
NON-TECHNICAL SUMMARY

Introduction

O' Regan's Quarry Products Limited (O'Regans Ltd), formerly Roadmac Transport Ltd, the quarry operator, is required to submit an application for planning permission for the continued operation of its sand and gravel quarry at Tulligmore. The application is required under Section 261 of the Planning & Development Act 2000, which deals with the regulation of quarries that started before October 1964.

This Environmental Impact Statement (EIS) was prepared as part of the planning application. It describes the proposal to continue quarrying and reinstatement works, and to start new and complementary construction and demolition waste recycling and green waste composting. It examines the potential impacts and significant effects on the environment associated with the proposals. Where the possibility of a significant impact is identified the measures to prevent and/or mitigate that impact are presented.

Site History

The quarrying began some time in the 1950s. The site was acquired by Ready Mixed (South West) Ltd who continued quarrying and began making concrete blocks. Ready Mixed (South West) Ltd stopped quarrying and shut down the block plant in around 2003. Dripsey Green Partnership acquired the site in 2004 and leased it to O'Regans Ltd, the current operator, who restarted quarrying in 2005.

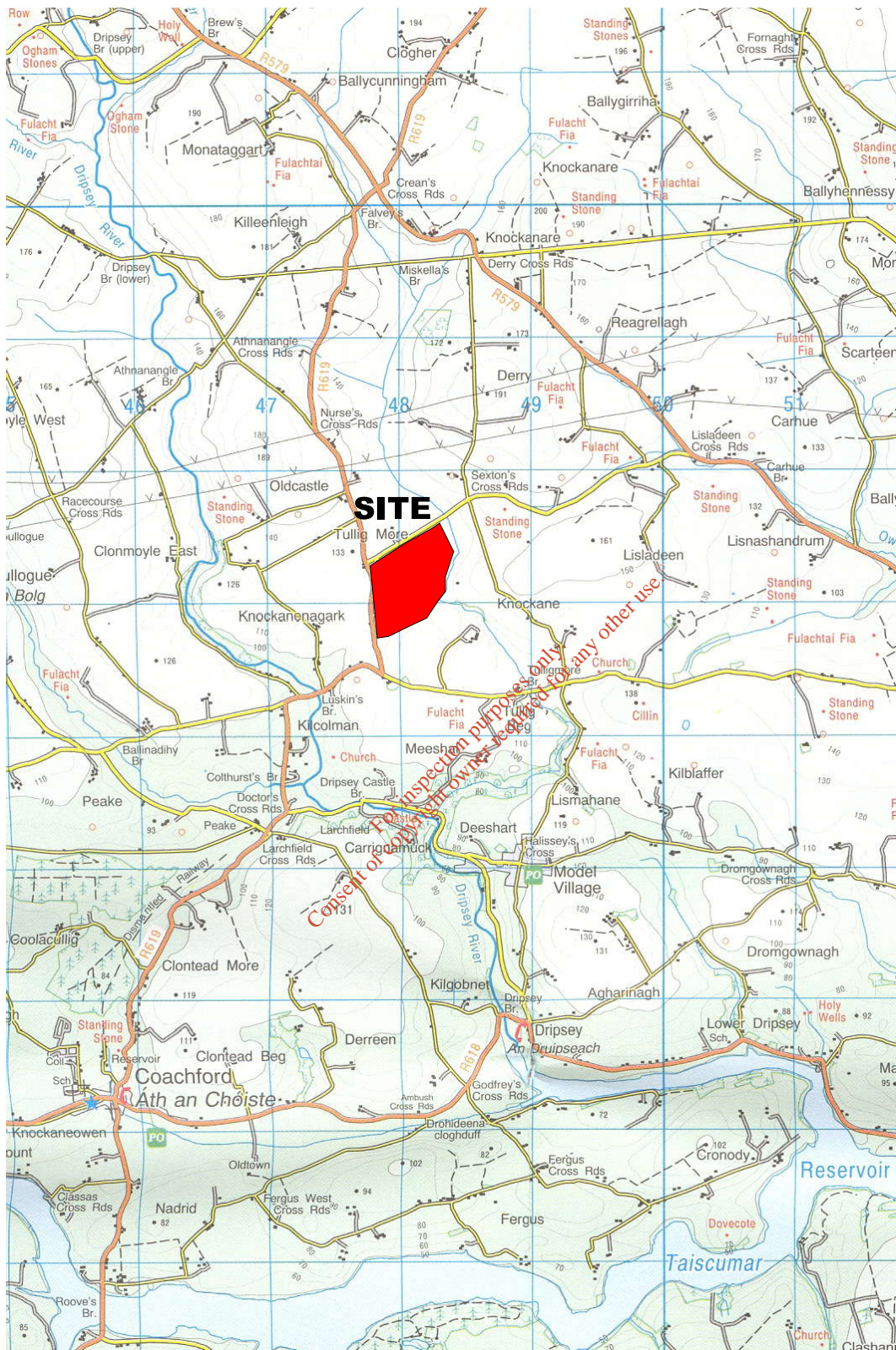
Public Consultation

O'Regans Ltd invited written comments from the general public on its intention to apply for planning permission for the continued use of the quarry and to develop recycling activities by means of a public advertisement in the Evening Echo. A total of three written submissions were received from residents living near the site. The submissions raised concerns about noise and dust emissions, vermin, impact on water supply and future regulatory enforcement.

Description of the Proposed Development

Site Location

The site, which encompasses approximately 32 ha (80 acres), is located in the townland of Tulligmore, approximately 3 kilometres north east of Coachford (Figure 1). The existing site entrance and approach route is on the R619. The majority of the site is at a level considerably lower than the surrounding lands.



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CLIENT

RoadMac Ltd

TITLE

Site Location Map

Details

O.S. Licence Agreement
 Number AR 0038702

Ordnance Survey Ireland.
 Government of Ireland.

FIG. No

1

Scale

NTS

Rev.

A

