

216983-04/11/2001-EIAR Main Report Part 1 (1)

1. Introduction

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Planning Department
04 NOV 2021
Cork County Council
County Hall
Cork.

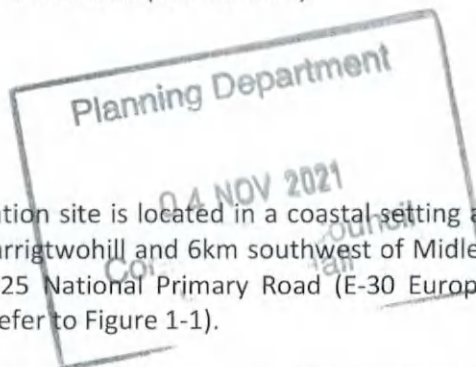
INTRODUCTION

- 1.1 This Environmental Impact Assessment Report (EIAR) provides supporting information to accompany a planning application to Cork County Council submitted by Lagan Materials Ltd. in respect of further development at their existing quarry at Rossmore, Carrigtwohill, Co. Cork.
- 1.2 The proposed development being applied for under this current planning application is shown on EIAR Figure 2-1 and is similar to that previously granted under An Bord Pleanála reference number 04.QD.0010 and will consist of:
- Deepening of the existing quarry extraction area by 2 no. 15 metre benches from -20m OD to -50 m OD, along with minor amendments to the permitted quarry layout (Plan File ref. no's: S/02/5476 & ABP Ref. PL04.203762 and ABP Ref. PL04.QD.0010) all within the existing permitted quarry footprint and the continued use of the existing water management system (settlement pond / infiltration pond system permitted under PL04.QD.0010) for the life of the proposed development, within an application area of c. 12.6 hectares – refer to Figures 1-1 and 1-2;
 - An extraction capacity of up to 375,000 tonnes per annum is sought to provide the applicant with the ability to respond to demand for aggregates for large infrastructure projects in the Region;
 - Permission is sought for twenty years plus two years for final restoration (total duration 22 years).
- 1.3 The application is made in accordance with the requirements of the Planning and Development Regulations 2001-2015 (as amended).

THE SITE

Site Location

- 1.4 The application site is located in a coastal setting and on a local county road approximately 2km south of Carrigtwohill and 6km southwest of Middleton, Co. Cork. It is located approximately 2km south of N25 National Primary Road (E-30 European Route) which links Cork city to Rosslare Europort (refer to Figure 1-1).
- 1.5 The site is located in the townland of Rossmore, Carrigtwohill, Co. Cork. Access to the lands is via an existing access to the public road to the north which connects to the N25 National Primary road to the north. The local county road forms the northern site boundary which links the R624 Regional Road to the west at Fota and the N25 National Primary Road at Middleton. Beyond the southern boundary of the lands is an access right of way to the adjacent Kilsaran quarry and Rossmore Bay, part of the Cork Harbour channel.
- 1.6 Further beyond the immediate adjacent land uses there is Fota Island Wildlife Park (2km to the west), the commercial/retail/residential centre of Carrigtwohill (2km to the north) and other extractive industries (2.5km to the north-east).



Site Description

- 1.7 The application site is a well-established quarry. The overall landholding measures c. 42.9ha. The site is accessed via an existing site entrance along a private road, which leads south from a crossroads with the east-west public highway to the north.
- 1.8 Existing site operations comprise of limestone extraction / processing and asphalt production. The site access is located to the southeast corner along with the wheelwash, weighbridge and portacabin site offices / canteen associated with the site. Crushing and screening is carried out on the quarry floor by mobile processing plant. Stockpiling of aggregate materials also takes place on the quarry floor.

Site Access

- 1.9 The established quarry haul routes will continue to be used. The junction between the private access road and the L3619-0 road was recently realigned to the west of its previous position to form a right-left staggered crossroads, with cutting back and removal of some trees along the south side of the L3619-0 in the vicinity of the crossroads undertaken to provide improved visibility for traffic turning out of the private access road. These works were undertaken by Lagan in 2019 following receipt of planning permission from An Bord Pleanála under planning ref. PL04.QD0010 in 2017.
- 1.10 All HGV's exiting the site will continue to pass through the existing wheelwash and weighbridge. The access road from the wheelwash / weighbridge to the county road is asphalt surfaced to prevent carryout of material onto the public road.

Surrounding Land-Use

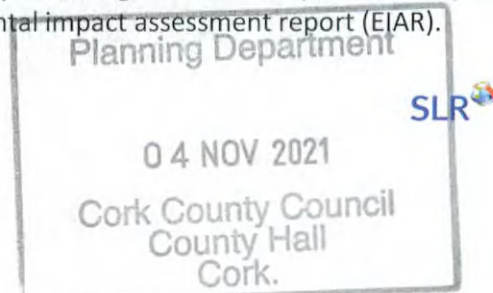
- 1.11 The application site covers an area of c. 12.6 hectares. The existing quarry site is bounded to the south by Rossmore Bay, to the west by the Kilsaran Quarry, to the north by a greenfield buffer zone, to some residential dwellings located along the east-west local public road and to the east by a private road, which provides access to the site, with agricultural lands beyond, which are also within the ownership of the applicant.
- 1.12 Residential development in the vicinity of the subject site is confined to single houses located along the local LP3619-0 road and other minor public roads.

THE APPLICANT

- 1.13 The applicant, Lagan Materials Limited, was previously part of the Lagan Group. On 20th April 2018, the Lagan Group was acquired by Breedon Group plc. Breedon is a public company with ordinary shares traded on the Alternative Investment Market (AIM). Throughout the UK and Ireland, the company employs approximately 3,600 people and operates 2 cement plants, 70 quarries, 40 asphalt plants, 200 ready-mixed concrete plants, 9 concrete and clay products plants, 4 contract surfacing businesses, 6 import/export terminals and 2 slate production facilities.

EIA SCREENING

- 1.14 Part 1 and Part 2 of Schedule 5 of the Planning and Development Regulations 2001 (as amended) set out the forms of development that require an environmental impact assessment report (EiAR).



- 1.15 Paragraph 19 of Part 1 of Schedule 5 states that the following form of development requires an EIA
“Quarries and open-cast mining where the surface of the site exceeds 25 hectares.”
- 1.16 Paragraph 22 relates to changes or extensions. It states:
“Any change or extension of projects listed in this Annex where such a change or extension in itself meets the thresholds, if any set out in this Annex.”
- 1.17 Paragraph 2 of Part 2 of Schedule 5 refers to extractive industry and part (b) of that section states that the following requires an EIA
“Extraction of stone, gravel, sand or clay, where the area of extraction would be greater than 5 hectares.”
- 1.18 In addition, paragraph 13(a) of Part 1 requires EIA in respect of:
“Any change or extension of development already authorised, executed or in the process of being executed (not being a change or extension refer to in Part 1) which would:-
- i. result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule and
 - ii. result in an increase in size greater than –
25 per cent, or
an amount equal to 50 per cent of the appropriate threshold,
whichever is the greater.
- 1.19 The proposed development relates to the further development of an existing quarry within an application area of c. 12.8 ha. The extraction area of the quarry is greater than 5 hectares. On this basis the extraction area of the quarry exceeds the area stated under Part 2 and an EIAR is required.

EIA SCOPING

- 1.20 In preparing this Environmental Impact Assessment Report a Preplanning Consultation document was issued to the following NGOs and stakeholders in February 2021 (refer to Table 1.1 for responses):
- Cork County Council (Planning and Environment Sections);
 - Development Applications Unit at the Department of Culture, Heritage and the Gaeltacht;
 - An Taisce;
 - Inland Fisheries Ireland;
 - Environmental Protection Agency (EPA);
 - Transport Infrastructure Ireland (TII);
 - Uisce Éireann/Irish Water.

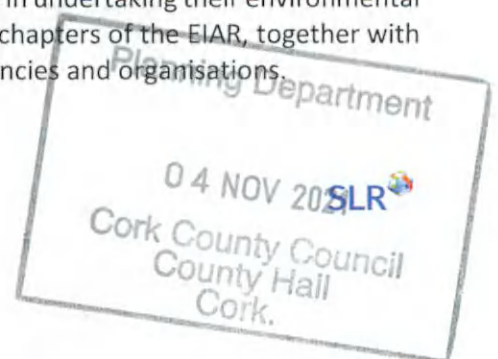


- 1.21 A virtual pre-planning consultation meeting in respect of the proposed development at Rossmore was held between officials of Cork County Council and the Applicant on the Microsoft Teams platform on the 11th March 2021. Staff from the environment and planning departments of Cork County Council were in attendance.
- 1.22 At the meeting, details of the proposed development were presented and issues likely to be of interest or concern to the Planning Authority were identified and discussed – see Table 1-1 below.

Table 1 - 1
Pre-Submission Consultation Responses to the Consultation Letter Issued February 2021

Consultee	Date of Response	Response/Issues Raised	Chapter of the Revised EIS Where Issues Raised are Addressed
Development Applications Unit (Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media).	15 th April 2021	<ul style="list-style-type: none"> This proposal lies immediately adjacent to the Great Island Channel SAC and Cork Harbour SPA. Therefore a detailed Appropriate Assessment process will need to be undertaken to include all potential cumulative impact assessment. The restoration plan for the site after works should include measures that will benefit local biodiversity and complement the features for which the adjoining Natura 2000 sites have been designated for. 	Chapter 2 (Project Description); Chapter 5 (Biodiversity); Appropriate Assessment Stage 1 Screening Report
Transport Infrastructure Ireland (TII)	17 th February 2021	<ul style="list-style-type: none"> TII recommends that you revert to Cork County Council as the planning and roads authority for the area concerned, to progress your query as per standard practice. 	Chapter 14 (Traffic)
Cork County Council	11 th March 2021	<ul style="list-style-type: none"> Specify no. of blasts per annum; Identify established haul routes; Cumulative assessment to include traffic from on-site manufacturing activities; Landscape and Visual Impact Assessment to include Zones of Theoretical Visibility (ZTV's) of the Existing, Permitted and Proposed Developments; Provide existing Air Quality / Noise / Vibration monitoring results. 	Refer to Chapters 2 (Project Description), 7 (Water), 8 (Air Quality), 10 (Noise and Vibration) and 14 (Traffic).

- 1.23 Other consultations and informal discussions held by contributors in undertaking their environmental impact assessments are detailed in the specialist environmental chapters of the EIAR, together with details of relevant archives and documentation held by state agencies and organisations.



DIFFICULTIES ENCOUNTERED WITH EIAR COMPILATION

1.24 This Environmental Impact Assessment Report was compiled on the basis of published regional and local data and site-specific field surveys. No difficulties were encountered in compiling the required information.

ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR)

1.25 An Environmental Impact Assessment Report (EIAR) “means a statement of the effects, if any, which the proposed development, if carried out, would have on the environment”. As such, it is a systematic analysis and assessment of the potential effects of a proposed project on the receiving environment.

1.26 The principal objectives of an Environmental Impact Assessment Report are to:

- Identify and / or predict the significant effects impacts of a development.
- Identify what mitigation measures should be incorporated into the development to eliminate or reduce the perceived impacts.
- Interpret and communicate the above information on the impact of the proposed development, in both technical and non-technical terms.
- Assist the Local Planning Authority in the decision making process with respect to the associated planning application.

