation. The current planning permission (Reg. 19/3719) includes a condition for mitigation of this habitat loss in the site restoration plan.

There is the potential for the proposed works to cause the spread of invasive plant species. Potential impacts on fauna are temporary indirect impacts on badger and the loss of nesting habitat for Raven, a species that is of low conservation concern. No significant effects on foraging and commuting 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 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. 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: Emissions to Air, Storm water discharges, Noise, Waste generation, Prevention of Accidents.

Mitigation and monitoring measures specific to biodiversity are as follows:

- Planning permission for the proposed development (Reg. 19/4719) includes a detailed site restoration plan incorporating natural habitat creation measures to mitigate the impacts of habitat loss due to the proposed removal of vegetation and sod and stone walls at the entrance point to Zone A as well as habitat loss incurred when a portion of the Carrigshane pNHA was quarried out in the early 2000's.

- An invasive species management plan is developed and implemented to address invasive species at the site (Condition 2.2.2.10)
- The applicant has stated that where feasible, no scrub clearance or other removal of vegetation to occur during the bird breeding season from 1st March to 31st August.
- Further bat surveys proposed to be undertaken prior to the infill within each zone to identify any changes in bat activity since the completed surveys.

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 10 of the EIAR. The site consists of an existing limestone quarry in the townlands of Carrigshane, Castleredmond and Coppingerstown, 2.1 km southwest of Midleton Co. Cork. The geology of the area is carboniferous limestone. Soils are well drained derived from Devonian Sandstone till. Land use is predominantly agriculture. At the site, there are many areas of outcropping and exposed bedrock. Soil where is present it is classified as podzolic; deep well drained till derived primarily from calcareous parent material.

The quarry site is approximately 15.7Ha within which approximately 9Ha of extraction area will be backfilled. The operation will backfill to an average depth of 20m above the quarry floor to a maximum depth of approximately 34m. The voids will be filled to tie in with the surrounding landscape. This will result in a 20m thickness of overburden (subsoil) where there currently isn't one. Approximately 1.4 Mm³ (2.52M tonnes) of inert soil and stone (LoW category of 17 05 04) will be imported. The infill material will be unwanted material from other construction sites and when fully backfilled the site will be covered in topsoil and returned to agricultural use.

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 and shallow soil/subsoils (<3m). Increasing the depth of subsoil to 20 m will provide a potential 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 in land use post restoration returning the land to agriculture, which may be seen as a positive effect.

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. These are addressed in Section 9 (Prevention of Accidents).

No significant cumulative effects on the land and soil environment have been identified. The site is in a rural area; the other land use activities are Coppingerstown

quarry, farming and single dwelling houses. Therefore, there are no likely significant direct, indirect or cumulative effects identified .

Mitigation and Monitoring

Mitigation measures and monitoring in relation to land and soil are detailed in the following sections of the licence assessment part of this report: Emissions to Air, Storm water discharges, Waste generation, Prevention of Accidents.

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 11 of the EIAR. The quarry is located on a hill in an area of karstified limestone. Rainwater readily percolates to groundwater through the soils/subsoil and fissures in the bedrock. As such there are no surface waters or drains on or near the site. The nearest watercourses are the Dungourney River 1.5 km to the north and the Ballynacorra Stream in a valley about 500m to the south. Both waterbodies flow west towards Ballynacorra River estuary. The groundwater table is below the quarry floor (the quarry floor is dry). The site is in the Midleton GWB – a Regionally Important karstified aquifer (Rkd).

The main receptors in the area are the groundwater aquifer and local wells. Nine private wells were identified within 500m of the site boundary. The site is not within a drinking water protection area. There is one GSI registered well within 1km, but it is not downgradient of groundwater flow from the site.

Groundwater from the local aquifer would be expected to discharge into the Ballynacorra Estuary which is part of Cork Harbour SPA and Great Island Channel SAC. The flow direction was assessed by observations of groundwater level at 6 no. boreholes drilled on site. The flow direction was confirmed to be to the west/southwest i.e. towards Ballynacorra River/estuary. The observed groundwater levels were 1 to 2m below the existing quarry floor.

In karstified aquifers, groundwater can move rapidly over several kilometres. Given the potential hydrological connection between the quarry and the European sites Cork Harbour SPA (Site Code: 004030) and Great Island Channel SAC (Site Code: 001058) 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 requested.