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The surrounding lands are mainly used for agricultural purposes; however there is a sand and gravel quarry approximately 100 m to the west of the site. A stream forms part of the eastern boundary. There are 27 houses within 500 metres of the site (Figure 2). The nearest houses are on the western site boundary, and the gardens of 3 of these are within 20 metres of worked out areas and directly overlook the site.

Operational Hours

The site currently operates from 6 am to 7 pm Monday to Saturday and is closed on Sundays and on Bank Holidays. Construction sites, which form almost all of O'Regans Ltd customers, normally begin work at 7 am and can continue to 7 pm each day. These customers require early morning/late evening deliveries to avoid delays in the construction programme. The early and late delivery times also avoid peak traffic times in urban areas where the majority of the construction sites are located. The current operational hours allow O'Regans Ltd to deliver aggregates cost effectively and on time, which are the key customer requirements. It is crucial to the economic viability of the quarry that O'Regans Ltd continues to operate and send out delivery trucks from 6 am to 7 pm Monday to Saturday.

Quarry Operations

The continued operation of the quarry does not require digging in any previously undisturbed areas. All digging will be carried out in previously worked areas in the southern and central parts of the site. To avoid disturbance to the nearest neighbours, who are to the south west and north-west, no digging will be carried out in these areas. It is estimated that approximately 2.3 million tonnes of sands and gravels will be removed over the next 6 - 10 years, depending on market conditions.

The quarrying does not involve digging below the water table. The materials are excavated using diggers and brought to a washing and screening plant using dump trucks, where they are washed and screened (sieved) to produce different grades (sizes) of gravel. Occasionally boulders or large rocks are found in the sands and gravels. A mobile rock crusher is regularly brought to the site to crush the rocks to a size suitable for sale. The materials are delivered to the customers in trucks.

The water used in the washing plant is obtained from a sump (hole) dug in the southern part of the site. This is pumped to the washing plant, where it is used to clean the sands and gravel. The wash water, which contains small particles (sand and silt), is pumped to ponds in the centre of the site, where the sand and silt settles to the bottom. The clear water from the ponds, and rainwater from the central and northern parts of the site, then flows in channels back to the hole in the south of the site.

