



Waste Soils Recovery Facility, Midleton, Co. Cork

Attachment-1-2-Non-Technical Summary

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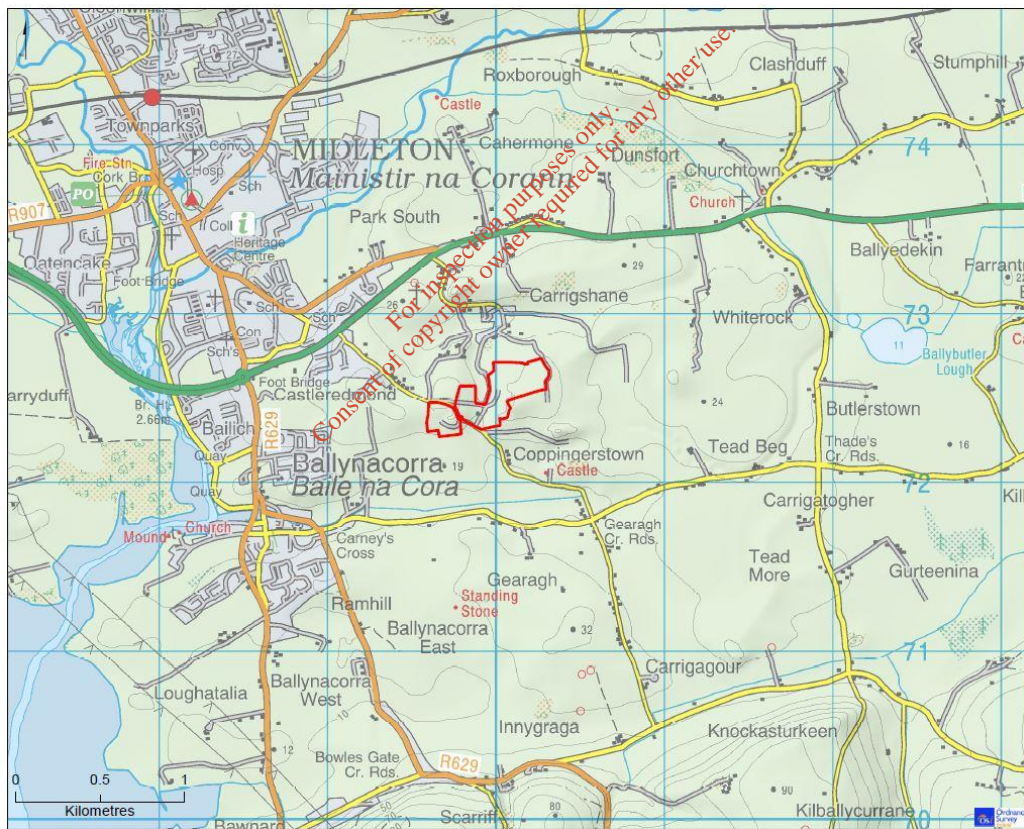
1 INTRODUCTION

RPS has prepared this non-technical summary for the waste licence application prepared for a waste soils recovery facility in Midleton, Co. Cork. The application by Roadstone Limited is to import waste soil and stones material in order to fill quarry voids. It is proposed to restore the land to agricultural use following importation of approximately 1.4M m³ of inert soil and stones material. An EIAR also forms part of this application to the Environmental Protection Agency (EPA) for a Waste Licence.

1.1 SITE LOCATION AND CONTEXT

The subject site is in the townlands of Castleredmond, Carrigshane and Coppingerstown to the south west of Midleton, Co. Cork. It is located approximately 800m south of the N25 and is accessed from the L-3626 also known as Rocky Road, which is a local access road which travels southeast from the N25 serving areas of ribbon residential dwellings and the Midleton Downs residential estate as well as agricultural lands on either side of the road.

Figure 1.1: Site Location



The site comprises an existing operational quarry (permitted at the site under Cork County Council Reg. Ref. 06/10088 and An Bord Pleanála Reference PL04.224250) of approximately 15.7Ha which is nearing exhaustion of material for extraction. Planning for the waste soils recovery facility was granted by Cork County Council in September 2019.