Groundwater quality was assessed at wells on site and at private wells in the area (Attachment-4-8-1-Operational Report, Attachment-7-6-3-Emissions to Ground Controls). Six boreholes and the production well on site were sampled in March 2018 and May 2019 (see map, Appendix 3). The boreholes were located both up-gradient and downgradient of the proposed activity. Samples were also taken from 8 no. private wells around the site in June 2019. The private wells were compliant with chemical parameters in the Drinking water Regulations (SI 122 of 2014) but non compliant with respect to microbial contamination. All but one well had Total

Coliforms present. E. Coli and/or Enterococci were detected in four wells and in some cases contamination was significant. Nitrate concentrations were also elevated. There was less microbial contamination at the boreholes in the quarry. Total Coliforms were detected at three wells, E. Coli was not detected, and Enterococci was detected at one well. Nitrate and chloride and in some cases ortho-phosphate were elevated. There were no detections of hydrocarbons. The report concludes that groundwater quality was typical of a karstified aquifer where the main land use is agriculture. There was no indication that the quarry activities were having an impact on groundwater. The difference in microbial contamination between private wells and those on the quarry site suggest contamination of private wells by septic tanks or other local sources.

The potential direct and indirect effects on ground water from the proposed activity include contamination of stormwater runoff from the carparking/refuelling area. Wastewater from welfare facilities will be collected by a licensed operator. 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: 6.3 Storm water discharges to ground/groundwater.

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 connected surface 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 the conditions in the RD. This is addressed in 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/developments. 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: 6.3 Storm water discharges to ground/groundwater.

Conclusions

I have examined all the information on water (including Storm Water Emissions to Ground) 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 Determination/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 8 of the EIAR. The quarry is in a predominantly agricultural area 2.1 km southwest of the town of Midleton, Co. Cork. There several residential properties along the L-3626 road used to access the site and farmsteads in the area. The nearest noise sensitive receptor is approximately 100m to the northwest, with two more about 230m to the north.

A baseline noise survey at four monitoring points around the site. Average daytime noise levels did not exceed 55 dB LAeq (30 minute). The main noise sources were from quarrying activities in the Midleton and Coppingerstown quarries, traffic on the L-3626 (both local traffic and quarry trucks), traffic on the N25, and agricultural activities.

The main potential noise and vibration sources are site traffic, plant and machinery on site and quarry blasting. Noise, vibration and air overpressure 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 assessed in the noise section of this report.

There is also the potential for accidental noise emissions due to e.g. explosion. This is addressed in Prevention of Accidents section of this report.

Cumulative effects of the activity in relation to noise 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. The number of permitted truck movements between the Midleton and Coppingerstown quarries will not increase above that currently permitted. The blasting operation at the quarry is a significant source of noise and vibration. However, blasting is likely to be of short duration and it is considered not likely to be a significant cumulative effect from noise, vibration and air overpressure emissions and other noise generated by other activities/developments in the area. There are no likely significant direct, indirect or cumulative effects identified.

The likelihood of accidental noise, vibration and air overpressure (noise) emissions occurring is considered low.

Mitigation and Monitoring

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

Conclusions

I have examined all the information on noise 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.

15.4.6 Air (including Dust and Odour)

Identification, Description and Assessment of Effects

Air is addressed in Chapter 9 of the EIAR. The potential direct and indirect effects on air, including dust are associated with vehicle movements to and from the facility during dry weather, machinery movements on site, stockpiling, unloading, levelling and grading activities and ongoing quarrying activities. Should emissions exceed Air Quality Standards this could have implications for air quality, population and human health and biodiversity within and beyond the installation 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: 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: 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 9 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. GHG's 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 GHG emissions from trucks travelling to and from the site, and plant and machinery at the site. Truck movements associated with the activity have the potential to generate an estimated 6,156 kgCO_{2e} per day or 1,816 tonnes CO_{2e} annually.

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.

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.

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: Energy Efficiency and Resource Use.