The existing worked out areas in the northern part of the site will be reinstated for long term agricultural use. This area will be raised to approximately the same level as the roads along the western and northern site boundaries. It is proposed to use materials won on-site that are not suitable for sale; clean soils from construction sites; and processed construction and demolition materials from the proposed recycling facility (e.g. crushed concrete, bricks, tiles) that are not suitable for sale. Compost from the proposed green waste composting will be used as a soil conditioner.

The reinstatement will be carried out in stages, starting in the north western area and then extending to the east (Figure 3). It is estimated that the reinstatement of these areas will require approximately 250,000 m³ of materials. It is also intended to reinstate the central and southern area of the sites, but the final level of this area has not yet been established and it may be at a lower level than the north of the site.

Construction and Demolition Waste Recycling

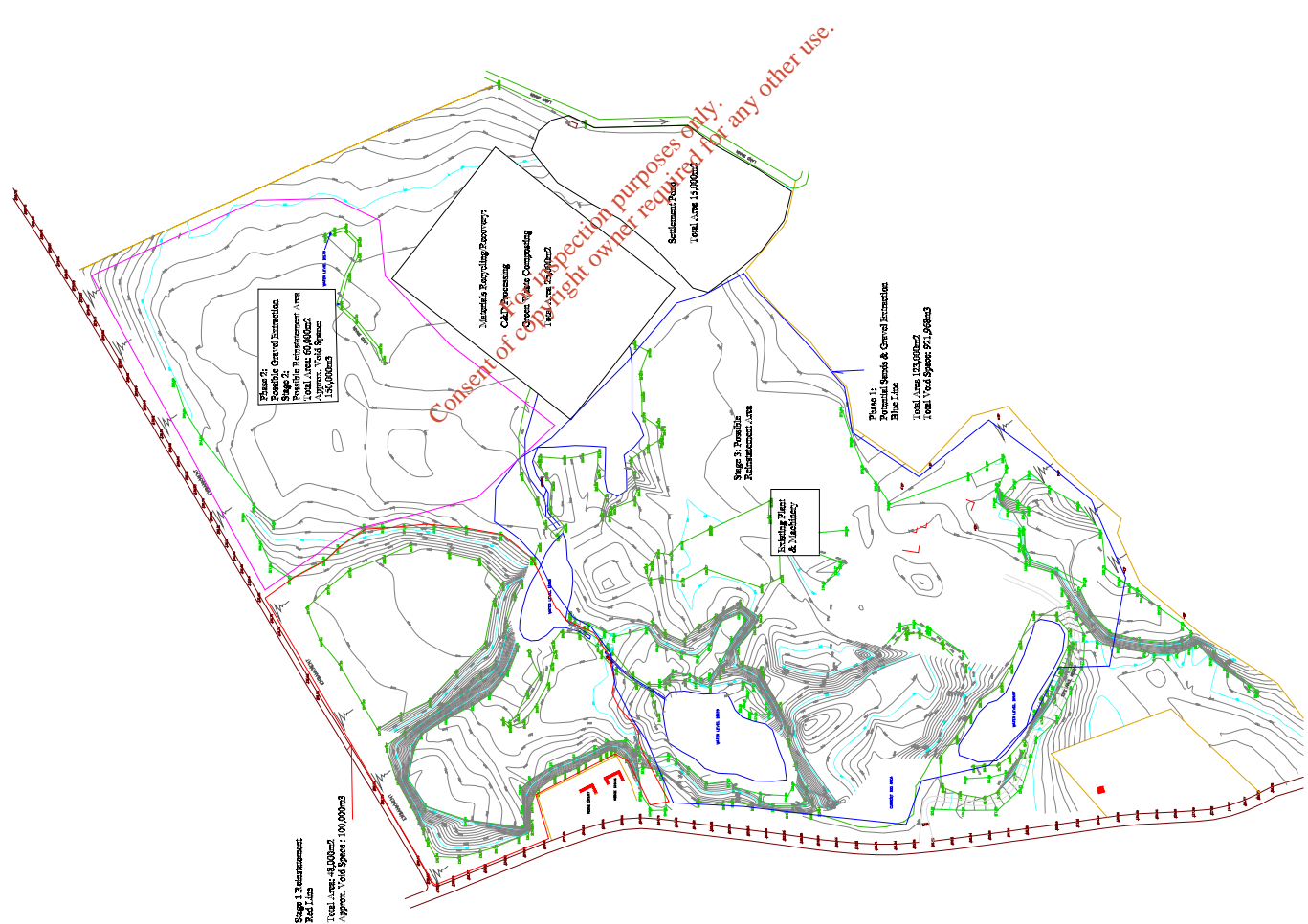
Only concrete rubble, bricks, tiles, tarmacadam, timber, soils and stones will be accepted at the site. These materials do not cause smells, attract birds or rats, or present a threat to groundwater quality. The majority of the materials will be from construction sites to which O'Regans Ltd delivers sand and gravel and wherever possible the materials will be brought back to the site in the O'Regans Ltd delivery trucks.