Format of the Environmental Impact Assessment Report (EIAR)

1.27 To facilitate clarity, this EIAR has been prepared in accordance with the Environmental Protection Agency (EPA) Guidelines (Draft – May 2017). The EIAR is sub divided into fifteen parts. As an overview, they comprise of:

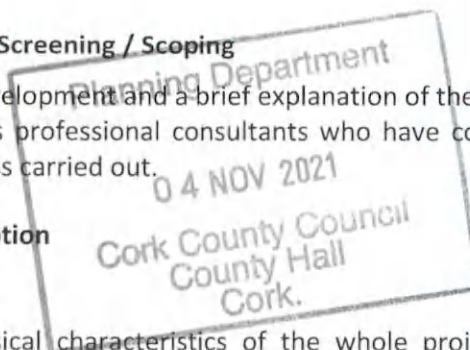
Chapter 1: Introduction / Screening / Scoping

1.28 An introduction to the development and a brief explanation of the aims and format of the EIAR. It also identifies the various professional consultants who have contributed to this EIAR and the screening / scoping process carried out.

Chapter 2: Project Description

1.29 Chapter 2 provides:

- details of the physical characteristics of the whole project, including, where relevant, demolition works, the land-use requirements during construction and operation as well as other works that are integral to the project;
- the main characteristics of the operational phase of the project e.g. nature and quantity of materials and natural resources;



- an estimate, by type and quantity, of the expected residues and emissions produced during the construction, operational and restoration phases of the proposed development.

Chapter 3: Reasonable Alternatives

Chapter 3 provides a description of the reasonable alternatives studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

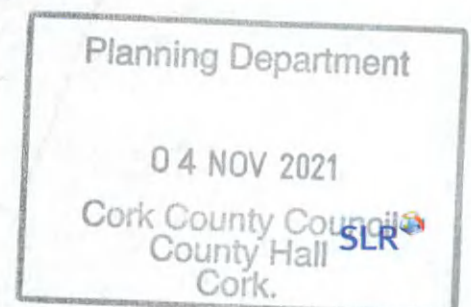
Chapters 4 - 15

1.30 These Chapters provide detailed information on all aspects of the existing (baseline) environment, identifies, describes and presents and assessment of the likely significant impacts of the proposed project on the environment, recommends mitigation and monitoring measures (where required) to reduce or alleviate these impacts and describes the residual impacts and conclusions. They are grouped under the following Chapters:

- Chapter 4: Population and Human Health
- Chapter 5: Biodiversity
- Chapter 6: Land, Soils and Geology
- Chapter 7: Water
- Chapter 8: Air
- Chapter 9: Climate
- Chapter 10: Noise and Vibration
- Chapter 11 : Material Assets
- Chapter 12: Cultural Heritage
- Chapter 13: Landscape
- Chapter 14: Traffic and Transport
- Chapter 15: Interactions

1.31 The associated references, plates, figures and appendices are provided at the end of each Chapter 1 – 15.

1.32 A “*Non-Technical Summary of the Environmental Impact Statement*”, incorporating all of the above chapters, is provided as a separate and self-contained document.



CONTRIBUTORS

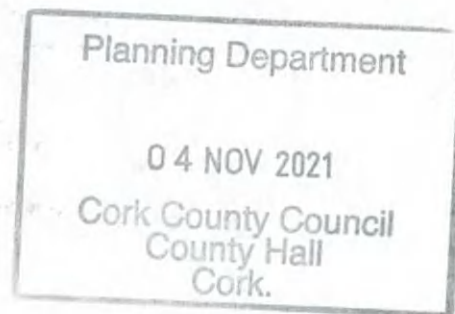
- 1.33 Lagan Materials Ltd. appointed SLR Consulting Ireland to prepare this Environmental Impact Assessment Report (EIAR) in support of its Planning Application for the proposed development at Rossmore, Carrigtwohill, Co. Cork.
- 1.34 The contributors who have assisted in the preparation of this EIAR are identified in **Table 1-1** below. Each contributor has the appropriate qualifications, experience and competence for their topic.

Table 1 - 2
List of Contributors

TOPIC	CONTRIBUTOR	COMPANY
Introduction	Peter Kinghan BSc, Dipl. Env. Eng., MiM, MSCSI, MRICS	Quarry Consulting
Description of Development	Peter Kinghan BSc, Dipl. Env. Eng., MiM, MSCSI, MRICS	Quarry Consulting
Alternatives	Tim Paul MSc CEng MIEI MRICS MIQ	SLR Consulting Ireland
Population and Human Health	Tim Paul MSc CEng MIEI MRICS MIQ	SLR Consulting Ireland
Biodiversity	Michael Bailey BSc MSc MCIEEM	SLR Consulting Ireland
Land, Soils and Geology	Paul Gordon BSc MSc PGeo EurGeol	SLR Consulting Ireland
Water	Dr. Pamela Bartley PhD, MSc, BEng, Dipl	Hydro G
Air	Aldona Binchy MSc. (Eng) AIEMA	SLR Consulting Ireland
Climate	Aldona Binchy MSc. (Eng) AIMEA	SLR Consulting Ireland
Noise and Vibration	Aldona Binchy MSc. (Eng) AIEMA	SLR Consulting Ireland
Material Assets	Tim Paul MSc CEng MIEI MRICS MIQ	SLR Consulting Ireland
Cultural Heritage	Dr. Charles Mount M.A., Ph.D.	Consultant
Landscape	Anne Merkle MSc, Dipl. Ing (FH) MILI	SLR Consulting Ireland

TOPIC	CONTRIBUTOR	COMPANY
Traffic and Transport	Aly Gleeson BSc MEng MBA RSA Cert CEng FIEI	PMCE Consultants
Co-ordination of EIA	Peter Kinghan BSc, Dipl. Env. Eng., MiM, MSCSI, MRICS	Quarry Consulting
	Tim Paul MSc CEng MIEI MRICS MIQ	SLR Consulting Ireland

- 1.35 Each contributor has been fully briefed about the proposal and the background to it. They have also visited the site and are familiar with the local environment.

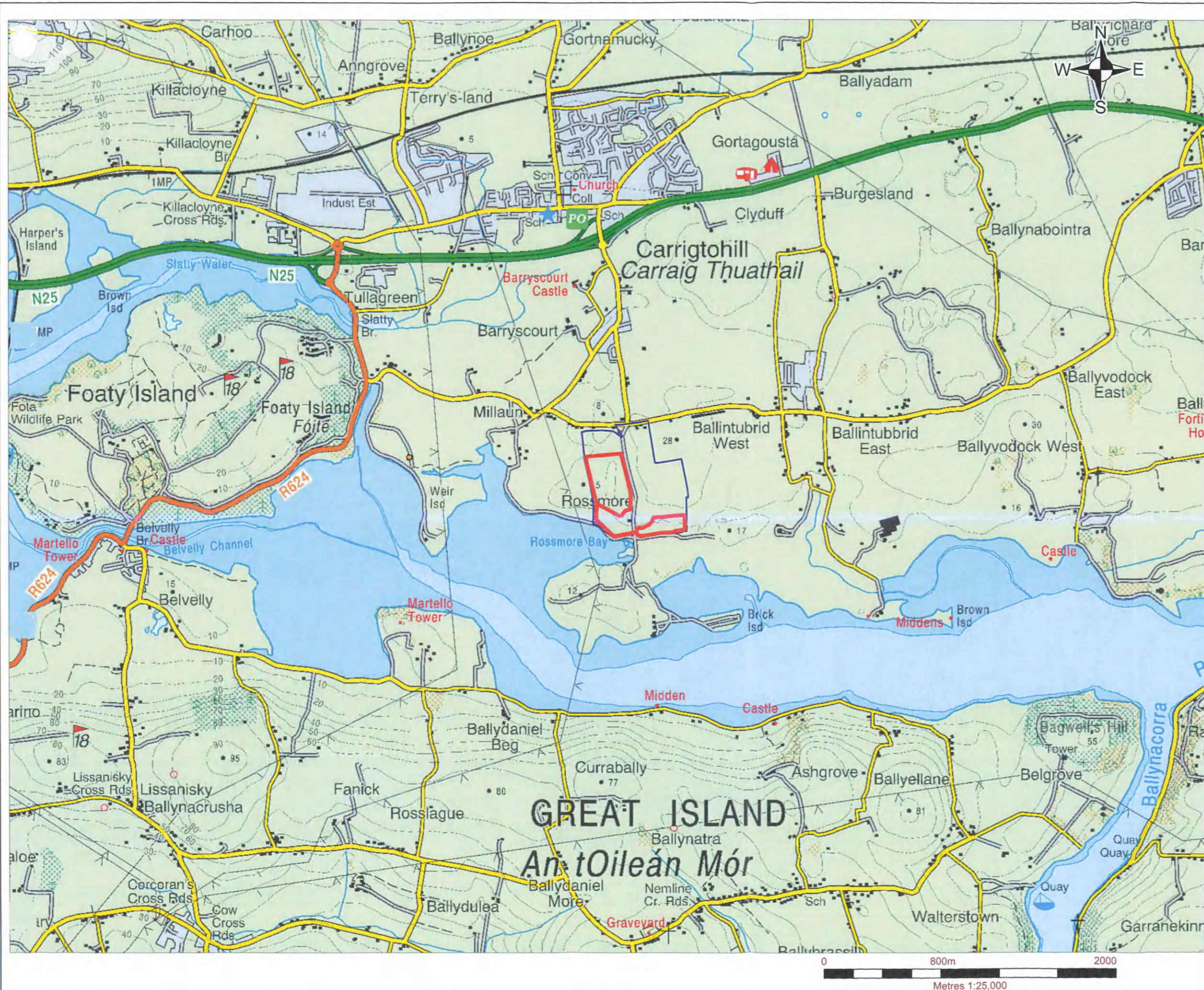


FIGURES

Figure 1-1
Site Location Map

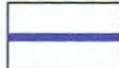

Figure 1-2
Existing Site Layout





- NOTES
1. ORDNANCE SURVEY IRELAND LICENCE NO. CYAL50167032 (C) ORDNANCE SURVEY IRELAND / GOVERNMENT OF IRELAND;
 2. EXTRACT FROM OS DISCOVERY SERIES MAP REF NO'S: 1606; 1806.

LEGEND

-  LAND OWNERSHIP AREA
-  APPLICATION AREA

Planning Department
 04 NOV 2021
 Cork County Council
 County Hall
 Cork.

SLR 

SLR CONSULTING IRELAND
 7 DUNDUM BUSINESS PARK
 WINDY ARBOUR
 DUBLIN 14
 T: +353-1-2964667
 F: +353-1-2964676
 www.slrconsulting.com

LAGAN MATERIALS LTD.
 EXISTING LIMESTONE QUARRY
 ROSSMORE TOWNLAND, CARRIGTWOHILL,
 CO. CORK
 SITE LOCATION

FIGURE 1.1

Scale 1:25,000 @ A3 Date SEPTEMBER 2021



- NOTES**
1. ORDNANCE SURVEY IRELAND LICENCE NO. CYAL50167032 (C) ORDNANCE SURVEY IRELAND / GOVERNMENT OF IRELAND;
 2. AERIAL PHOTOGRAPHY CARRIED OUT BY SLR CONSULTING MARCH 2021

- LEGEND**
- LAND OWNERSHIP (c. 43.5 Ha.)
 - APPLICATION AREA (c. 12.6 Ha.)
 - CROSS SECTION LOCATION REFER TO FIGURE 2.3

Planning Department
 04 NOV 2021
 Cork County Council
 County Hall
 Cork.