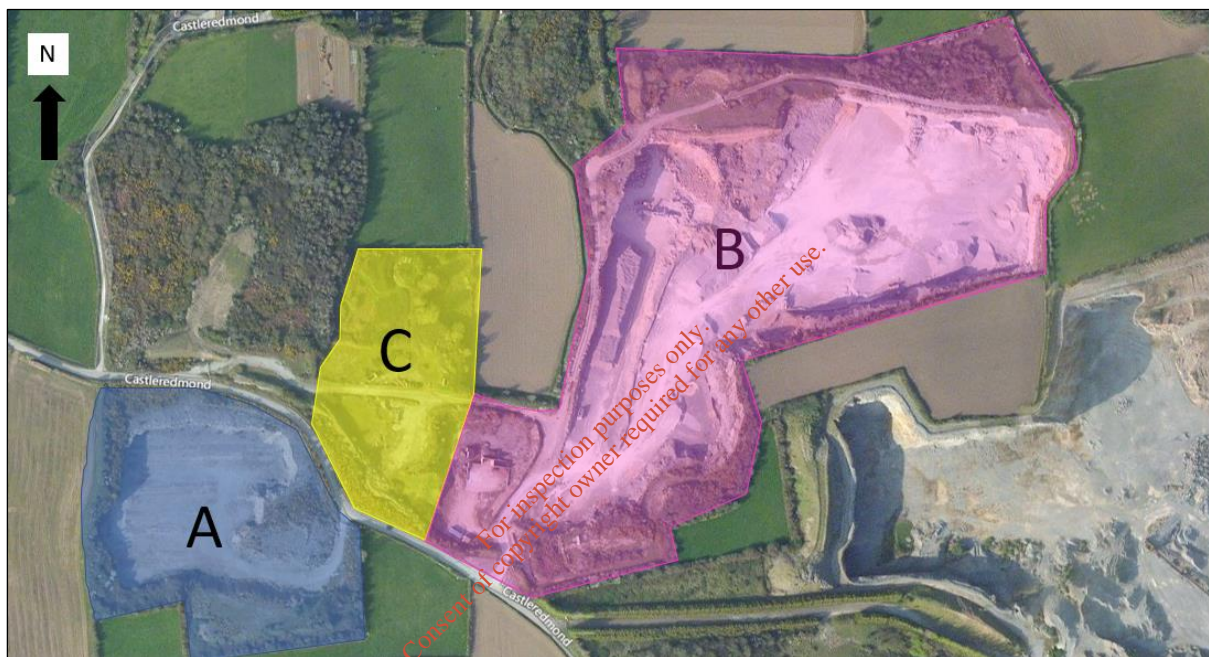
Quarrying activity has been underway at the site since before 1963. Much of the quarry has now been worked out with only a few years of extraction material remaining. For ease of reference in the report,

the site has been subdivided into three separate and identifiable zones, Zones A, B and C which are at various stages of quarrying completion. These are identified on **Figure 1.2** below.

Zone A, which is located to the southwest of the L-3626 comprises approximately 3.2ha of land where all extraction has been completed.

Zones B and C are located to the northeast of the L-3626. Zone B is an active quarry where limestone extraction is still underway but is largely complete. Extraction is yet to be completed at Zone C. Part of Zone C is currently utilised for general circulation, storage and ancillary quarrying activities. The ongoing quarrying activities include blasting, processing, crushing and screening.

Figure 1.2: Zones A, B & C



Another quarry in the ownership of the applicant is located to the south east of the subject site as can also be partially seen on **Figure 1.2** known as Coppingerstown Quarry. This quarry is also currently active. It does not form part of the proposed soils recovery facility site or application.

1.2 SITE MANAGEMENT

Roadstone has an established Environmental Management System (EMS). Roadstone regards environmental protection management as an integral and essential part of good business practice.

Roadstone are committed to providing the necessary information, training and equipment to enable their employees to carry out their duties safely and in an environmentally responsible manner. All staff and persons working for and/or on behalf of Roadstone are made aware of the Environment Policy.

A facility manager will be appointed by Roadstone to ensure that the Environmental Management System, Environmental Objectives & Targets and the Environmental Monitoring Plan are fully implemented.

The EMS shall include 'Environmental Monitoring Programme' for the monitoring of water, dust and noise, and will be revised subject to compliance with any conditions attached to a Waste Management Licence for the proposed soil recovery facility.

The potential generation of wastes onsite will be low and all waste will be managed in accordance with the appropriate procedures in the EMS and in line with the waste hierarchy. The waste streams generated by the licensable and associated activities will be from the office and welfare facilities. This waste will be segregated and collected by a suitably licensed contractor as required for reuse, recycling, recovery or disposal as appropriate.

While it is only intended to accept inert soil and stone material which has been considered suitable in accordance with waste acceptance procedures and onsite verification checks. It may be the case that some non-inert waste (metal or wood) may inadvertently be accepted in loads of otherwise inert soil and stone material. This material will also be separated and placed in a skip pending removal off-site by a suitably licensed contractor. This material shall be segregated where practical to facilitate treatment options higher in the waste hierarchy for individual material streams.

The EMS shall include Emergency Response Procedures to prevent the unauthorised or unexpected emissions.