The applicant has proposed several measures to minimise CO₂ emissions including:

- implementation of a traffic management plan and doubling up on truck movements
- reducing engine idle times by providing an efficient loading/unloading system,
- turning off engines when not in use for more than five minutes,
- implementation of an Energy Management System including the use of light sensors on buildings, low energy lighting, the use of thermostats to control space heating and adequate insulation in building structures and solar/thermal power to heat water for the on-site welfare facilities

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 Determination/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)

Chapter 6 of the EIAR addresses Material Assets.

Identification, Description and Assessment of Effects

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. There will be no significant impacts on extraction at the quarries. 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 and are not controlled by the Agency. The Planning Authority has considered the effect to be acceptable.

No significant cumulative effects on material assets have been identified. Therefore, there are no likely significant direct, indirect or cumulative effects identified.

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: Waste Generation, Energy Efficiency and Resource Use, Prevention of Accidents etc.

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

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.

The planning authority has also identified, described and assessed the likely significant direct and indirect effects of the development on material assets.

Their assessment concluded that "In the main, save for road and 3rd party properties (dealt with under separate section) no significant on material assets have been identified."

15.4.8.2 Cultural Heritage

Chapter 14 of the EIAR addresses Cultural Heritage.

Identification, Description and Assessment of Effects

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 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. The EIAR predicts that the activity "will not result in any predicted impacts on the known archaeological or architectural heritage". The planning authority assessment concluded that "this conclusion would appear reasonable". 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

Chapter 13 of the EIAR addresses Landscape and Visual Impact.

Identification, Description and Assessment of Effects

The quarry is located on a hill within the Cork Metropolitan greenbelt. The landscape is generally undulating with limestone outcropping. The potential direct and indirect effects on the landscape are associated with removal and lowering of vegetation at the entrance to Zone A as well as topographical and final restoration works. These impacts are relatively minor and short lived. Most of the works will take place within the quarry pit which, screened from the public road by earthen berms, hedgerows and other landscaping.

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 are not controlled by the Agency. 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 planning authority has identified, described and assessed the likely significant direct and indirect effects of the development on the landscape. Their assessment concluded that "the restoration works will have a net beneficial impact to the wider area given the restoration of agricultural lands. Some mitigation measures have been proposed (including boundary vegetative planting) to assist in this regard."

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 15 of the EIAR. The most significant interactions between the factors as a result of the activity are summarised below:

Population and human health/Water/Land and soil – in the event of contaminated infill or fuel/oil leaks/spills impacting soil, subsoil and groundwater. Potential positive impact on groundwater by reducing aquifer vulnerability due to thicker subsoil layer.

Population and human health/Air/Biodiversity – impact of truck movements on air quality (dust and noise), disturbance to fauna and nuisance for the local population.

Population and human health/Land and soil/Biodiversity/Landscape – site restoration will involve provision of additional habitat including hedgerows and grassland which will provide habitat suitable for foraging, and shelter by fauna.

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 that the interactions identified are likely to cause or exacerbate any potentially significant environmental effects of the activity.

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 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 quarry is not in an area prone to flooding and the risk of fire and explosion is low given the inert nature of the material to be imported and storage of fuels off site. The main risk is from fuel/pollutant spillages and importation of contained material. This is dealt with in Chapters 10 and 11 of the EIAR and Section 9 of this report.

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 submissions from the planning authority and third parties in the course of the application, it is considered that the potential significant direct and indirect effects of the activities on the environment are as follows:

- Stormwater emissions to ground/groundwater
- Emissions to air (dust)
- Noise
- Accidental leakages or spillages and importation of contaminated material
- Site restoration to agricultural use and provision of hedgerow and grassland habitats

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

- Emissions to ground/groundwater will be mitigated through operation of abatement equipment, monitoring, maintenance and control measures; compliance with Environmental Objectives (Groundwater) Regulations 2010 as amended, and implementation of waste acceptance procedures.
- 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; implementation of monitoring, maintenance and control measures; and
- Accidental leakages or spills will be mitigated through inspection and maintenance of bunds, tanks and pipework, 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 activities 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.

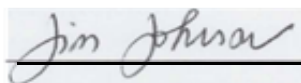
17. Recommendation

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 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

A handwritten signature in cursive script, appearing to read "Jim Johnson", is written over a horizontal line. The signature is in black ink on a light-colored background.

Jim Johnson

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.