SLR SLR CONSULTING IRELAND
 7 DUNDUM BUSINESS PARK
 WINDY ARBOUR
 DUBLIN 14
 T: +353-1-2964667
 F: +353-1-2964676
 www.slrconsulting.com

LAGAN MATERIALS LTD.
 LIMESTONE QUARRY
 ROSSMOR TOWNLAND, CARRIGTWOHILL,
 CO. CORK
 EXISTING SITE LAYOUT

FIGURE 1.2

Scale 1:5,000 @ A3 Date SEPTEMBER 2021



2. Project Description

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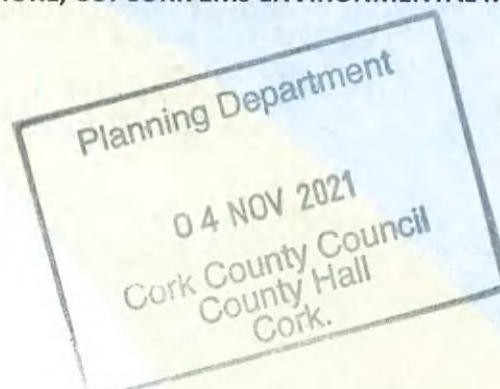
FIGURE 2-1 PROPOSED EXTRACTION PLAN

FIGURE 2-2 RESTORATION PLAN

FIGURE 2-3 EXISTING, PROPOSED AND RESTORED CROSS SECTIONS

APPENDICES

APPENDIX 2-A ROSSMORE, CO. CORK EMS ENVIRONMENTAL MANUAL (ISO14001:2015)



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EXISTING DEVELOPMENT

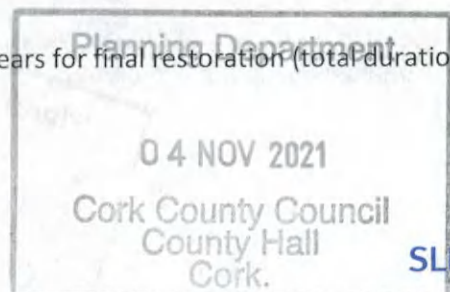
- 2.1 The site occupies ground with elevations ranging between -20 m OD and 20 m OD. The lower quarry floor currently extends to a maximum depth of -20 m OD, with the current planning permission authorising extraction to -20 m OD. The application area forms the existing quarry area and water management system (settlement pond / infiltration pond system).
- 2.2 The existing quarry operations comprise extraction of limestone using conventional blasting techniques; processing (crushing and screening) of the fragmented rock using mobile plant and equipment to produce aggregates for use in the production of value added products, road construction and site development works.
- 2.3 There is an existing asphalt plant located to the south of the application site. In addition, planning permission has been granted for a readymix concrete plant, ground limestone processing plant, ground limestone storage building, closed circuit settlement system and all ancillary works (Plan File Ref. No. 20/04124). This plant has not been constructed to date. The potential for cumulative impacts from the existing asphalt plant, permitted readymix plant and ground limestone plant have been assessed in the relevant chapters of this EIAR.
- 2.4 The operating asphalt plant is located to the south of the site adjacent to the site entrance, alongside the weighbridge, wheel-wash, staff offices and facilities, car park and associated facilities and a settlement lagoon system located to the south-east of the site.

PROPOSED DEVELOPMENT

Development Overview

Operational Phase (Limestone Extraction and Processing)

- 1.1 The proposed development being applied for under this current planning application is shown on EIAR Figure 2-1 and is similar to that previously granted under An Bord Pleanála reference number 04.QD.0010 and will consist of:
 - Deepening of the existing quarry extraction area by 2 no. 15 metre benches from -20m OD to -50 m OD, along with minor amendments to the permitted quarry layout (Plan File ref. no's: S/02/5476 & ABP Ref. PL04.203762 and ABP Ref. PL04.QD.0010) all within the existing permitted quarry footprint and the continued use of the existing water management system (settlement pond / infiltration pond system permitted under PL04.QD.0010) for the life of the proposed development, within an application area of c. 12.6 hectares – refer to Figures 2-1 and 2-3;
 - An extraction capacity of up to 375,000 tonnes per annum is sought to provide the applicant with the ability to respond to demand for aggregates for large infrastructure projects in the Region;
 - Permission is sought for twenty years plus two years for final restoration (total duration 22 years).



Restoration (Reinstatement to Nature Conservation Habitat Areas)

- 2.5 Upon the cessation of extraction operations, it is proposed to return the quarry area to natural habitat after-uses – refer to Figure 2.2.
- 2.6 Where feasible, restoration of exhausted and redundant areas will be carried out at the earliest opportunity. However, it is envisaged that the majority of restoration proposals will be carried out after extraction operations at the site have ceased.

Aggregate Reserve Assessment

- 2.7 The total recoverable reserve of limestone from within the proposed extraction area, from -20m OD to -50m OD is assessed at c. 7.5 million tonnes. This includes the existing permitted reserves to -20 mOD.

Duration of Extraction

- 2.8 An outline of the proposed extraction plan and the final ground level contours is shown in Figure 2-1. Cross-sections through the final landform are shown in Figure 2-3.

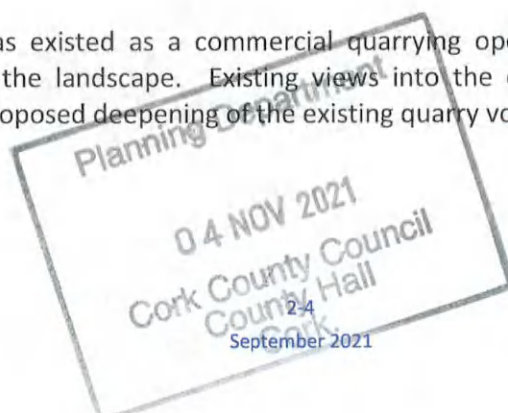
Table 2-3
Material Quantities

Material	Quantity
Topsoil / Overburden	0 m ³
Limestone	7.5 Million Tonnes

- 2.9 The duration of quarrying activities at the application site will largely be dictated by the rate at which the limestone reserve is extracted from the site. There are many factors which will influence this, including, but not limited to the:
- Prevailing economic climate and related construction industry output;
 - Distance of construction projects from the facility (and scale of activity).
- 2.10 In light of these and other variables, calculation of extraction rates and duration is not an exact science. However, an extraction capacity of up to 375,000 tonnes per annum is sought to provide the applicant with the ability to respond to demand for aggregates for large infrastructure projects in the Region.
- 2.11 A planning permission duration of 20 years is therefore sought for the extraction and processing period and a further 2 years to complete final restoration of the site.

Site Screening

- 2.12 Rossmore quarry has existed as a commercial quarrying operation since the 2000's and is an established part of the landscape. Existing views into the quarry of the local road would be unchanged by the proposed deepening of the existing quarry void.



Removal of Topsoil and Overburden Soils

- 2.13 Within the planning application boundary an area of 12.6 hectares has been used for the extraction of limestone, and ancillary facilities, and therefore has been completely stripped of overburden and topsoil material.
- 2.14 No further stripping of topsoil or overburden materials will be carried out within the application area.

Site Drainage

- 2.15 A hydrological / hydrogeological assessment has been carried out taking into consideration the existing water regime at the quarry site. It addresses mitigation measures to eliminate and/or minimise the potential impacts, if any, on surface water and groundwater – refer to Chapter 7 – Water.

Stability of the Quarry

- 2.16 Industry standard slope angles, bench heights, and bench widths will be used for extraction operations at the site.

Method of Extraction

- 2.17 Blasting is and will continue to be used within the quarry area to fragment the stone prior to processing (crushing / screening / washing etc.).

Processing Methods

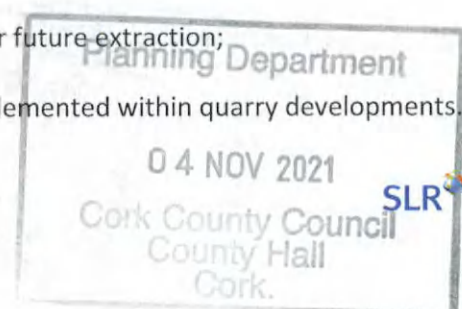
- 2.18 The processing of the extracted rock, into aggregate products, will consist of crushing and screening by mobile processing plant within the quarry void.

Quarry Working Hours

- 2.19 In accordance with condition 15 of the existing planning permission, quarry operations will be carried out between 07.00 – 18.00 hrs Monday to Friday and 07.00 – 14.00 hrs Saturday. The quarry will not operate on Sundays or Bank Holidays, except in emergency situations.

Employment

- 2.20 The proposed development will provide continued employment of up to 8 no. people directly on-site, in addition to a number of indirect employees such as crushing contractors, HGV drivers, maintenance contractors, local suppliers, etc.
- 2.21 The continued development of the site is consistent with the policies set out in the National Planning Guidelines for the sector; the Regional Planning Guidelines and the Cork County Development plan which recognise the requirement for:
- A secure supply of construction aggregates and related products is necessary for the continued development of the region;
 - Proven aggregate reserves need to be safeguarded for future extraction;
 - 'Best environmental management practice' to be implemented within quarry developments.



SITE INFRASTRUCTURE

Site Access

- 2.22 The site is accessed by a private road that leads northwards forming a crossroads with the east-west LP3619-0 local public road and onwards on the L7645-0 local road to the Barryscourt interchange and the N25. The private road also serves the Rossmore Landfill and Civic Amenity Centre, which is operated by Cork County Council.
- 2.23 In order to improve road safety, the junction between the private access road and the L3619-0 road was recently realigned to the west of its previous position to form a right-left staggered crossroads, with cutting back and removal of some trees along the south side of the L3619-0 in the vicinity of the crossroads undertaken to provide improved visibility for traffic turning out of the private access road. These works were undertaken by the applicant in 2019 following receipt of planning permission from An Bord Pleanála under planning ref. PL04.QD0010.
- 2.24 All traffic enters Lagan's landholding via the site office and weighbridge and runs over a paved road surface.

Site Security

- 2.25 The access gates to the site are locked outside operational hours.
- 2.26 At the present time, the property boundary is secured by post and wire fencing and/or hedgerow.

Site Roads, Parking and Hardstanding Areas

- 2.27 HGV's access the site from the Local road at the South-eastern corner of the quarry site and travel west over a section of paved internal roadway within the application site.
- 2.28 Adequate car parking provision for employees and visitors is provided at the existing weighbridge office.

Weighbridge

- 2.29 All HGV traffic is directed across the existing weighbridge.

Wheelwash

- 2.30 There is an existing wheel wash system in place at the site .

Offices and Ancillary Facilities

- 2.31 Ancillary facilities at the site include the portacabin offices, weighbridge, canteen and toilets.

Quarry Ancillary Facilities and Activities

- 2.32 Value added manufacturing facilities at the quarry include asphalt manufacturing, which is located within the ancillary area to the south of the site.
- 2.33 In addition, planning permission has been granted for a readymix concrete batching plant, ground limestone processing plant, ground limestone storage building, closed circuit settlement system and all ancillary works (Plan File Ref. No. 20/04124). This development has not been constructed to date.



Utilities and Services

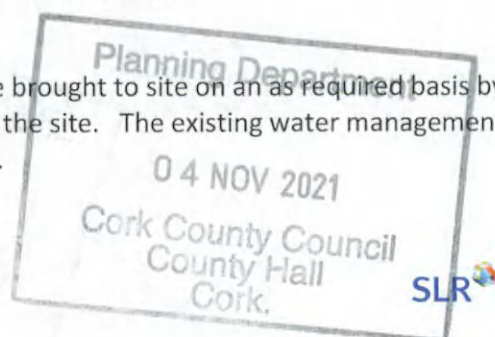
- 2.34 Electrical power is currently provided to the application site via mains supply. Electricity will continue to provide the principal source of energy for office lighting and heating.
- 2.35 The subject site is currently traversed by two overhead ESB lines. The first is a 10Kv line which extends along the eastern extents of the existing quarry site as it adjoins the private access road. The second is a 38Kv line which takes a north-easterly alignment from the existing quarry site across the private access road and into the neighbouring 'greenfield' site to the east.
- 2.36 Site based staff at the application site are contactable by mobile phone, landline and email and broadband connections to the site office are provided via a mobile network.
- 2.37 An existing effluent treatment system is located within the application site. Potable water is provided to the site via large dispenser bottled water – refer to EIAR Chapter 7 Water.
- 2.38 Given the lack of combustible waste materials at this site, it is considered highly unlikely that a fire will break out during quarry operations. A range of fire extinguishers (water, foam and CO₂) are kept at the site office to deal with any localised small scale fires which might occur. Additional fire-fighting capacity can be provided by storing water in a mobile bowser on unsealed hardstand areas around the infrastructure area.