1.3 ADDITIONAL DETAILS REQUIRED

1.3.1 Applicant and Proposed Operator

Roadstone Limited,
Fortunestown,
Tallaght,
Dublin 24,
Dublin
D24 PKK2

1.3.2 Planning Authority in whose functional area the activity will be carried on

Cork County Council

1.3.3 Details of Sanitary Authority

Not applicable as there is no proposed discharge to sewer.

1.3.4 Details of Site

The location and townlands are outlined in Section 1.1 above. The postal address is:

Midleton Quarry,
Castleredmond,
Midleton,
Co. Cork

Irish National Grid Coordinates:

Easting: 190007. **Northing:** 072481

1.3.5 Class of Activities and Nature of Waste

The recovery activities proposed as per the Fourth Schedule of the Waste Management Act are:

- **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)”

It is proposed to import 1,400,000m³ of soil and stone material (List of Waste Code 17 05 04) and to backfill a quarry void.

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2 NEED FOR THE DEVELOPMENT AND DEVELOPMENT DESCRIPTION

2.1 NEED FOR THE DEVELOPMENT

The need for, or purpose of, this development is two-fold. The primary rationale for the development is to provide a suitable facility to accept inert soil and stones. There is a recognised shortage of such waste acceptance facilities. The secondary reason for the development is to restore the site on completion of the quarrying activities to a productive agricultural use which will be in keeping with its existing surrounding agricultural landscape.

2.2 SITE DESCRIPTION

2.2.1 Access

There are 2 no. vehicular access points from the L-3626 into Midleton Quarry landholding which are currently used; 1 no. to Zone A, and 1 no. to Zones B and C. The access to Zones B and C is currently in operation for extraction purposes. It is proposed to utilise both these access points for the infilling and landscaping processes.

There is another access to Zones B and C from the L-3626 on the west of Zone C, through adjacent land in the ownership of the Applicant which is not subject to this subject development.

The L-3626 currently accommodates two-way traffic allowing entry and exit to these points. The speed limit on this road is 50km/h from approximately the junction with the N25 as far as approximately the entrance to Zone A, and from this location east the speed limit is 80km/h.

2.2.2 Boundaries and Land use / cover

Site boundaries consist of chainlink and stockproof fencing, sod and stone ditches and hedgerows comprising a mix of gorse, hawthorn, ivy and other species. Some earthen berms / banks have been positioned inside the roadside boundaries together with planting such as hawthorn and tall trees which have provided additional screening to the site for the quarrying activities.

The majority of the site has no vegetation due to the quarrying land use. There are pockets of scrub like vegetation and poor grassland at the edges of Zones A and B, while the majority of Zone C is entirely vegetated with scrub such as gorse, hawthorn and bracken as quarrying has not yet commenced in this area.

2.2.3 Depths to Quarry Floor

Zone A where quarrying is completed comprises a void approximately 15m deep. The quarry floor lies at approximately 22mOD while the original ground levels around this zone vary from 37 to 30mOD.

Zone B quarry where extraction is ongoing has a quarry floor at approx. 9mOD which is above the water table as permitted under Reg. Ref. 06/10088 and An Bord Pleanála Reference PL04.224250. Cliff faces and benches in Zone B range from approx. 15mOD to 43mOD. When Zone C is extracted the quarry floor will be approx. 9mOD.

2.2.4 Services and on-site Structures

Overhead electricity cables traverse the site in a northwest to southeast direction across Zones A and C. A gas main is located approximately 415m to the east of the subject site.

There are no buildings in Zones A or C. In Zone B there is a concrete loading bay which will be removed prior to completion of current extraction works in Zone B, as well as a number of smaller concrete structures such as a pump house which shall be retained.

2.2.5 Proximity to Residences

There are residential dwellings to the northwest of the site along the L-3626, the closest of which is approximately 100m to the northwest of Zone A with improved agricultural grassland in between. There is a cluster of individual detached dwellings and farmyards to the north of Zones B and C, the closest of which is approximately 120m north of the site. There are also a number of detached dwellings and farmyards located to the south east of the site along the L-3626. The closest residence to the south east is approximately 230m from the subject site.

2.2.6 Watercourses, Bedrock and Aquifers

There are no watercourses traversing the site. The closest stream is Ballynacorra stream over 500m to the south. Rainfall / surface water soaks naturally to the ground and there are no discharge points within the site. The site is not located within a flood zone and no flood events have been recorded on the OPW flood website for the site.

The bedrock on the site comprises limestone with no known karst features within the site itself. However, there is a cave located to the north of Zone B.

The site lies within a regionally important karstified aquifer which does not form part of a drinking water protection area. The site has an extreme groundwater vulnerability rating as topsoil and subsoils have been removed from most of the site.

2.2.7 Protected Ecological Sites

Carrigshane Hill proposed Natural Heritage Area (pNHA) comprises sections of vegetated land north and west of Zones B and C. This pNHA also comprises an area within the north eastern section of Zone B which was permitted for extraction and is therefore substantially removed as extraction is almost complete in this area.