18. Appendices

Appendix 1 Appropriate Assessment

Table 1 Assessment of the effects of the activities on European sites and proposed mitigation measures.

Site Code	Site Name	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
004030	Cork Harbour SPA	<p>Birds</p> <p>A056 Shoveler (<i>Anas clypeata</i>) A149 Dunlin (<i>Calidris alpina</i>) A140 Golden Plover (<i>Pluvialis apricaria</i>) A050 Wigeon (<i>Anas penelope</i>) A028 Grey Heron (<i>Ardea cinerea</i>) A069 Red-breasted Merganser (<i>Mergus serrator</i>) A142 Lapwing (<i>Vanellus vanellus</i>) A130 Oystercatcher (<i>Haematopus ostralegus</i>) A141 Grey Plover (<i>Pluvialis squatarola</i>) A052 Teal (<i>Anas crecca</i>) A054 Pintail (<i>Anas acuta</i>) A157 Bar-tailed Godwit (<i>Limosa lapponica</i>) A162 Redshank (<i>Tringa totanus</i>) A183 Lesser Black-backed Gull (<i>Larus fuscus</i>) A179 Black-headed Gull (<i>Chroicocephalus ridibundus</i>) A004 Little Grebe (<i>Tachybaptus ruficollis</i>) A160 Curlew (<i>Numenius arquata</i>) A182 Common Gull (<i>Larus canus</i>) A048 Shelduck (<i>Tadorna tadorna</i>) A017 Cormorant (<i>Phalacrocorax carbo</i>) A193 Common Tern (<i>Sterna hirundo</i>) A005 Great Crested Grebe (<i>Podiceps cristatus</i>) A156 Black-tailed Godwit (<i>Limosa limosa</i>)</p> <p>Habitats</p> <p>Wetlands</p>	NPWS (2014) Conservation Objectives: Cork Harbour SPA 004030. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	<p>The proposed activity is approximately 1.13 km from the European site. There is a potential groundwater connection from the to the SPA via the regional karstified aquifer. Potential impacts on water quality could arise at the facility from fuel/pollutant leaks/spills or use of contaminated material for infill. A hydrogeological risk assessment determined that the measures proposed are sufficient to prevent and mitigate any adverse impacts.</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 8.11); • local groundwater water monitoring including up gradient and down gradient of the proposed soakaway (Condition 6.16); • a documented waste recording procedure for all material entering the site (Condition 11.12) • fuels to be stored in appropriately banded areas (Condition 3.8); • 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 to a percolation area (Condition 3.21); • a trigger level of 3 mg/l for total petroleum hydrocarbons (TPH) to apply to the discharge from the fuel/oil interceptor (Schedule B.6). • 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 6.8) • visual examination of storm water discharges to be carried out daily (Condition 6.10.1). Storm water to be monitored prior to discharge to the soakaway, with appropriate trigger levels

Site Code	Site Name	Qualifying Interests (* denotes priority habitat)	Conservation Objectives	Assessment
				established (Condition 6.10.2).
001058	Great Island Channel SAC	Habitats 1140 Mudflats and sandflats not covered by seawater at low tide 1310 Salicornia and other annuals colonising mud and sand	NPWS (2014) Conservation Objectives: Great Island Channel SAC 001058. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	<p>The proposed activity is approximately 1.11 km from the European site. There is a potential groundwater connection from the to the SPA via the regional karstified aquifer. Potential impacts on water quality could arise at the facility from fuel/pollutant leaks/spills or use of contaminated material for infill. A hydrogeological risk assessment determined that the measures proposed are sufficient to prevent and mitigate any adverse impacts.</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 8.11); • local groundwater water monitoring including up gradient and down gradient of the proposed soakaway (Condition 6.16); • a documented waste recording procedure for all material entering the site (Condition 11.12) • fuels to be stored in appropriately bunded areas (Condition 3.8); • 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 to a percolation area (Condition 3.21); • a trigger level of 3 mg/l for total petroleum hydrocarbons (TPH) to apply to the discharge from the fuel/oil interceptor (Schedule B.6). • 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 6.8) • visual examination of storm water discharges to be carried out daily (Condition 6.10.1). Storm water to be monitored prior to discharge to the soakaway, with appropriate trigger levels established (Condition 6.10.2).