The materials will be stored in the north-eastern part of the site (Figure 3). Depending on the type of materials they will initially be crushed and then screened to produce a suitable size. The material will be sold for use in the making of concrete blocks, or for road building. The materials will comply with relevant quality standards and specifications that deal with the use of recycled products. Materials that cannot be sold will be used for reinstatement. The site will handle approximately 180,000 tonnes a year and will occupy an area of approximately 2.5 hectares (6 acres).

Greenwaste Composting

Composting is the breakdown of organic material, such garden waste, by organisms (e.g. bacteria and fungi) in a controlled environment. The green waste composting will be located in the north east of the site beside the proposed recycling area. The green waste will include trees and branches from tree surgery business, grass and shrub trimmings from garden and park maintenance by landscape gardeners, grass and shrub trimmings from civic amenity areas and timber and wood recovered from the construction and demolition materials. This type of material is not attractive to birds or rats.

NOTES



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 17 Colchester, Middlesex, Surrey
 020 8899 1000
 17 Colchester, Middlesex, Surrey
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CLIENT: ROADMAC
 TITLE: PROPOSED SITE PHASING
 SCALE: DRAWING No. FIGURE 3
 REV: A
 D06 DRAWING : D06/00004

The composting area will cover some 2,000 m² and will be completely lined with a concrete slab. The proposed method of composting involves a number of stages. The first is the shredding and mixing of the different waste types to ensure the proper physical and nutrient mix. The mixed materials are then placed in a long row (windrow), approximately 5 metres wide, 2.5 metres high and 25 metres long using a front-end loader. The windrow allows the control of the air supply and temperature, which is vital to the production of a good quality compost.

After the windrows the material is moved to maturation area using the front loading shovel, where it is sieved to remove impurities (plastic, glass, large pieces of wood). The compost will remain in the maturation area for approximately 8 weeks following which it will either be sold or used in the reinstatement works.

The composting system is designed to handle about 5,000 tonnes of green waste annually and produce around 3,500 tonnes of compost.

Existing Environment, Potential Environmental Effects and Mitigation Measures

Climate

The climate can be described as mild and wet, with the prevailing wind direction from the south west. The development will not result in any impacts on the climate or microclimate at the site.

Geology / Hydrogeology

Sands and gravels have been extracted from the entire site and all topsoil has been removed. The remaining materials consist of a mixture of silts, sandy gravels and boulder clay ranging from 9 - 17 metres above the bedrock. The bedrock is a Devonian purple mudstone and sandstone belonging to the Ballytrasna Formation.

The sands and gravels contain groundwater. The water table is approximately 14 metres below ground level in the central part of the site. The bedrock is classified as a locally important aquifer. It is likely that the water in the sands and gravels is connected to the water in the underlying bedrock. All of the residences in the vicinity of the site, including the nearest ones, get their water from wells drilled into the bedrock. The direction of groundwater flow in both the sands and gravels and the bedrock is to the south towards the Dripsey River

Water used in the washing plant is pumped from the hole dug in the southern part of the site. The water in the hole is a combination of groundwater, recirculated wash water and rainwater from the northern part of the site. The estimated pumping rate is 113 cubic metres/hour (25,000 gallons) and the pump can be on for up to 13 hours a day. This pumping rate lowers the water level in the hole by around 3 metres, but the water rises to 0.5 m of the original level 24 hours after pumping stops.