The closest Natura 2000 sites are within Cork Harbour located approximately 1.1km to the west; Cork Harbour SPA and Great Island Channel SAC.

2.2.8 Cultural Heritage

There is an entry to the Record of Monuments and Places (RMP) attached to the subject site, which states that a 'ringfort-cashel' once stood at the subject site (RMP code: CO076-066). The record entry goes on to state that in 1991 there was no visible trace of the structure. There are a further 4 no. entries on the RMP for sites within approximately 500m of the subject site, the closest of which is described as a 'tower house' (RMP code: CO076-051). This site is located approximately 400m south east of the subject site. The closest protected structure as listed on the Cork County Council record of protected structures is Lake View house which is situated approximately 900m to the west of the site (RPS ID – 00519).

2.2.9 Landscape and Visual Context

Scenic Route No. S51 (as set out in the Cork County Development Plan 2014-2020) which is the R630 Road from Ballynacorra via East Ferry to Whitegate and Roche's Point is located approximately 1km to the west. The majority of the site is located within a high value landscape which is characterised as *City Harbour and Estuary*; the exception is the north eastern most portion of Area B which is characterised as *Broad Fertile Lowland Valleys*.

2.3 DEVELOPMENT DESCRIPTION

2.3.1 Nature of Imported Material

Material proposed to be imported to the site comprises inert soil and stones which fall under the List of Waste (LoW) category of 17 05 04. This material largely originates from excavations accommodating large scale infrastructural or other construction works. Material may be accepted from both greenfield and brownfield sites, subject to acceptance procedures referenced later in Section 2.3.4.

The estimated total volume of material to be imported to the site is approximately 1.4M m³ (2.52M tonnes) (Zone A = 100,000m³ approx, Zone B = 1,140,000m³ approx. and Zone C = 147,000m³ approx.).

The estimated annual intake is approx. 300,000 tonnes (166,666m³ approx.) per annum. This annual importation rate is less than the combined currently permitted extraction rates from both Midleton Quarry and the adjacent Coppingerstown Quarry of 500,000 tonnes per annum (approx. 208,333m³).

2.3.2 Phasing

It is proposed to commence importation of fill material in Zone A. Once sufficient material has been deposited to broadly tie in with the surrounding contours, subsoil and topsoil will be positioned to enable landscaping of the site. Extraction is currently ongoing in Zone B and once complete, extraction will then move to Zone C allowing importation and backfilling of Zone B. Finally, Zone C shall be filled.

Landscaping and restoration of the furthest areas of Zone B will be possible while extraction or importation works are underway in Zone C. The remainder of required landscaping (Zone B and all of Zone C) will commence once all importation activities have been completed.

2.3.3 Access

It is proposed that all HGVs carrying imported material will approach the site from the N25 and L-3626. All HGVs will enter the site at the main access point to Zone B to access a weighbridge. In the first phase of infilling (in Zone A), trucks will then exit via the same access, turn west and enter Zone A to deposit the imported material. The trucks will be required to return to the weighbridge in the northern lands before exiting the site completely and travelling west towards the N25 again. The weighbridge will be more conveniently located for the infilling of Zones B and C thereby reducing the number of localised turning movements. A new wheel wash will be installed in each of Zones A and B.

The access point to Zones B and C are sufficient to cater for ongoing extraction together with importation. It is proposed however to significantly cut back the vegetation and lower the boundary treatments on both sides of the existing access to Zone A to achieve 90m sightlines.

Within the site, existing haul roads across the rock surface will be used as appropriate for the infilling activities. It is also proposed to connect Midleton Quarry with the adjacent Coppingerstown Quarry in order to optimise infrastructural requirements such as access to a wheel wash, weighbridge and welfare facilities at both quarries. The proposed connection will run in the same general location as an existing track with some of the footprint of the current track being set out for site services including weighbridge, wheel wash and office.

2.3.4 Waste Acceptance Procedures

The EPA *Draft Guidance Note on Soil Recovery Waste Acceptance Criteria* published for consultation in March 2018 (EPA, 2018) sets out a high-level approach towards acceptance of soils material at such licensed facilities and testing requirements recommended to be carried out. It also outlines waste acceptance criteria for backfill material. Such requirements and criteria will be adopted at the site and amended as required.

All hauliers must hold a valid waste collection permit which shall be presented to the facility prior to transportation of material onto site. Appropriate competent persons shall carry out invasive species risk assessments and waste characterisation. Waste Acceptance Criteria (WAC) results and all site investigation and laboratory reports shall be presented to the facility for review prior to material acceptance.