Lighting

- 2.39 Sufficient lighting is provided at the site to ensure safe operations during winter periods.

Hydrocarbon Storage

- 2.40 Hydrocarbon storage will continue at the current location. The only hydrocarbons to be stored on site for the quarry development that will have the potential to cause water pollution are small quantities of lubricating oils, hydraulic oils, waste oils, used oil filters and oily rags. All of these are / will continue to be stored in the following manner:
- suitably certified tanks within areas bunded to a capacity of 110% of the tank;
 - where two tanks are bunded, bund capacity will be 120% of the largest tank;
 - no pipe work will go through the bund at any point to reduce the risk of leakage;
 - surface water from bunds will be pumped out through a suitable oil interceptor;
 - a bunded tank is provided for waste oils;
 - dedicated storage bins are provided for used oil filters and oily rags.
- 2.41 There are no bulk fuels stored at the overall quarry site.
- 2.42 All fuels required to serve mobile plant and machinery are brought to site on an as required basis by local fuel suppliers. A number of spill kits are provided at the site. The existing water management system for the quarry includes a hydrocarbon interceptor.



Landscape and Boundary Treatment

- 2.43 There are a number of safety and security measures in place for the existing quarrying operations on the subject site. In this regard, fences are located and regularly maintained around the perimeter of the site, thereby discouraging inadvertent access to the quarry.
- 2.44 The existing settlement lagoon and infiltration area on the south-eastern portion of the site is secured with perimeter security fencing and security fencing.

WASTE MANAGEMENT

Extractive Waste Management

- 2.45 Almost all products and by-products arising from the aggregate processing have commercial value. Any waste materials from the site are stored, collected, recycled and/or disposed of in accordance with any requirements of Cork County Council.

General Waste Management

- 2.46 Lagan Materials Ltd. are a member of the Irish Concrete Federation and commits themselves to the principles of the Federations Environmental Code. The code states:-
- 2.47 "ICF members will minimise production of waste and where appropriate consider its beneficial use including recycling. They will deal with all waste in accordance with the relevant legislation and other controls in place, including using waste contractors with valid Waste Collection Permits"
- 2.48 Potential waste produced and the measures used to control it are described as follows:-
- Scrap metal – these materials are chiefly produced from the maintenance of the possessing plants and can cause a nuisance if allowed to build up in an uncontrolled manner. A designated scrap metal area will be demarcated on site and the build-up of scrap is controlled by the regular removal by licensed scrap metal dealers.
 - Used Oil and Oil Filters – any waste oil/oil filters that may arise from servicing of fixed or mobile plant will be removed from the site by a licensed waste contractor.
 - Used Batteries – similarly all used batteries will be removed from site for collection and recycling by a licensed waste contractor in accordance with the Waste Management Regulations.
 - Domestic Style Waste (Canteen Waste) – domestic waste generated at the offices and employee's facility will be collected by a licensed waste collection contractor.



EXISTING ENVIRONMENTAL CONTROLS

General

- 2.49 Extraction, processing and ultimately restoration activities at the application site require a number of environmental controls to eliminate or minimise the potential nuisance to the public arising from the extraction and processing operations. The environmental control measures in place at the site are outlined in the relevant EIAR Chapters.
- 2.50 The existing operations at the site are regulated by conditions attaching to An Bord Pleanála reference number PL 04.QD.0010.
- 2.51 Any additional control measures, over and above those already in place and/or outlined below, which may be instructed on foot of the proposed planning application, will also be implemented.

Bird Control

- 2.52 As the process of limestone extraction is free of putrescible (food / kitchen) waste, site activities are unlikely to attract scavenging birds such as gulls and crows for the duration of works. Accordingly, it is not intended to implement any specific bird control measures at the site as is the case at present.

Traffic Control

- 2.53 As the planning application relates to the deepening of the existing quarry operation, the proposed development will continue to utilise the existing site entrance and established haul routes.

Litter Control

- 2.54 As the proposed development will be largely free of litter, the daily operational activities are unlikely to give rise to problems with windblown litter. Accordingly, there is no requirement to implement any specific litter control measures at the site.
- 2.55 In the unlikely event that any litter waste is identified, it will be immediately removed off-site to an authorised waste disposal or recovery site.

Odour Control

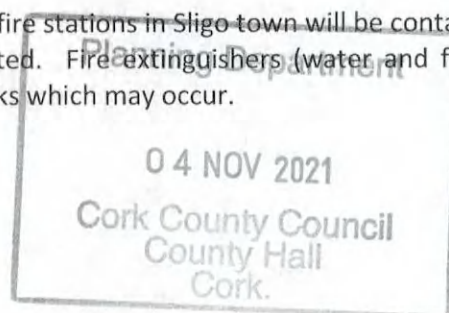
- 2.56 As the limestone extraction activities at the site are not biodegradable and do not therefore emit odorous gases, site activities do not give rise to odour nuisance. No odour control is required.

Vermin Control

- 2.57 As the proposed development is free of putrescible (food / kitchen) waste, on-site activities will not attract vermin for the duration of the extraction or subsequent restoration operations. Accordingly, no specific vermin control measures are required.

Fire Control

- 2.58 In the unlikely event that a fire does occur, the local fire stations in Sligo town will be contacted and emergency response procedures will be implemented. Fire extinguishers (water and foam) are provided at all offices to deal with any small outbreaks which may occur.

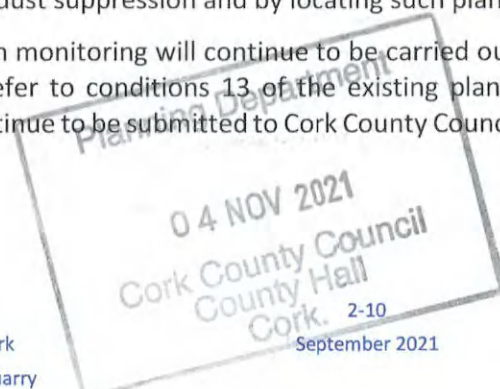


Surface Water and Groundwater Management

- 2.59 The current water management within the quarry involves pumping a combination of rainwater and groundwater from the quarry floor to the existing settlement lagoon and groundwater infiltration area located to the Southeast of the site.
- 2.60 All water (stormwater and groundwater inflows) pumped from the quarry void will continue to be discharged in compliance with the requirements of discharge licence ref no WP(W)08.18(R) and in accordance with the emission limit values specified under the discharge licence.
- 2.61 Runoff from the asphalt plant and surrounding hardstanding areas, including access roads, drains through two separate oil interceptors and a sediment trap along the southern site boundary before discharging to the settlement lagoon.

Dust Generation and Control

- 2.62 In dry, windy weather conditions, site activities may give rise to dust blows across and beyond the existing or planned development site areas.
- 2.63 The incidence of fugitive dust outside of the operation is reduced by all of the mobile crushing and screening plant being located within the quarry void. Generation of fugitive dust is generally limited to periods of very low rainfall (refer to EIAR Chapter 8 – Air Quality). Dust generation occurs from three main sources.
- Point sources – such as operating plant and machinery.
 - Line sources – such as roads and conveyors.
 - Dispersed Sources – such as quarry floors and stockpiles.
- 2.64 In order to control dust emissions, the following measures will continue to be implemented:-
- Water will be sprayed from a tractor drawn bowser on dry exposed surfaces and stockpiles (paved roads, unsealed haul roads and hardstand areas);
 - Provision of a fixed sprinkler system along the internal road from the site access to the office;
 - Dust blows at the existing site are largely screened by the side walls of the existing quarry void;
 - Areas of bare or exposed soils will, insofar as practicable, be kept to a minimum;
 - The amount of dust or fines carried onto the public road network will be mitigated by the continued use by HGV's of the existing wheelwash system and the periodic sweeping of internal paved site roads and surrounding public roads as required;
 - All loads of dusty materials will continue to be covered;
 - Emission of fugitive dust from machinery such as mobile processing plant will be minimised by utilising dust suppression and by locating such plant within the quarry area.
- 2.65 Dust deposition monitoring will continue to be carried out as part of the environmental monitoring programme (refer to conditions 13 of the existing planning permission). A review of monitoring results will continue to be submitted to Cork County Council on an annual basis - refer to EIAR Chapter 8.



2.66 Mitigation measures will be provided in accordance with the DoEHLG (2004) and EPA (2006) guidelines for the sector, refer to EIAR Chapter 8.

Noise Generation and Control

2.67 The sources of noise located within the planning application area are primarily related to machinery / plant operation.

2.68 The potential for noise generation from the planning application area is reduced by locating all of the mobile crushing and screening plant within the quarry void. This means that the potential for noise generation from activities associated with the operation of the plant such as movement of vehicles and maintenance has been reduced – refer to Chapter 10.

2.69 In addition to the above the following good house-keeping measures are put in place in order to reduce noise emitted from plant and machinery as much as possible:

- All machinery used will be CE certified for compliance with EU noise control limits;
- The machinery will be regularly maintained. This includes regularly checking any muffler systems and servicing or replacing as required. It also ensures any loose or damaged panels or covers that suppress noise is fixed or replaced immediately;
- If there are further noise-reducing modifications available for any machinery, they will be fitted wherever practical (e.g. rubber-decked screens, rubber chute linings etc.)
- Haul road grades are kept as low as possible ($\leq 1:10$) to reduce engine / brake noise from heavy vehicles.

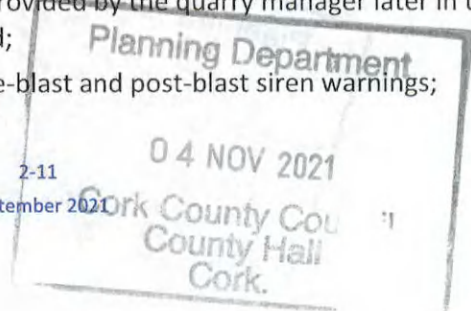
2.70 Mitigation measures are provided in accordance with the DoEHLG (2004) and EPA (2006) guidelines for the sector.

2.71 Noise monitoring will continue be carried out as part of the environmental monitoring programme, on a bi-annual basis, refer to condition 10 of the existing planning permission for the site.

Blasting Control

2.72 The blast design and blasting methodology for the site operations carried out at the quarry have, and will continue to be, optimised to ensure that any resulting ground borne vibration levels are comfortably within the prescribed limits. The following measures will continue to be implemented at the application site to minimise disturbances due to any future blasting operations:

- Blasting will not be carried out on Saturdays, Sundays or public holidays;
- Written notification of each blast will continue to be provided 7 days in advance of each blast, to all residences within c. 1km radius of the quarry;
- On the morning of each blast, the quarry manager provides verbal confirmation (by telephone) to local residents to confirm that the blast is due to take place on the day;
- Additional verbal confirmation is provided by the quarry manager later in the day, when the exact time of the blast is confirmed;
- Blast notification is provided by pre-blast and post-blast siren warnings;



- All blasting operations are carried out by a certified 'shotfirer' in accordance with the relevant health and safety regulations;
 - The optimum blast ratio is maintained, and the maximum instantaneous charge shall be optimised.
 - The blast design and blasting methodology uses the monitoring results to optimise and ensure consistent blast designs.
- 2.73 An annual review of the blast monitoring programme for the quarry will continue to be submitted to Cork County Council on an annual basis.