There is a well in the south east of the site that supplies water to the site offices. The water is of good quality and has not been affected by current activities. The location of a groundwater sampling point is shown on Figure 4. There is no evidence that the current pumping rate is having any effect on water supplies in the houses in the vicinity of the site. As it is not proposed to change the current work practices the continued operation of the quarry will not affect the water supplies of nearby houses.

Hydrology

The site is located in the catchment of the Dripsey River, which is approximately 1 km to the south west. An unnamed tributary of the Dripsey forms part of the eastern site boundary. This stream is probably used for drinking water by farm animals. The Dripsey is a tributary of the River Lee, which is an important fishery and also a source of drinking water for Cork City. Testing of the water in the stream, both up and down stream of the site, indicates the water is of good quality and that the current activities are not affecting the quality. The sampling locations are shown on Figure 4.

Settlement ponds and drains have been formed in the northern, central and western areas. Rainwater run-off from the northern area and overflow from the ponds, flows to the hole in the south of the site. Due to the fact the majority of the site is at a lower level than both the surrounding lands and the stream there is no surface water drainage from the site. The current and proposed activities do not and will not give rise to either the entry of surface water from the site to the stream or the abstraction of water from this stream. Therefore, the development will not result in any impacts on off-site streams or rivers.

Ecology

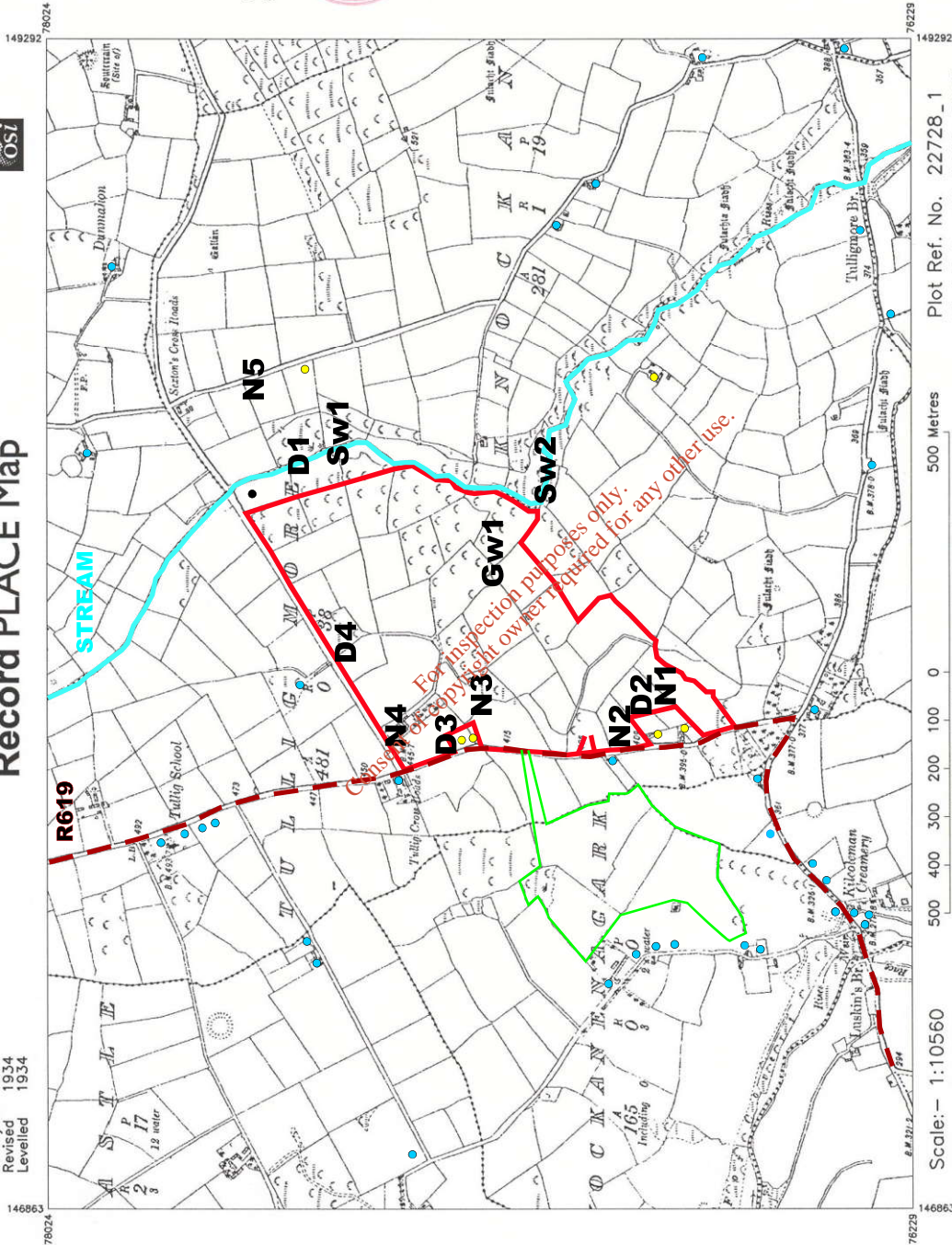
There are no designated habitats on or in the vicinity of the site that could be affected by the proposed development. The habitats within the site are exposed sands and gravels, stockpiles of unsuitable materials, silt ponds and drainage channels. There is some low level scrub (briars and weeds) in the eastern and northern parts of the site. These areas are of low ecological significance and are unlikely to support large numbers of plants, animals, birds and insects. The hedges surrounding the site are semi-natural habitats that may be important as breeding sites for birds.