Following testing as per the Waste Acceptance Criteria, if the material is deemed suitable for acceptance, then the customer will be informed in writing and notification will be given for presentation at on-site verification. Additionally, a Roadstone New Site Notification sheet must be completed by a competent person and reviewed by Roadstone and Roadstone chain of custody booklets shall be issued to site.

In addition to the EPA draft requirements, an invasive species risk assessment will be carried out by appropriately skilled persons and site visits will be carried out to donor sites if necessary.

All loads in and out of the facility shall be weighed and issued with a docket providing the type of waste and customer details. A Waste Intake Log Sheet shall be filled out by the weighbridge clerk and signed by the driver.

Imported waste shall not be processed in any capacity on site. If material arrives to site and is deemed to be unsuitable for depositing in the quarry void it will be refused, or if necessary to retain that material at a quarantine area until such a time that it is ready to be transported elsewhere for disposal as appropriate.

The imported material shall be deposited in such a manner as to achieve the proposed final profile as per the Landscape Plan. The majority of site boundaries such as hedgerows and stone walls shall be retained. Existing berms however, close to the L-3626 shall be removed and that soil spread over the site.

The material will be either tipped directly into a quarry void where suitable tipping locations are identified to accommodate truck access, or trucks will tip the soils material close to the active filling area and plant such as bulldozers will position the soils material in place.

2.3.5 Traffic

As set out earlier, Midleton and Coppingerstown Quarries are permitted to extract stone and export this from the site. Under these permissions, a total of 172 daily truck (HGVs) movements (86 trucks in each direction) travel the L-3626 from the 2 no. quarries west as far as the N25. It is proposed to maintain this number of HGVs as the status quo and balance importation and extraction activities to ensure there will be no increase in the combined current permitted 172 daily truck (HGVs) movements (86 trucks in each direction) travelling the L-3626. This will mean that extraction rates will be below their permitted levels.

There is the opportunity to avail of doubling up in HGV trips (e.g. HGVs importing material may exit the site with extracted material). However there will be no increase in traffic volumes even when overlapping extraction and infilling activities occur as it is intended to balance importation and extraction to ensure truck movements are maintained at the current permitted rate.

2.3.6 Lifetime of the Development

The applicant has applied for a permission with a duration of 18 no. years which allows for approximately 15 no. years of importation and 3 no. years of monitoring. Chapter 7 (Traffic) of the EIAR sets out two separate scenarios which portray possible lifetimes of the development. In summary however, the proposed and likely scenario utilises at least 50% of trucks for both importing and extraction the full 166,666m³ (300,000 tonnes) annual intake of soil to occur, which will result in a duration of approximately 8.4 years for the full soil recovery works. The worst-case scenario separates all backfilling and extraction truck movements, meaning the annual intake of soils will be approx. 91,450m³ (164,610 tonnes) which will result in an extended duration of approximately 15.3 years for the full soil recovery works.

Extraction of the remaining stone at Midleton Quarry is dependent on a number of factors including demand for the material. Nonetheless extraction is permitted until 2023. After that period, in theory, the importation of soils will then be able to increase to 166,666m³ (300,000 tonnes) however this is unlikely to occur due to ongoing extraction from Coppingerstown Quarry and the requirement to balance total HGV numbers to 172 movements. Additionally, there is a requirement to allow for market fluctuations as experienced in Ireland over the last decade in the construction sector in particular.

2.3.7 Drainage

Surface water across the entire site currently infiltrates to ground naturally. Due to the provision of the proposed link track and hardstanding area however, it is proposed to install a drainage system to collect surface water from the new track and hardstanding areas. This network of pipes including silt traps shall discharge surface water to a new soakaway located south of the existing entranceway to Coppingerstown Quarry. A new car parking area and a dedicated machinery refuelling area which will also serve as an overnight plant parking area, will drain to a full retention oil interceptor prior to discharge to ground via a soakaway. It is proposed to pass the discharge from the oil interceptor through a constructed wetland prior to release into the soakaway. The potential impact of the proposed drainage arrangements have been considered in Attachment-6-3-7-Emissions to Ground Controls.

The wheel wash apparatus is a closed system which shall recycle water insofar as possible. Any additional spray or water which leaves the trucks once they leave the apparatus shall be collected in the abovementioned surface water collection system.

2.3.8 Ancillary Buildings and Facilities

The ancillary buildings and facilities required for the operation of the soils recovery facility are listed below. These are temporary facilities only to be provided for the duration of the soils recovery activities and will be removed from site as part of the final restoration works. Some of these items are already in place for the quarrying activity and will be utilised for and retained for the duration of recovery activities also.

- Site storage / office facilities
- New wheelwash and weighbridge
- Weighbridge office including welfare facilities; and
- Quarantine area for any imported material suspected of being contaminated or unsuitable for acceptable at the facility. This will comprise of a concrete slab area with quarantine shed and skips.