EXISTING ENVIRONMENTAL MONITORING

General

- 2.74 There is an existing Environmental Management System in place for the site – refer to Condition No. 9 imposed under An Bord Pleanala reference number 04.QD.0010 and copy of the EMS Manual enclosed in Appendix 2-A.
- 2.75 Water, noise, dust and blast monitoring will continue to be carried out on a regular basis, to demonstrate that the development is not having an adverse impact on the surrounding environment.

Dust Monitoring

- 2.76 Dust deposition monitoring will continue to be carried out at the application site on a quarterly basis. Dust monitoring locations shall be reviewed and revised where necessary. A review of dust monitoring results will continue to be submitted to Cork County Council on an annual basis, as per the requirements of condition 13 of the existing planning permission.

Noise Monitoring

- 2.77 Noise monitoring will be carried out at the application site on a bi-annual basis. Noise monitoring locations shall be reviewed and revised where necessary.

Water Monitoring

- 2.78 The site was granted a Trade Effluent Discharge Licence (TEDL) from Cork County Council in 2019 (Ref. WP(W)08/18(R)) to discharge water from the quarry to groundwater, subject to conditions.
- 2.79 A programme of water monitoring is currently ongoing at the site, which includes sampling of the quarry discharge, and monitoring of discharge flows.



PROPOSED FINAL RESTORATION

Proposed Restoration Scheme

- 2.57 The restoration scheme for the planning application area is shown on the restoration Figure 2-2 Restoration Plan.
- 2.58 The application area will be restored to a natural habitat, which is one of the beneficial after uses listed in the EPA Guidelines: 'Environmental Management in the Extractive Industry' (2006). This will be achieved by the following measures:
- The application area will be left for natural recolonisation by locally occurring grass and shrub/scrub species and the void will fill with water.
 - All existing boundary fences and hedgerows will be retained to ensure that the site is secure.
 - All plant and machinery will be removed from the quarry void.
- 2.59 The restoration works will be carried out in accordance with the EPA Guidelines (2006).

Site Management and Supervision

- 2.80 The Applicant will clearly define the management responsibility for the site restoration work and will ensure that this person has the necessary information (from the planning application) and authority to manage the whole restoration process. Relevant staff will be briefed on the scheme and will be adequately supervised / controlled. A system of record keeping for the key restoration activities will be put in place.

Long Term Safety and Security

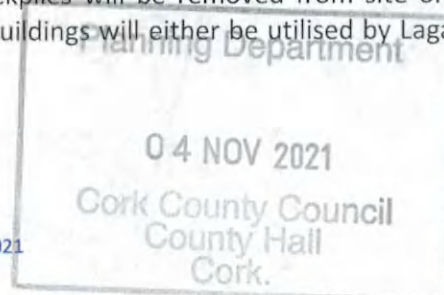
- 2.81 Existing hedges surrounding the development will be gapped up and thickened where required. These combined with fencing and the secure and locked entrance gates to the development will prevent unauthorised third party access.

Long Term Surface Water and Groundwater

- 2.82 Surface water in the processing area on the eastern side of the local road will percolate to ground. Surface water in the quarry area will percolate to ground or be directed to the water body within the void created by quarrying – refer to EIAR Chapter 7.
- 2.83 On completion of extraction operations, a lake will be formed in the quarry void as groundwater returns to its natural level.

Decommissioning of Plant and Machinery

- 2.84 Redundant structures, plant equipment and stockpiles will be removed from site on permanent cessation of extraction activity. Machinery and buildings will either be utilised by Lagans on other sites, or be sold as working machinery or scrap.



- 2.85 As part of the overall decommissioning process, all fuel, oil storage and septic / effluent treatment tanks within the existing site will be removed from the site by a licensed waste contractor. Therefore, there will be no potential for fuel, oil or sewage to cause long-term water pollution following completion of extraction activities.

Aftercare and Monitoring

- 2.86 No aftercare or monitoring is required for the restoration proposals for the application area.



FIGURES

Figure 2-1
PROPOSED EXTRACTION PLAN

Figure 2-2
RESTORATION PLAN

Figure 2-3
EXISTING, PROPOSED AND RESTORED CROSS SECTIONS



00584.00024.F E 2.1 PROPOSED SITE LAYOUT REV 2.dwg



- NOTES
1. ORDNANCE SURVEY IRELAND LICENCE NO. CYAL50167032 (C) ORDNANCE SURVEY IRELAND / GOVERNMENT OF IRELAND;
 2. AERIAL PHOTOGRAPHY CARRIED OUT BY SLR CONSULTING MARCH 2021

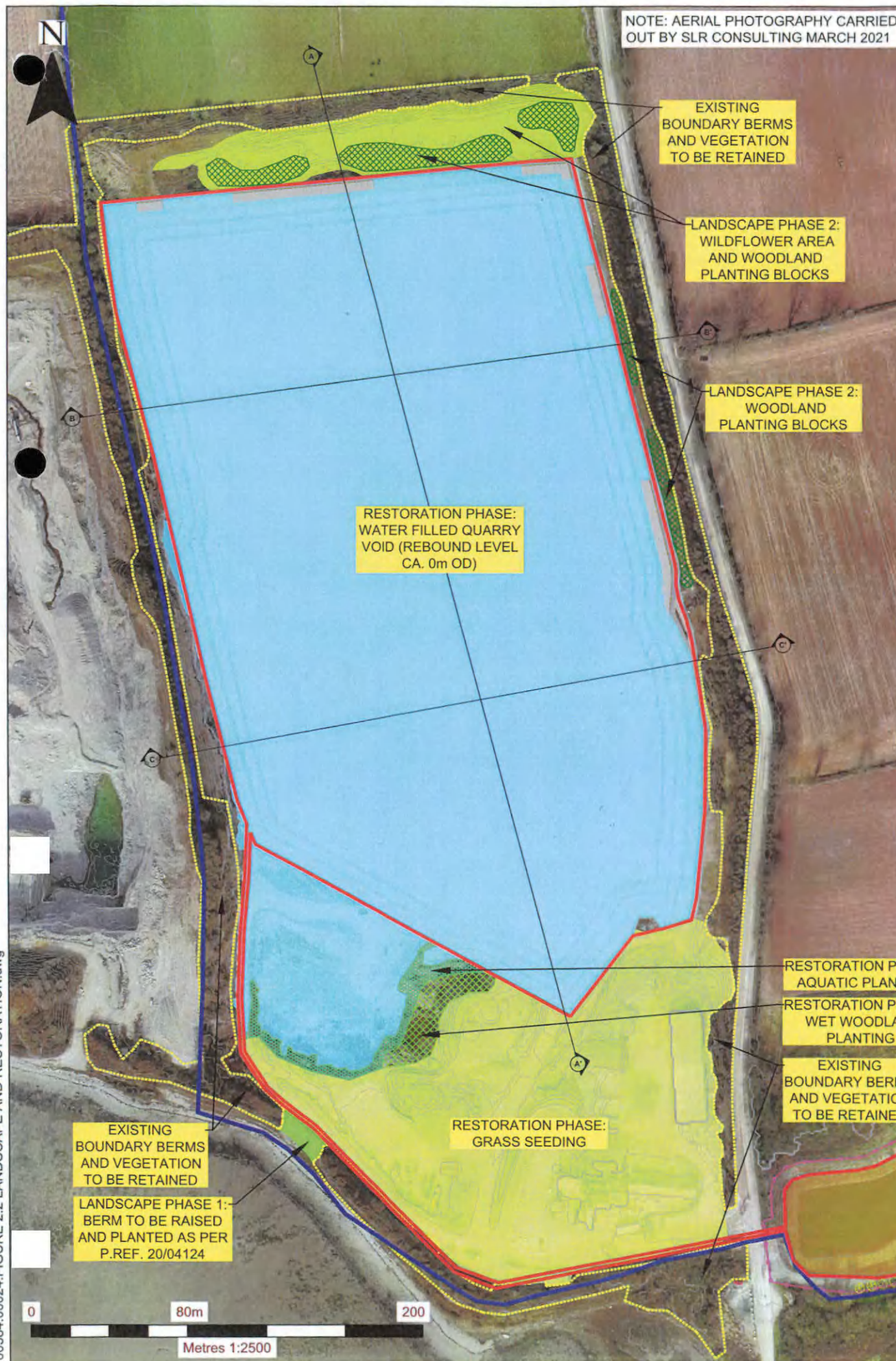
- LEGEND
- LAND OWNERSHIP (c. 43.5 Ha.)
 - APPLICATION AREA (c. 12.6 Ha.)
 - CROSS SECTION LOCATION REFER TO FIGURE 2.3

Planning Department
 04 NOV 2021
 Cork County Council
 County Hall
 Cork.

SLR
 SLR CONSULTING IRELAND
 7 DUNDRUM BUSINESS PARK
 WINDY ARBOUR
 DUBLIN 14
 T: +353-1-2964667
 F: +353-1-2964676
 www.slrconsulting.com

LAGAN MATERIALS LTD.
 LIMESTONE QUARRY
 ROSSMORE TOWNLAND, CARRIGTWOHILL,
 CO. CORK
 PROPOSED SITE LAYOUT

FIGURE 2.1
 Scale 1:2,500 @ A3
 Date SEPTEMBER 2021



NOTE: AERIAL PHOTOGRAPHY CARRIED OUT BY SLR CONSULTING MARCH 2021

LANDSCAPE MITIGATION AND RESTORATION PROPOSALS

The proposed landscape and restoration works at Rossmore Quarry will be carried out on a phased basis, as described further below. It is proposed to restore the site to a natural habitat, which is one of the beneficial afteruses recommended in the EPA Guidelines 'Environmental Management in the Extractive Industry' (2006). All existing boundary screening berms and vegetation will be retained.

LANDSCAPE PHASE 1 - TO BE CARRIED OUT ON COMMENCEMENT OF THE PROPOSED DEVELOPMENT

- A gap in the berm along the southern boundary will be closed by raising the relevant section of the berm slightly, using overburden from within the site, and planting a native shrub mix, as permitted under P.Ref. 20/04124 (refer to Drawing 5 submitted with the planning application for further details).
- Rows of pedunculate oak and downy birch (selected standard size) will be planted in a number of locations along the southern boundary of the settlement pond / infiltration pond system, as indicated on the plan (refer to Planning Drawing 5).

LANDSCAPE PHASE 2 - TO BE CARRIED OUT DURING THE COURSE OF THE PROPOSED DEVELOPMENT

- As soon as all overburden has been placed into the area along the northern boundary, those parts of the disturbed area to be turned into a wildflower meadow will be covered with a maximum 5cm of soil from stores within the site. The wildflower area will then be seeded with a suitable wildflower mix, such as the 'Seaside Wildflora Mix', Product Code: EC06 by wildflowers.ie (refer to: <http://www.wildflowers.ie/mixes/ec/ec06.htm>), or similar, to be agreed with Cork County Council.
- The proposed woodland planting areas along the northern and eastern boundary, will be covered with 20cm of soil from stores on site, as soon as they become available, and will be planted with a native woodland mix (refer to Planning Drawing 5).

RESTORATION PHASE - TO BE CARRIED OUT ON COMPLETION OF ALL EXTRACTION WORKS

- The quarry void will be cleared of all plant, machinery and stockpiles and left to naturally re-fill with water. The water rebound level is expected to be around 0m OD, which will result in some shallow water areas at the southern end of the waterbody.
- The shores of the shallow water area will be planted with an aquatic plant mix (as soon as the water levels have fully rebound - refer to Planning Drawing 5). Please note that for health and safety reasons it is not feasible to carry out planting on those sections of the upper quarry benches which will remain above the water level, i.e. along the western, northern and eastern boundary of the water body.
- To the east of the shallow water and aquatic planting an area will be covered with 20cm of soil from stores on site and a block of wet woodland planting will be carried out (refer to Planning Drawing 5). This will increase the variety of habitats present and therefore the biodiversity of the restoration area.
- The processing area will be cleared of all plant, machinery and stockpiles. It will then be levelled, covered with any leftover overburden and soil material and seeded with a native grass mix (refer to Planning Drawing 5).
- The settlement pond / infiltration pond system will be left for natural regeneration. For health & safety reasons it is not possible to carry out planting within the settlement pond area. It is therefore more practicable to let the pond dry out naturally and become colonised with locally occurring grass and scrub species. The existing secure fencing surrounding the pond system will be retained and prevent unauthorised access to this area.