The stream along the eastern site boundary is a tributary of the River Dripsey, which is itself a tributary of the River Lee. The Lee is a designated salmon river. The water quality in the stream is good and it is considered that the stream is of significant local ecological value. The proposed activities will not result in any abstraction or inflow to the stream and so will not cause any impact.

With the exception of the removal of a small section of hedges at the site entrance, which is required to improve traffic safety, these hedges will not be disturbed by proposed site activities. The proposed recycling and composting will involve the clearance of scrub in the east of the site, but the loss of this habitat is not significant. The recycling and composting activities will not result in any significant environmental emission that might affect any existing off site habitats.

Surveyed 1841
Revised 1934
Levelled 1934

Record PLACE Map



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CLIENT

RoadMac Ltd

TITLE

Monitoring Locations
Noise, Dust, Surface Water, Groundwater

Details

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FIGURE NUMBER
4

Scale
Not To Scale

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The proposed reinstatement works will, in the long term, have a positive impact on the local ecology of the site as it is intended to return these areas to agriculture, similar to the surrounding use.

Air Quality

The quarrying can produce dusts. A dust survey was conducted in August - September 2006, which is the time of year when dust is most likely to occur due to dry weather. Four monitoring points were located at the south western, northern and eastern boundary at positions close to occupied houses. The gauge locations are shown on Figure 4.

Occupants of the houses to the south-west, west and north had raised concerns about dusts. The survey established that the current quarrying is not a source of dust at levels that would cause a nuisance outside the site boundaries. This is due to the control measures currently in place which include the spraying of the access road and paved yard. The placing of soils during the reinstatement of the northern area may be a temporary source of dust, however a water tanker and tractor will be kept on-site and used to damp down the work areas during dry weather. Reinstatement soils will not be placed during windy conditions.

The crushing and screening in the recycling area is a source of dust. O'Regans Ltd will use the same dust control measures as those presently applied. Importantly the recycling area is more than 400 m from the nearest house which will minimise the risk of impact from dust. The pre-treatment stage (shredding of wood) of the compost process is a possible source of dusts. The shredder will, if considered necessary, be fitted with a water spray. The moisture in the composting materials prevents the generation of dust during turning, movement and storage. These together with the distance between the composting area and the closest houses minimises the risk of dust impacts.