The site is already secure at all perimeters with a combination of chainlink and stockproof fencing, established hedgerows and sod and stone walls. These will be maintained until the recovery activities are complete and the site final restoration is complete. The existing site security will remain in situ including CCTV and gates, as well as the existing site office and welfare facilities.

It is proposed to provide a weighbridge, wheelwash, car parking and a quarantine area to the southeast of Zone B, adjacent to the link track to Coppingerstown Quarry thereby enabling use of the infrastructure for operations in both quarries (both recovery and quarrying) to increase efficiency of the overall business. A wheelwash is also proposed at Zone A.

2.3.9 Energy and Raw Material Requirements

In terms of energy requirements, electricity is required only for office, weighbridge, welfare facilities and security such as CCTV and lighting only in the area of the proposed link road to Coppingerstown Quarry. The only additional requirement for energy is in the form of fuel for plant operating on the

site. No fuel storage is proposed within the application site. An existing bunded fuel store owned and operated by the applicant at the neighbouring Coppingerstown Quarry will serve the proposed materials recovery operations also. Water Supply and Wastewater

Welfare facilities and the wheelwash currently on site are served by a borehole on site pumping groundwater to a tank. An existing pipe under the L-3626 provides water to Zone A. Wastewater from welfare facilities is collected by a licensed operator as required while water from the wheelwash is recycled for use again.

2.3.10 Working Hours

Current operational hours for extraction activities at the site comply with Condition No. 7 as set out in the grant of permission for Reg. Ref. 06/10088 (ABP PL04.244250). It is proposed that working hours for the backfill operations will be the same as those set out and currently operational, i.e. Monday to Friday 07.00 to 18.00, and 07.00 to 14.00 on Saturday. No operations shall take place on Sundays or Public Holidays.

2.3.11 Residues and Emissions

Emissions are expected from the proposed development in terms of noise, air and water.

There will be no point emissions in terms of air quality (dust or CO₂) or noise. Ongoing air and noise monitoring has been undertaken in recent years as part of the permitted extraction development at Midleton Quarry. Impact assessments for air (Attachment-7-1-3-1-EIA-Air) and noise (Attachment-7-1-3-2-EIA-Noise) have been undertaken and the proposed mitigation measures are outlined in the relevant attachments.

2.4 CLOSURE AND RESTORATION

It is proposed to profile the imported soils material according to a site-specific landscape plan and return the site to agricultural use. In order to provide an economical and practical land package for modern day agricultural use, it is not proposed to restore field boundaries to those represented in historical mapping. Many of the pre-existing fields are of a small size and are unsuitable for the large machinery required to operate a modern sustainable farming enterprise.

Existing landscaped berms will be retained in situ until backfilling is complete. This will ensure ongoing protection of the visual amenities of the area.

2.5 WASTE LICENCE

The soil material proposed to be imported to the site is classed as waste and is allocated the List of Waste Code 17 05 04 which constitutes soils and stone. As it is proposed to import a total amount of waste greater than the threshold for a waste facility permit, granted by a local authority; a waste licence from the EPA is required.

3 NOISE AND VIBRATION

The most noise sensitive locations (NSLs) identified for this assessment, based on the nature, extent and location of the proposed development, are residential dwellings close to the subject site. The main noise sources in the study area comprise quarrying and extraction activities, traffic noise from Rock Road and the N25, and agricultural practices. There are no known facilities operating vibration sensitive equipment within 300m of the proposed road. Additionally, no cultural heritage features which could potentially be susceptible to vibration impacts were identified.

The works required during the operational stage include construction of the Coppingerstown link track, importation of materials and finally restoration. Site set up will comprise installing hardstanding, a quarantine shed, site offices / facilities, a weighbridge and wheel wash. The busiest and longest phase of the development will be importation of the soils material which shall comprise the use of a variety of equipment including trucks, dozers and vibration rollers to import to the site and deposit it in the relevant location depending on the phase of implementation at the time.

The restoration phase will comprise depositing soils, contouring same to shape the final form of the landscape and planting. It is considered that most of the importation activities and subsequent required machinery is quite similar in nature to the current extraction facilities and therefore no major change in noise levels is predicted. There will be vehicular movements to and from the site which have the potential to generate noise and vibration.

The assessment undertaken has regard to the fact that traffic is not proposed to increase above the existing permitted levels on Rocky Road. The assessment considers that the development will not result in cumulative noise impact greater than 1 dB and confirms that this increase is negligible and the resultant impact is typically imperceptible.

Once all extraction has been completed at the site, 50% of all HGV trips will involve an empty truck as is the case currently with just extraction underway and therefore noise levels are not expected to increase once extraction is completed.