GENERAL NOTES

Grass/Wildflower Seeding: Surface preparation, seeding and establishment works of the wildflower / grass areas will be carried out by a suitably experienced landscape contractor, as per the manufacturer's instructions. Seeding will take place whilst suitable weather conditions prevail.

Aquatic Planting: The aquatic planting will be carried out by a suitably experienced landscape contractor under supervision of an ecologist.

Woodland / Tree Planting: All proposed species are native and are typically present in the local area. All plants to be protected with spiral guards or alternatively with rabbit proof fencing. All plant handling, planting and establishment works will be carried out in accordance with current best practice and will take place in the appropriate planting season (e.g. bareroot planting: November to March only and in favourable weather conditions by a suitably qualified landscape contractor).

Aftercare: Establishment maintenance will be carried out for 2 years following each phase of the planting works (minimum 3 maintenance visits per year; i.e. spring, summer and autumn). This will include weed control, replacement planting where required and the adjustment/removal of tree ties and spiral guards. With regard to the wildflower area this will cover all necessary maintenance tasks (e.g. grass cutting and removal of cut material from site) to achieve successful establishment.

LEGEND

- LAND OWNERSHIP (c. 43.5 Ha.)
- APPLICATION AREA (c. 12.6 Ha.)
- CROSS SECTION LOCATION REFER TO FIGURE 2.3

EXISTING FEATURES TO BE RETAINED

- BOUNDARY SCREENING BERMS AND VEGETATION
- SECURE FENCE SURROUNDING THE SETTLEMENT POND / INFILTRATION POND SYSTEM

LANDSCAPE PHASE 1 (TO BE CARRIED OUT ON COMMENCEMENT OF THE PROPOSED DEVELOPMENT)

- RAISING OF BOUNDARY BERM AND PLANTING TO CLOSE GAP, AS PER P.REF. 20/04124
- PEDUNCULATE OAK AND DOWNY BIRCH TREE PLANTING (SELECTED STANDARD SIZE)

LANDSCAPE PHASE 2 (TO BE CARRIED OUT DURING THE COURSE OF THE PROPOSED DEVELOPMENT, AS AREAS BECOME AVAILABLE)

- WILDFLOWER SEEDING ON NORTHERN BOUNDARY BERM
- WOODLAND BLOCKS ON NORTHERN BOUNDARY BERM AND ALONG EASTERN BOUNDARY

RESTORATION PHASE (TO BE CARRIED OUT ON COMPLETION OF ALL EXTRACTION WORKS)

- QUARRY VOID TO BE LEFT TO NATURALLY FILL WITH WATER (REBOUND LEVEL CA. 0m OD)
- AQUATIC PLANTING ALONG SHALLOW EDGES OF WATERBODY
- WET WOODLAND PLANTING BLOCK
- PROCESSING AREA TO BE CLEARED, LEVELLED, COVERED WITH SOIL AND GRASS SEEDED
- SETTLEMENT POND / INFILTRATION POND SYSTEM TO BE LEFT FOR NATURAL REGENERATION

04 NOV 2021
 SLR CONSULTING IRELAND
 7 DUNDUM BUSINESS PARK
 WINDY ARBOUR DUBLIN 14
 T: +353-1-2964667
 F: +353-1-2964676
 www.slrconsulting.com

SLR County Cork
 LAGAN MATERIALS LTD.
 ENVIRONMENTAL IMPACT ASSESSMENT REPORT
 LIMESTONE QUARRY
 ROSSMORE TOWNLAND,
 CARRIGTWOHILL, CO. CORK
 LANDSCAPE MITIGATION AND RESTORATION PLAN

FIGURE 2-2
 Scale 1:2,500 @ A3
 Date SEPTEMBER 2021

APPENDICES

Appendix 2-A Rossmore, Co. Cork: Environmental Management System (EMS) Manual (ISO14001:2015)

Planning Department
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Cork County Council
County Hall
Cork.



LAGAN MATERIALS LTD.

ROSSMORE, CO CORK

ENVIRONMENTAL MANAGEMENT PLAN

CONTENTS

- 1. Environmental Manual**
- 2. Depot Procedures Manual**
- 3. Current Planning Permits, Registrations, Licences and Authorisations**
- 4. Audit and Inspection Sheets**
- 5. Environmental Training for Contractors**






LAGAN MATERIALS LTD.

ROSSMORE, CO CORK

ISO 14001: 2015

1. ENVIRONMENTAL MANUAL




	Document No. EM-001	Effective Date	Amendment
	Environmental Manual	28.09.2021	9

AMENDMENT RECORD


Date	Section	Amendment No.	Amendment
31/01/2006	All	1	Various changes to align document for both quality and environmental procedures and include reference to specific Air Emissions Licence.
31/01/2007	All	2	Various changes including personnel updates
01/12/2007	All	3	Organisational changes reflecting new appointment of quarry manager.
31/03/2008	All	4	Implementation of FPC in accordance with EN 13108-21:2006 and issue 7 of SS14.
30/05/2008	All	5	Updated to include cross-references to site-specific Permits & Licences and to site-specific procedures
16/01/2009	All	6	Various changes made to the Procedures to account for changes at the site and to accommodate a change in the inspection sheets.
03/04/2014	All	7	Various changes including SOP and Personnel updates.
01/02/2017	All	8	Implementation of EMP at site to comply with the requirements and format of ISO 14001:2015.
29/09/2021	All	9	Updating EMP to reflect changes in SOPs and personnel and company ownership.

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 Cork.

	Document No. EM-001	Effective Date	Amendment
	Environmental Manual	28.09.2021	9

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INTRODUCTION

Lagan Materials Ltd operates asphalt plants, aggregate quarries and associated products in strategic locations aimed at being able to service all but the remotest regions of Ireland. The Lagan Materials Ltd. sites are located at:

Aughamore, Co Sligo;
 Aughnacliffe, Co Longford;
 Ballisodare, Co Sligo;
 Ballycoolin, Co Dublin;
 Belcare, Tuam, Co Galway;
 Bennetsbridge, Co Kilkenny;
 Bweeng, Co Cork;
 Castlepollard, Co Westmeath;
 Cliff, Co Clare;
 Dolans Pit, Coolrain, County Laois;
 Glanworth, Co Cork;
 Kinnegad, Co Westmeath;
 Leacarrow, Co Roscommon;
 Lobinstown, Co Meath;
 Milebush, Co Cork;
 Rossmore, Carrigtwohill, Co Cork;
 Spink, Co Laois;
 Tulla, Co Clare.

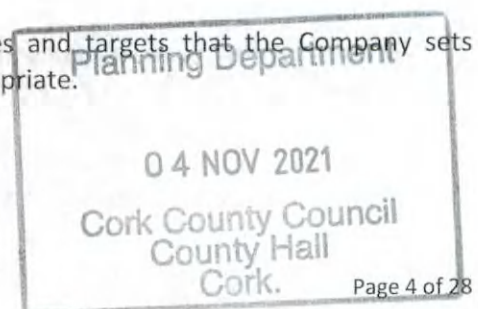
The Companies head office facility is based on the outskirts of Dublin at Rosemount Business Park, Ballycoolin.


The Companies have established an integrated management system (IMS) designed to comply with the Environmental requirements of the ISO 14001:2015 standard and the Quality Management requirements of ISO 9001:2015. The IMS is a two-tier system with this top-level Environmental Manual based on ISO EN 14001:2015 being applicable to all activities. The top-level Quality manual then feeds down to the Factory Production Control (FPC) Quality Plans and the depot specific Environmental Management Plans.

The FPC Quality Plans incorporate the procedures and controls in place to reflect the quality system for asphalt and aggregate production. The Environmental Management Plans (EMP's) are depot specific and have been designed to comply with the requirements of ISO EN 14001:2015. The EMP's record the procedures and controls in place to reflect the Quality System and the specific environmental aspects and impacts and the legislative requirements applicable at each depot.

The Company has implemented a quality assurance system and an environmental management system and has certification to the ISO 9001 and ISO 14001 standards. The Company's experience and implementation of the systems has identified the advantages of a structured and systematic approach in achieving managerial objectives.

The establishment of an IMS will ensure that the objectives and targets that the Company sets themselves in the environmental and quality policies are appropriate.



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1 SCOPE

The Environmental Management System of Lagan Materials Ltd. is outlined in this Environmental Manual and is based on the requirements of ISO 14001:2015.

Consistent with Lagan Materials Ltd. Environmental Policy, the intended outcomes of the Environmental Management System (EMS) include:

- enhancement of environmental performance;
- fulfilment of compliance obligations;
- achievement of environmental objectives

The EMS is applicable to the activities within the control and boundary of the Lagan facility at Rossmore, Co Cork.

2 NORMATIVE REFERENCES

There are no normative references applicable to this document.

3 TERMS AND DEFINITIONS

For the purpose of this manual the terms and definitions used are as defined in Section 3 of ISO 14001:2015.

4 CONTEXT OF THE ORGANISATION

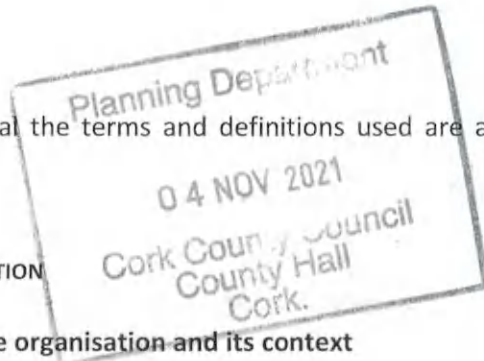
4.1 Understanding the organisation and its context


Lagan Materials Ltd. has determined external and internal issues that are relevant to its purpose and that affect its ability to achieve the intended outcomes of its environmental management system. Such issues include environmental conditions being affected by or capable of affecting the organisation.

An environmental review of internal and external issues relevant to Lagan Materials Ltd. was completed and considered the following:

- environmental conditions relating to climate, air quality, water quality, flora and fauna, archaeological quality, land use, natural resource availability and biodiversity that can either affect the company's purpose or be affected by its environmental aspects.
- the external cultural, social, political, legal, regulatory, financial, technological, economic, natural and competitive circumstances
- the activities, products and services, strategic direction, culture and capabilities (people, knowledge, processes, systems)

This review provided an understanding of the context of Lagan Materials Ltd. and is used to establish, implement, maintain and continually improve its EMS. The internal and external



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issues that were and continue to be determined can result in risks and opportunities to Lagan Materials Ltd. or to the EMS. The organisation determines those that need to be addressed and managed as described in the following sections of this manual.

4.2 Understanding the needs and expectations of interested parties

The company has determined the interested parties that are relevant to the EMS. All stakeholders in both the operation of the facility and recipients of the goods produced onsite are considered interested parties. The interested parties for the company include the Licensing Authorities, the Health and Safety Authority, the facility neighbours, customers and anybody who may be impacted directly or indirectly by the company activities on and off-site or the goods produced.