The green waste composting will generate odours, but these are not offensive. The compost area will be more than 400 m from the nearest house which eliminates the risk of odours affecting residents. Bioaerosols (airborne micro-organisms such as fungi and bacteria) can be formed when composting materials mixed. Bioaerosols are naturally present in rural areas and may occur at levels similar to those found in composting facilities. The highest natural concentrations occur during summer and autumn.

The operational controls that will be used in the composting to reduce the potential for bioaerosol generation include: -

- Regular and thorough mixing of windrows,
- Maintaining optimal moisture content in the windrows,
- Maintaining a clean site, including access roads and storage areas and provision of a damping system to reduce dust generation from dry surfaces,
- Training of operators,
- Construction of windrows as high as possible.

In addition the compost area will be more than 400 m from the nearest house which further reduces the risk.

Noise

The current and proposed activities (diggers, trucks, washing and screening plant, rock crusher and shredder) are a source of noise. In October 2005 O'Regans Ltd received a complaint from the occupant of a house to the north east about noise from the site. The submissions made in the consultation process also raised concerns about noise.

A noise survey was carried out to establish the existing noise levels. Five noise monitoring points were set up along the boundary close to private houses. The locations are shown on Figure 4. Four were on the western and northern boundaries, and the fifth was off-site near the house from which the complaint was received. The points in the south west of the site were selected to assess impacts on the nearest residences whose occupants have raised concerns about noise from the proposed development.

The noise levels at all the locations, including contributions from the various off-site sources, were at or below the limit (55 dB) normally applied at the boundaries of quarries. In all cases the levels attributable to the quarry was significantly below the 55 dB limit. The dominant noise near the south west of the site was a machine, possibly a sawdust extraction system, in a private workshop outside the site boundary.

The Landscape

The existing landscape character of the site is neither distinctive nor of exceptional value in the context of the surrounding landuse. The site has been used as a quarry for more than forty (40) years and therefore the usual sensitivity of the site to change is not considered significant.

The site is visible from the public road and three houses on the western boundary and from a house about 300 m from the eastern boundary. There are earth banks and mature hedges along the western, northern and southern boundary which effectively screen the site from other houses and the roads.

The continued operation of the quarry and the proposed recycling and composting will not change the visibility of the site from the houses to the west of the R619. The construction of an earth bank, which will be planted, will screen the view from the east. The reinstatement of the northern area to the level of the public roads means that this area will not become visible to any new houses. The reinstatement will have a positive impact on the views from the two houses along the north western boundary.

Traffic

A Traffic Impact Assessment was carried out to assess the impact of traffic linked to both the current and proposed operations on the local roads. At present there is approximately 49 truck movements a day to and from the quarry. The other movements are those of employees and customers which are mainly cars.

The introduction of the recycling and composting will result in an increase in daily truck movements to 110. The local roads and junctions have more than enough capacity to handle this increase.

Given the expected increase in truck movements a dedicated right hand turn lane will be provided on the R619, with permanent signs on the approach to the junction. The reduced lane width will act as a traffic-calming device for through traffic. Sight lines in both directions will be cleared to 160 m measured at a set-back of 2.4 m from the road edge to the near-side carriageway.

Cultural Heritage

The entire site has been dug out and it is not proposed to dig in any undisturbed areas either inside or outside the site boundaries. There have been no archaeological finds on the site and there are no features on the lands surrounding the site that could be affected by the proposed operations.

Human Beings

The quarrying and recycling are not activities that affect the health of people living in the vicinity. These operations can be a source of nuisances, such as noise and dust that can affect people. A combination of the site location, the positioning of the various activities inside the site boundaries and proper operational control measures will ensure that noise and dust emissions do not give rise to nuisance.

Green waste is not attractive to flies, rats or other vermin and the proposed recycling and composting activities will not draw these to the site. The health risks to the general public linked to bioaerosols from the composting are minimised by a combination of operational controls and a buffer of more than 400 m between the compost area and the nearest houses.

The continued operation of the quarry will not affect any local business in the area and the development of the recycling and composting may lead to increased employment at the site.

Material Assets

The site is not in any area of high amenity value and the continued operation and introduction of recycling and composting will not impact on the amenity value of the area. The surrounding landuse is predominantly agriculture. The reinstatement programme will see certain areas of the site returned to agricultural use and will therefore have a positive impact in the area.