The backfilling works themselves also have potential for noise generation. The results of the assessment indicate that construction noise levels at varying distances from the proposed works areas are within the NRA guidelines for construction noise levels. The predicted noise levels are below the maximum permissible noise level.

Quiet working methods will be employed on the scheme insofar as possible within the parameters of the works proposed. This includes use of the most suitable plant, reasonable hours of working for noisy operations, taking economy and speed of operations into account. Working hours at the site during the operational phase will generally be limited to 07:00 to 18:00 Monday to Friday and 07:00 to 14.00 on Saturdays. Work on Sundays or public holidays are not expected to be necessary, however in the event they are this will be undertaken in consultation with Cork County Council.

It is anticipated that the levels of vibration generated by the works associated with the proposed scheme and haulage of material to the site compounds and subsequent movement to construction sites/area of works would be below the criteria specified in relevant BS standards, as the level of vibration from these activities would not be significant.

Noise monitoring is to continue at the four monitoring locations (N1, N2, N3 and N4 – details included in Attachment-7-1-3-2-EIA-Noise).

Following final restoration of the site, there will be a net positive permanent residual impact on noise as a result of the proposed development as reverting the site to agricultural use will result in occasional machinery use, similar in nature to surrounding land uses.

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4 AIR QUALITY

Chapter 9 of the Environmental Impact Assessment Report (EIAR) assessed the Air Quality and Climate impacts associated the proposed soil recovery activity which comprises the importation of inert soil material to fill existing quarry voids. As this activity will occur simultaneously with the existing quarrying activity, this chapter considered the combined implications of both activities.

Dust and increased traffic volumes associated with the subject site is likely to be the main impact source. When the activities cease post restoration there will be no potential for impact on air quality or climate.

Dust is considered a risk of pollution from the proposed development and in combination with the existing quarrying operation. There is a risk that the dust may cause an impact to sensitive receptors such as residential houses in close proximity to the source of the dust generated. In order to mitigate dust emissions during the construction / operational phase, a dust minimisation plan will be prepared. This dust minimisation plan will include a number of mitigation measures (including the use of water misting system) that provided the applicant/operator adheres to good working practices and the dust mitigation measures, the dust generated are assessed to be minimal and are unlikely to cause an environmental nuisance.

Monitoring on dust deposition is to continue at the seven existing monitoring locations (D1, D2, D3, D4, D5, D6 and D7 – details included in Attachment-7-1-3-1-EIA-Air) The Applicant / Operator will be required to maintain monthly dust levels below the recommended guideline for the protection of human health and the environment. Where the dust levels are measured above these limits, the dust minimisation plan will require revision.

Post restoration, the operational sources of pollution (i.e. dust and traffic) would be eliminated and there would cease to be any potential impact to air quality for this phase.

5 SOILS, GEOLOGY

The existing environment of the proposed site of the soil's recovery activity in terms of soils, geology and land use was analysed using data collected from a desk study review, site walkover survey and a site investigation programme. The site is underlain by karstic rocks from the Little Island Limestone Formation which show evidence of weathering and faulting. Much of the overburden deposits have been removed from the site and there are many areas of outcropping bedrock. Where overburden exists, it is classified as Till derived chiefly from limestones (TLs) and can be described as orange brown clayey Till. One geological heritage site has been identified with 2km of the proposed road development.

Potential impacts during the importation/operational phase may arise from the following activities: earthwork operations, exposure of features of geological importance, potential for the import of contaminated soil and accidental spillages.

A series of measures have been proposed to mitigate the impacts associated with the above including:

- Adherence to approved filling procedures, topsoil replacement, stabilisation techniques, assessment by an onsite geotechnical engineer
- Provision of silt trap, oil interceptor, containment measures and emergency procedures
- Adherence to established operational waste acceptance procedures

Once the mitigation measures proposed have been employed, there are no significant negative residual impacts associated with the proposed development site.

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6 WATER SERVICES, HYDROLOGY, HYDROGEOLOGY AND FLOOD RISK

The proposed infill site is an existing limestone quarry that is located east of Midleton town and on a surface water catchment divided between the Dungourney River which flows to the north of the site and the West Ballynacorra Stream which flows to the south. Both watercourses drain westerly towards the Ballynacorra River estuary. There are no streams or drains (surface water connections) within the site itself or near the proposed site that drain into either the Dungourney River or the West Ballynacorra Stream. Most of the rainfall (and subsequent runoff) that lands on the site percolates down through the limestone rock and into the underlying groundwater table which exists below the floor of the quarry (the quarry floor is dry).

Based on a flood risk assessment undertaken for the proposed development, the site or the surrounding lands are not located in a mapped flood zone. There are also no known recurring flooding issues in the locality of the site or surrounding lands.

The limestone bedrock underlying the site and the region itself is classified as a regionally important aquifer as most wells drilled in this aquifer type are very productive.