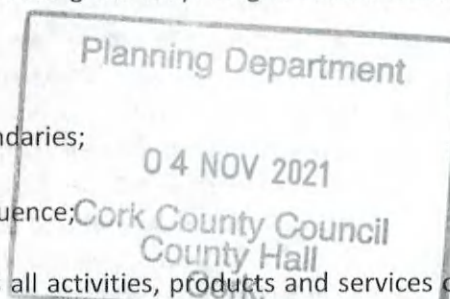
Lagan Materials Ltd. clearly understands the requirements of all stakeholders as described above including the applicable statutory and regulatory requirements. The stakeholders and their associated requirements and any associated risks are routinely reviewed and updated. These are reviewed at strategic level as part of the management review process and are documented with appropriate minutes maintained. Actions and targets associated with this are added to the Lagan Materials Ltd. Objectives and Targets.

The compliance obligations are determined from the above stakeholder requirements and these are set out in the Environmental Management Plan for the site.

4.3 Determining the scope of the environmental management system

Lagan Materials Ltd. has determined the boundaries and applicability of its Environmental Management System to establish its scope. When determining the scope Lagan Materials Ltd. considered the following:

- The external and internal issues referred to in 4.1;
- The compliance obligations referred to in 4.2;
- Its organisational units functions and physical boundaries;
- Its activities, products and services;
- Its authority and ability to exercise control and influence;




The scope of the Lagan Materials Ltd. EMS is defined as all activities, products and services of the organisation operated or directed from within the physical boundaries of the site as detailed in the Planning Permission Application and as detailed in the Environmental Management Review which is carried out annually and is available to interested parties.

4.4 Environmental management system

To achieve the intended outcomes including enhancing its environmental performance Lagan Materials Ltd. has established, implemented, maintains and continually improves its Environmental Management System including the processes needed and their interactions in accordance with the requirements of International Standard ISO 14001:2015 as detailed in this manual and associated documents and processes.

The Environmental Manual is a controlled document, which identifies the overall organisation responsibilities, products, services and facilities, and the scope of operation of Lagan Materials Ltd. It also defines all procedures devised to ensure that the policy objectives are met.

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There is also the controlled subsidiary “Depot Procedures” manual, which contain procedures and instructions, which govern the environment-critical activities of the product / service in accordance with the stated objectives of the Environmental Manual.

5 LEADERSHIP

5.1 Leadership and commitment

Top management demonstrates leadership and commitment with respect to the Environmental Management System by:

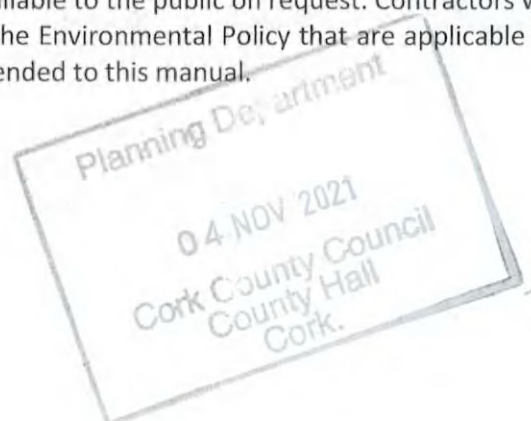
- Taking accountability for the effectiveness of the EMS;
- Ensuring the environmental policy and environmental objectives are established and are compatible with the strategic direction and the context of the organisation;
- Ensuring the integration of the EMS requirements into the organisations business processes;
- Ensuring that the resources needed for the EMS are available;
- Communicating the importance of effective EMS and of conforming to the EMS requirements;
- Ensuring that the EMS achieves it intended outcomes;
- Directing and supporting persons to contribute to the effectiveness of the EMS;
- Promoting continual improvement;
- Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.


5.2 Environmental policy

Top management has established, implemented and maintains an environmental policy that within the defined scope of its Environmental Management System:

- Is appropriate to the purpose and context of Lagan Materials Ltd. including the nature, scale and environmental impacts of its activities, products and services;
- Provides a framework for setting environmental objectives;
- Includes a commitment to the protection of the environment, including prevention of pollution and other specific commitments relevant to the context of the organisation;
- Includes a commitment to fulfil it's compliance obligations;
- Includes a commitment to continual improvement of the EMS to enhance environmental performance.

The environmental policy is maintained as documented information, is communicated within the organisation at induction, awareness training and is available to interested parties as detailed in the Depot Procedures. The policy applies to all staff at Lagan Materials Ltd. and a copy is clearly displayed in the reception area which is accessible to all staff and the public. A copy of the policy is also available to the public on request. Contractors will also be made aware of the relevant sections of the Environmental Policy that are applicable to them. A copy of the Environmental Policy is appended to this manual.



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5.3 Organisational roles, responsibilities and authorities

Top management ensures that the responsibilities and authorities for relevant roles are assigned and communicated within the organisation.

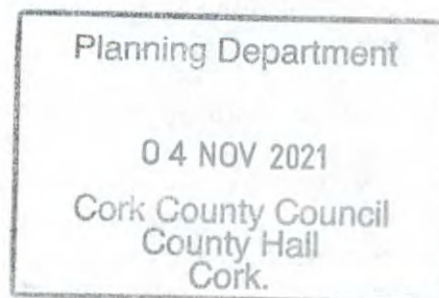
Top management assigns the responsibility and authority for:

- Ensuring that the Environmental Management System conforms to the requirements of ISO 14001:2015;
- Reporting on the performance of the EMS including environmental performance to top management.

Lagan Materials Ltd. roles are shown in the company's organisation chart below. In the absence of the responsible person the relevant manager or subordinate will undertake the assigned duties or delegate as required. The organisation chart identifies functions and their interrelations within the companies. This chart is posted within the organisation to communicate and facilitate effective quality management.

The Operations Director will implement the company requirements at regional level and is responsible for the establishment of the EMS. The Head of Planning and Environment is responsible for ensuring that the company EMS requirements are implemented and maintained in order to comply with the requirements of ISO 14001. The Depot (Operations) Manager implements the day to day requirements of the EMS at depot level and will report on the effectiveness of the operation of the EMS.

The Managing Director will ensure that sufficient resources are allocated to the system to ensure its satisfactory operation.



Organisational Chart

Lagan Group Level	Lagan Site Level - Rossmore
Managing Director <i>Terry Lagan</i>	Regional (General) Manager Fraser Thom
Operations Director <i>Fraser Thom</i>	Depot (Operations) Manager <i>Stuart King</i>
Head of Land, Minerals & Environment - Ireland <i>Brian Downes</i>	Weighbridge Operator / Plant Driver
Planning & Environment Officer <i>John Fennell</i>	
Health & Safety Director <i>Martin Cairns</i>	
Health & Safety Manager <i>Caitriona Hallisey</i>	

Responsibilities

Lagan Materials Ltd. employees and sub-contractors have the authority and responsibility to protect the environment at all times. Responsibilities are detailed during the site induction. The Depot (Operations) Manager is the environmental representative on site. It is the responsibility of all staff to report any environmental accidents, incidents, near misses or anything that could potentially cause any of these.

Managing Director – Terry Lagan

The Board of Lagan Materials Ltd. will ensure that adequate resources are provided. The Managing Director (Terry Lagan) has the responsibility to ensure that the Regional Manager and Depot Manager are provided with all necessary resources to ensure the on-going environmental compliance and improvements at the site.

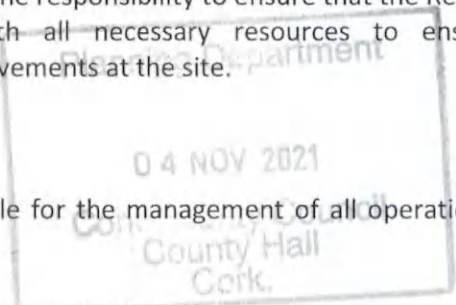
Operations Director – Fraser Thom


The Operations Director is responsible for the management of all operational matters at the Depot and within the local area.

Head of Land, Minerals & Environment - Ireland – Brian Downes

The Head of Land, Minerals & Environment - Ireland is responsible for the establishment of the 14001 management system and providing support to the company. They will be responsible for auditing the system as per the requirements of the audit schedule. They will be responsible for ensuring that environmental aspects are reviewed and that their significance has been determined. They will be responsible for ensuring that the system is being maintained in a satisfactory manner. They will ensure that adequate training has been given to all appropriate personnel and that they are fully familiar with their roles and responsibilities.

Planning & Environment Officer – John Fennell



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The Planning & Environment Officer is responsible for the ongoing effective implementation of the EMS at depot level and is also responsible for providing updates and feedback on the status of the sites EMS to the Head of Planning & Environment.

Regional Manager – Fraser Thom

The Regional Manager is responsible for the on-the-ground management of all operational matters at the Depot and for updating the Operations Director.

Depot (Operations) Manager – Stuart King

The Depot Manager is responsible for ensuring that directives from the Managing Director and the Environmental Department are implemented at the depot. He will liaise on a regular basis with the Planning and Environment Officer and Operations Director.

The Depot Manager is responsible for the implementation and maintenance of the EMS for all activities carried out at the Depot. An element of the following list of responsibilities may be delegated as required but responsibility remains with the Depot Manager.

Responsibilities include:

- Maintenance of all on site environmental records;
- Ensuring that emergency procedures are implemented in the event of an accident or emergency situation;
- Performing weekly H&S, QA and Environmental Inspections;
- Ensuring site targets and objectives are completed within their allocated time scales;
- Resolution of all NCR's;
- Ensuring all monitoring requirements are fulfilled including monitoring stack emissions;
- Ensuring a licensed waste contractor is used for removal and disposal of waste leaving site;

Weighbridge Operator / Plant Driver

The Weighbridge Operator / Plant Driver reports to the Depot Manager.


Responsibilities include:

- Carrying out stockpile checks;
- Maintenance of all calibration records for the Depot;
- Carrying out weekly environmental checks;
- Carrying out daily weather recording;
- Weighing of Lorries, incoming and outgoing;
- Maintenance of goods inwards records;
- Carrying out daily dust checks.



Health & Safety Manager – Caitriona Hallissey

The Health & Safety manager will be responsible for auditing and reviewing all aspects of Health & Safety onsite and will report to the Health and safety Director.

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6 PLANNING

6.1 Actions to address risks and opportunities

6.1.1 General

The organisation has established, implemented and maintains the process needed to meet the planning requirements.

When planning for the EMS, Lagan Materials Ltd. considers the issues referred to in Section 4.1 and the requirements referred to in Section 4.2 and also the scope of the EMS. The company determine the risks and opportunities that are required to be addressed to:

- give assurance that the EMS can achieve its intended outcomes;
- prevent or reduce undesired effects, including the potential for external environmental conditions to affect the organisation and
- achieve continual improvement.

The scope of the EMS includes the determination of potential emergency situations, including those that can have an environmental impact.

The organisation maintains documented information of its:

- risk and opportunities that need to be addressed;
- processes needed in Sections 6.1.1 to 6.1.4 to the extent necessary to have confidence they are carried out as planned.

A risk analysis review is performed at monthly board meetings and the resulting actions form part of the Objectives and Targets for the company. Lagan Materials Ltd. will then, where appropriate, plan actions to address these risks and opportunities through setting of Objectives and Targets and integrate and implement the actions into its EMS processes. These actions are then evaluated for the effectiveness on an ongoing basis


Actions taken to address risks and opportunities shall be proportionate to the potential impact on the conformity of products and services.

6.1.2 Environmental aspects

Lagan Materials Ltd. has made an environmental impact assessment of the activities to be undertaken by the Company. It will evaluate these documents in conjunction with existing assessments made as a requirement of its own ISO 14001 management system to identify the environmental aspects and impacts of their activities and determine those which are deemed significant. Lagan Materials Ltd. will determine those over which it is possible to have an influence, which will be consistent from a life

Lagan Materials Ltd. will evaluate its aspects and identify the means by which the aspects and impacts are classified.

Lagan Materials Ltd. will seek to minimise the environmental impacts of its operations and will seek to monitor throughout each activity the environmental aspects and impacts of its activities in relation to the production of material products. Aspects and impacts will be evaluated on a

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continual basis. Lagan Materials Ltd. has in the establishment of this manual considered the requirements of the local communities and regulatory obligations.