Appendix 2 Relevant Legislation

The following European 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 (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 as amended by Directive 2014/80/EU
Air Quality Directives (2008/50/EC and 2004/107/EC)
Energy Efficiency Directive (2018/2002/EU)
Environmental Liability Directive (2004/35/CE)

Appendix 3 Proposed environmental monitoring locations

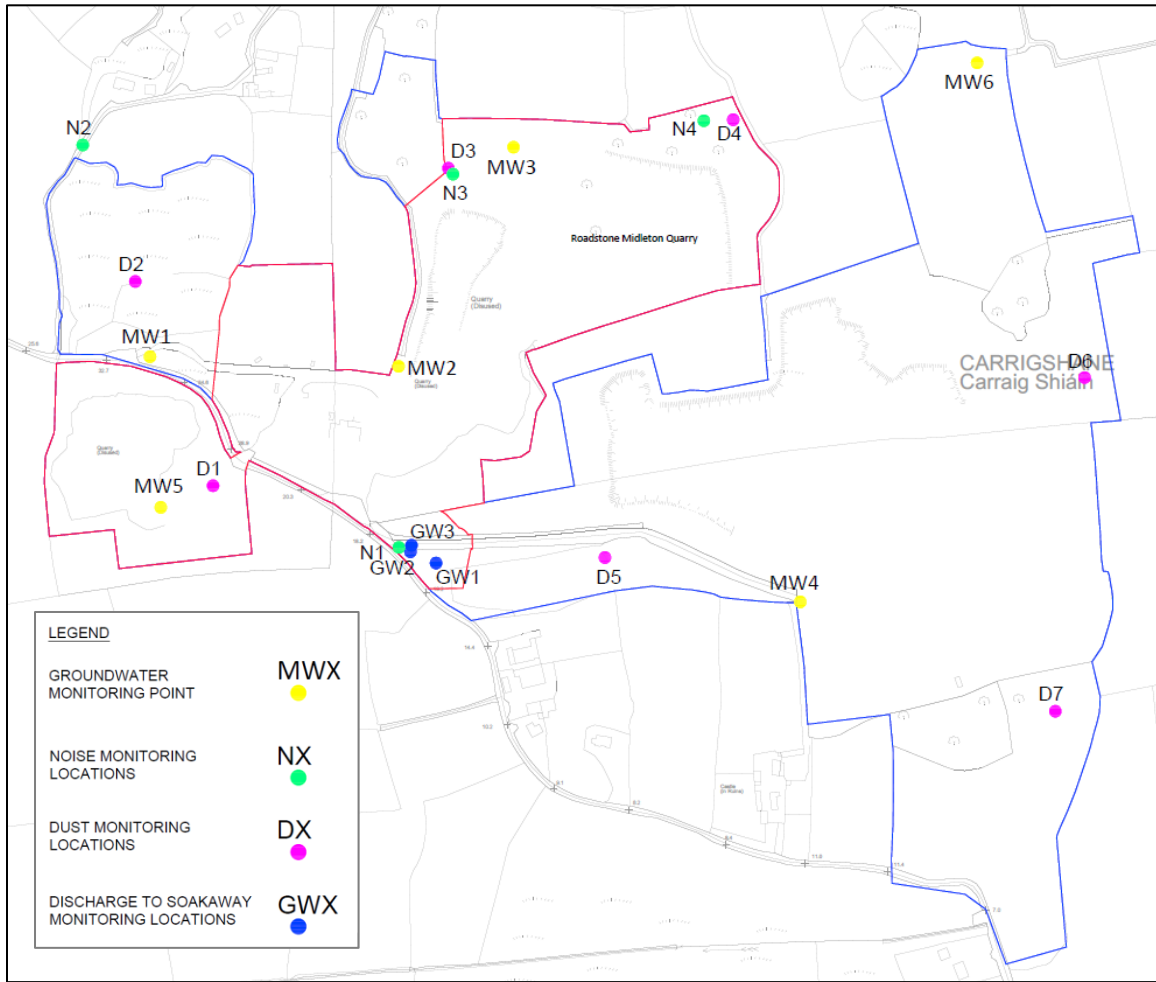


Figure 3 Proposed environmental monitoring locations [From: Application Drawing CP17028WL0017 Rev P02 (July 2020)]