Investigations undertaken at the site show that the groundwater flow direction underneath the site is westerly/south-westerly towards the Ballynacorra River estuary. Results of groundwater sampling at the proposed site show that the groundwater quality is good and typical of a regionally important limestone aquifer. There are several private residential dwellings in the area of the site that use groundwater wells as a water supply. Some of these wells are located to the west of the site and are therefore downstream of the proposed development in terms of groundwater flow.

In terms of ecological conservation sites, Great Island Channel SAC (Special Area of Conservation) is located approximately 2km to the west of the proposed infill site. Groundwater flow from the area of the proposed development is expected to flow towards the Great Island Channel.

The proposed development comprises importing inert soil and stone to infill the existing quarry void. Infilling of the site with inert soil will pose a low risk to groundwater quality (and downstream features such as local wells and ecological conservation sites) as no harmful contaminants will be present. Due to the absence of surface water flowpaths between the site and the local stream/river there is no potential to impact on local watercourses.

Potential pollution sources such as oils and fuels will be present on-site, but these sources are common to all construction sites (such as road works, construction and industrial sites). These potential contamination sources are to be carefully managed at the site during the construction and operational phases of the development and measures are proposed within the EIAR to deal with these potential minor local impacts. There will be no release of domestic wastewater as it will be contained and then moved off-site to waste facility.

As part of the waste licence, groundwater quality monitoring will be undertaken on a regular basis during and after the infilling phase to ensure water quality is not affected in any manner.

6.1 MONITORING

6.1.1 Groundwater Monitoring

There is a network of new monitoring wells at the site identified in Figure 1.3 above. It is proposed to undertake regular monitoring for groundwater levels and groundwater quality at locations MW1 – MW6.

6.1.2 Additional Monitoring

In addition, it is proposed to undertake monitoring of the discharge point from the class 1 full retention oil interceptor and the discharge of untreated stormwater to the soakaway. The location of GW1 and GW2 are shown on Drawing Ref. CP17028WL0008. Coordinates to Irish National Grid reference are outlined below:

Table 6-1: Coordinates of Proposed Stormwater Discharge monitoring points

Ref.	Easting	Northing
GW1	189978	072277
GW2	189953	072288

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7 BIODIVERSITY

Habitats present at the proposed site comprise active quarries, exposed calcareous rock, scrub, recolonising bare ground and buildings and artificial surfaces. Much of the site is bounded by hedgerows. Protected species recorded at the site include foraging bats (common pipistrelle, soprano pipistrelle, Leisler's, brown long-eared and *Myotis* species) 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 the site surveys. Raven (a Green listed species) was recorded nesting in the quarry face in two locations.

The proposed site is located c. 1.1km from Cork Harbour SPA and Great Island Channel SAC and pNHA. A Screening for Appropriate Assessment has been prepared for the proposals, considering potential significant effects on European Sites within 15km. This screening concluded that the proposed Waste Soils Recovery Facility, either alone or in-combination with other plans and/or projects, does not have the potential to significantly affect any European Site, in light of their conservation objectives.

Carrigshane Hill pNHA is in three sections, two of which are adjacent to the proposed site. The third is located within the north-east area of the proposed site; as such the majority of this section of the pNHA has already been excavated, with a small area of scrub remaining. No works are proposed to the two intact areas of Carrigshane Hill pNHA. No significant impacts on Carrigshane Hill pNHA as a result of the proposed infill and landscaping proposals are anticipated.

Potential impacts on habitats are the long-term/ permanent loss of 340m² of hedgerow. 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.

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8 LANDSCAPING AND FINAL RESTORATION

The proposed development is located directly within the Undulating Agricultural Patchwork Landscape. The proposed development will not noticeably alter the local topography until the final restoration stage as the activities associated with the soils recovery facility will be located within the quarry. This landscape due to its undulating nature has potential to quickly absorb any slight changes. This extensive landscape therefore will overall have negligible changes at short to medium distances from the proposed site as it is located within an existing quarry site that is part of the existing landscape character and the landscape impacts during the operational phase will be Minor to negligible adverse. The impact will be no change for adjacent landscape character areas namely; Midleton Town Centre and Undulating Residential Townscape; and Estuarine Harbour-based Industrial and Maritime Landscape.

An assessment has been undertaken to determine the magnitude of visual impact of the proposed development during the construction/operational phase on potential views from sensitive visual receptors including residential properties.

On completion of the post-restoration activities the predicted landscape and visual effects will be reduced and overall have a small landscape and visual beneficial impact at a local level as the restored site will be hard to discern from within the wider landscape.

In summary the broader landscape character area and visual context around the landscape southeast of Midleton and wider East Cork area has the capacity to absorb a development of this scale in landscape and visual terms.

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