Interaction of the Foregoing

The continued operation of the quarry and the introduction of recycling and composting will result in emissions (noise, dust and bioaerosols) that may affect quality with consequent affects on nuisance and public health. The site location, design and proposed method of operation incorporate measures to effectively control and mitigate the impact of these emissions from site operations.

The quarrying involves the abstraction of groundwater from the sands and gravels for use in the washing plant. This water is recirculated within the site and current operations are not affecting the wells supplying the houses in the vicinity of the site. As it is not proposed to change the current working methods the future quarrying should not affect any off-site wells.

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PREAMBLE

This Environmental Impact Statement (EIS) examines the potential impacts and significant effects on the environment of the proposal to continue sand and gravel extraction at O'Regan's Quarry Products Limited (O'Regans Ltd), formerly Roadmac Transport Ltd, quarry at Tulligmore, Dripsey, County Cork and to develop complementary construction and demolition recycling and green waste composting at the site.

The information contained in the EIS complies with Paragraph 2 of the Second Schedule of the European Communities Environmental Impact Assessment Regulations 1989, as amended by the European Communities (Environmental Impact Assessment) (Amendment) Regulations 2001.

The EIS follows the grouped format structure recommended, in the 'Guidelines on the Information to be Contained in Environmental Impact Statements' (March 2002), published by the Environmental Protection Agency (EPA), and the EPA's Advice Notes to these Guidelines. This structure assesses each relevant topic in a separate section, which describes the existing environment; the impacts associated with the proposed development and, where considered necessary, the proposed mitigation measures.

The assessment of impacts took into consideration the 'Guidelines to Planning Authorities on Quarries and Ancillary Activities' (2005) published by the Department of the Environment, Heritage and Local Government (DEHLG).

Public Consultation

A public advertisement of O'Regans Ltd intention to apply for permission to continue extraction and develop ancillary recycling and composting activities was placed in the Evening Echo newspaper on 25th August 2006 which has a large circulation in the area of the proposed development. The advertisement invited written comments from the general public.

OCM received three submissions from residents who live in the vicinity of the site. The main concerns raised in the submissions relate to traffic, groundwater, noise, dust, litter and vermin. All of the concerns and issues raised in the submissions were taken into consideration during the preparation of the EIS. A copy of the newspaper advertisement and the submissions are included in Appendix 1.

O'Regans Ltd has discussed the proposed reinstatement of the northern part of the site with the occupants of two residences immediately adjoining the north-western site boundary. It is understood that the occupants have expressed their approval of the proposal to reinstate this area.

Difficulties in Compiling the Required Information

OCM did not encounter any particular difficulties in compiling the required information. Given the fact that the entire site has been previously excavated; the absence of undisturbed original ground and that extraction is on-going in the southern parts of the site, specialist ecological and archaeological surveys were not carried out. Based on the site conditions and surrounding land use it is considered that such surveys were not required to allow for an adequate assessment of the likely impacts and the need for mitigation measures.

The topographic survey of the site, which was used as the base map for the EIS, was completed in September 2005.

Project Team

OCM were the prime consultants and prepared the EIS, but were assisted by a number of specialist service providers. The members of the project team were: -

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Capita Symonds Ltd – Consulting Engineers: Site Design & Layout

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MHL & Associates – Traffic Impact Assessment

Address: Carrig Mor House,
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Telephone: 021 - 4840214

Fax: 021 - 4840215

Dixon Brosnan Ltd – Baseline Noise Monitoring and Predictive Assessment

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Telephone: 021 - 4377947
Fax: 021 - 4377947

Alcontrol Geochem Ireland – Surface/Ground Water Quality Analysis

Address: Unit 18A,
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Ballycoolin,
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Telephone: 01 - 8829893
Fax: 01 - 8829895

Southern Scientific Services Ltd – Dust Analyses

Address: Dunrine,
Killarney,
Co. Kerry.

Telephone: 064 - 33922
Fax: 064 - 39022

Unless otherwise referenced OCM were responsible for completing the baseline surveys and assessment of impacts.

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