The Head of Planning and Environment will be responsible for re-assessing environmental aspects and impacts prior to work actually commencing; this is to facilitate for any environmental or ecological changes that may have emerged since the impact statements were conducted. This will include potential impacts based on emergency or abnormal operating conditions. They will ensure that work planned for the future has environmental aspects considered and the possible impacts that these may have.

Aspect Significance

Lagan Materials Ltd. will employ a competent person to identify the environmental aspects and determine those activities over which it is possible for Lagan Materials Ltd. to have an influence, in order to determine those which may have significant impacts on the environment.

Aspects and impacts will be evaluated and any aspect will be deemed significant if:

1. There is a requirement to meet legislative criteria e.g. Air Emission Licence, planning conditions.
2. The impact could cause a prolonged or long term nuisance.
3. The impact could have long term effect to the environment outside the confines of the site.
4. It is assigned a score of over 10 after analysis using a risk matrix.

Environmental aspects will be reviewed and identified by the Technical Manager. The review will take place annually and will be recorded in the management review meeting minutes. The review will consider the following:

- a. Legislative updates or amendments
- b. Introduction of any new item of plant or machinery
- c. Introduction of any new procedure or operational change
- d. Any change to the environment outside the site boundary that could be impacted by the Companies activities.

Risk Matrix Analysis

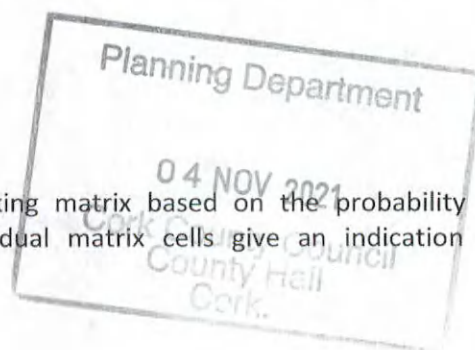
Methodology

Lagan Materials Ltd. will assign aspects to a ranking matrix based on the probability of occurrence and severity of consequences. Individual matrix cells give an indication of significance.

Step 1:

All possible aspects and impacts will be identified and listed for all processes, activities and areas under normal, abnormal and emergency conditions. Consideration will also be given to past and planned activities.

Step 2:



Lagan Materials Ltd. will categorise each aspect under all identified conditions by probability and severity from the criteria given below. The scores for probability and severity are multiplied together and can then be plotted on the ranking matrix (below).

E.g. probability 3 and severity 4 would be priority 12. The numbers in each cell of the matrix represent ranking for priority to determine which management actions will be taken to control or improve the aspect.

Any aspect that scores a priority of 10 or more is significant and requires management actions (operational control or objectives and targets for improvement).

RANKING MATRIX FOR SIGNIFICANCE EVALUATION:

Probability	V. High	5	5	10	15	20	25
	High	4	4	8	12	16	20
	Medium	3	3	6	9	12	15
	Low	2	2	4	6	8	10
	V. Low	1	1	2	3	4	5
			Trivial	Minor	Moderate	Serious	Major
			1	2	3	4	5
			Severity				


PROBABILITY FACTORS:

1. Very Low: Every 10 years
2. Low: 1 – 10 years
3. Medium: Monthly
4. High: Daily / Weekly
5. Very High: Continuous / Hourly

SEVERITY FACTORS:

- 1 Very Minor Environmental Damage
- 2 Minor environmental Damage / Business interruption.
- 3 Moderate Environmental Damage – nuisance to public.
- 4 Serious Environmental Damage – Off site clean-up required, possibility of prosecution.
- 5 Major Environmental Incident – Fatality.




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Aspect Evaluation for the Rossmore Depot


Aspect	Condition	Priority Score	Significant	Reason for Significance
Fugitive Dust Emissions	Normal	P3 x S2 = 6	Y	1 & 2
	Abnormal	P4 x S2 = 8	Y	1 & 2
	Emergency	P4 x S2 = 8	Y	1 & 2
	Past	P3 x S2 = 4	Y	1 & 2
	Planned	P2 x S2 = 6	Y	1 & 2
Dust deposition as a result of emissions could cause off-site nuisance. Limits are in place.				
Discharges to Water	Normal	P2 x S3 = 6	N	
	Abnormal	P3 x S4 = 12	N	
	Emergency	P3 x S4 = 12	Y	1, 3 & 4
	Past	P2 x S2 = 4	N	
	Planned	P2 x S2 = 4	N	
A major fuel spillage could damage flora and fauna and habitat and cause land contamination and could damage groundwater. Controls and limits are in place.				
Groundwater dewatering	Normal	P4 x S3 = 12	Y	1, 3 & 4
	Abnormal	P4 x S3 = 12	Y	1, 3 & 4
	Emergency	P4 x S3 = 12	Y	1, 3 & 4
	Past	P4 x S3 = 12	Y	1, 3 & 4
	Planned	P4 x S3 = 12	Y	1, 3 & 4
Groundwater is used at the site for the wheel-wash, fugitive damping etc.				
Use of resources / Energy consumption	Normal	P4 x S1 = 4	N	
	Abnormal	P2 x S1 = 2	N	
	Emergency	P2 x S1 = 2	N	
	Past	P4 x S1 = 4	N	
	Planned	P4 x S1 = 4	N	
Storage & use of Fuels / Chemicals	Normal	P4 x S2 = 8	N	
	Abnormal	P4 x S2 = 8	N	
	Emergency	P2 x S5 = 10	Y	1 & 4
	Past	P4 x S2 = 8	N	
	Planned	P4 x S2 = 8	N	
Aspect is controlled through the use of proper storage arrangements.				
Resource Usage	Normal	P5 x S1 = 5	N	
	Abnormal	P2 x S1 = 5	N	
	Emergency	P2 x S1 = 2	N	
	Past	P5 x S1 = 5	N	
	Planned	P5 x S1 = 5	N	

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Aspect	Condition	Priority Score	Significant	Reason for Significance
Waste Generation	Normal	P4 x S3 = 12	Y	4
	Abnormal	P4 x S3 = 12	Y	4
	Emergency	P4 x S3 = 12	Y	4
	Past	P4 x S3 = 12	Y	4
	Planned	P4 x S3 = 12	Y	4
All waste removed from site will be taken away by fully licensed contractors; copies of waste disposal licence and duty of care documentation will be maintained.				
Noise & vibration	Normal	P4 x S3 = 12	Y	1, 2 & 4
	Abnormal	P4 x S3 = 12	Y	1, 2 & 4
	Emergency	P4 x S3 = 12	Y	1, 2 & 4
	Past	P4 x S3 = 12	Y	1, 2 & 4
	Planned	P4 x S3 = 12	Y	1, 2 & 4
Noise from site activities could cause nuisance. Limits are in place.				
House Keeping	Normal	P4 x S4 = 16	Y	1 & 4
	Abnormal	P4 x S4 = 16	Y	1 & 4
	Emergency	P4 x S4 = 16	Y	1 & 4
	Past	P4 x S4 = 16	Y	1 & 4
	Planned	P4 x S4 = 16	Y	1 & 4
Ecology	Normal	P4 x S2 = 8	N	
	Abnormal	P4 x S2 = 8	N	
	Emergency	P4 x S2 = 8	N	
	Past	P3 x S2 = 6	N	
	Planned	P3 x S2 = 6	N	
Visual Impact	Normal	P2 x S1 = 2	N	
	Abnormal	P2 x S1 = 2	N	
	Emergency	P2 x S1 = 2	N	
	Past	P2 x S1 = 2	N	
	Planned	P2 x S1 = 2	N	

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Aspect	Condition	Priority Score	Significant	Reason for Significance
Site Security	Normal	P2 x S4 = 8	N	
	Abnormal	P2 x S4 = 8	N	
	Emergency	P2 x S4 = 8	N	
	Past	P2 x S4 = 8	N	
	Planned	P2 x S4 = 8	N	
Ground Contamination	Normal	P2 x S2 = 4	N	
	Abnormal	P2 x S2 = 4	N	
	Emergency	P1 x S5 = 5	N	
	Past	P2 x S2 = 4	N	
	Planned	P2 x S2 = 4	N	
In an emergency situation ground contamination may occur from chemicals/fuels stored on site. Controls in place				
Archaeology	Normal	P2 x S2 = 4	N	
	Abnormal	P2 x S2 = 4	N	
	Emergency	P1 x S5 = 5	N	
	Past	P2 x S2 = 4	N	
	Planned	P2 x S2 = 4	N	
Air Emissions	Normal	P3 x S2 = 6	Y	1 & 2
	Abnormal	P4 x S2 = 8	Y	1 & 2
	Emergency	P4 x S2 = 8	Y	1 & 2
	Past	P3 x S2 = 4	Y	1 & 2
	Planned	P2 x S2 = 6	Y	1 & 2
Air emissions from asphalt plant could cause off-site nuisance. Limits are in place.				

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6.1.3 Compliance obligations

Lagan Materials Ltd. will be responsible for liaising and communicating with the regulatory authorities, local councils and environmental groups.

Lagan Materials Ltd. has produced a register of applicable environmental legislation, which is controlled by an external service provider and is updated annually. Each update will be reviewed by the Head of Planning and Environment / Planning and Environment Officer. These reviews will be recorded and required legislative amendments will be implemented into the EMS.

Lagan Materials Ltd. will aim to meet or exceed all legislative regulations and standards and will adopt monitoring systems to ensure compliance. In the absence of governmental legislation Lagan Materials Ltd. will adopt recognised international standards or will recommend sound environmental practices.

All regulatory authority documents with environmental requirements or conditions are included in Section 3 of the Environmental Management Plan for the site.

6.1.4 Planning action

As discussed in section 6.1.1 a risk analysis review will be performed at the monthly board meeting for any environmental issues that are raised and the resulting actions will form part of the Objectives and Targets. The senior management team will hold an annual environmental management meeting where the Objectives and Targets for the year ahead will be set out and the previous years Targets and Objectives will be reviewed and assessed. The annual environmental management meeting has ten specific areas for discussion and review including risks and opportunities, compliance obligations and environmental aspects. The specific areas for discussion are considered for technological options and financial, operational and business requirements.

6.2 Environmental objectives and planning to achieve them


6.2.1 Environmental Objectives

Lagan Materials Ltd. shall establish and maintain documented environmental objectives and targets at each relevant function and level within the Company. The objectives and targets are set, recorded and reviewed at the annual environmental management meeting.

When establishing and reviewing its objectives, the company shall consider all legal and other requirements, its significant environmental aspects, its technological options and its financial and business requirements, and the views of interested parties.

The environmental objectives established by the Company will be environmental goals, arising from the Company's environmental policy, that the Company will set itself to achieve, and shall be:

- consistent with the environmental policy;
- measurable (where possible);
- monitored;
- communicated;

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- updated as appropriate.

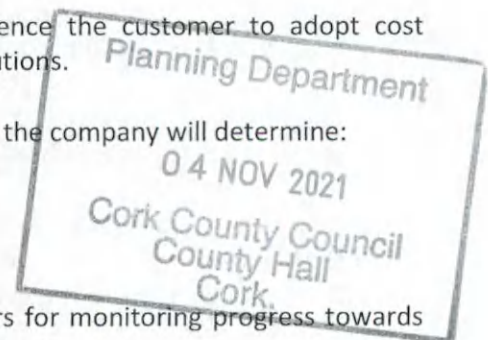
6.2.2 Planning actions to achieve environmental objectives

The Company will establish environmental objectives and targets that will be applicable to the production of company products and to ensure that all site activities are in keeping with company policy requirements. Environmental objectives will be achieved by:

- Regularly monitoring the Company performance on an on-going basis and this will be achieved by internal and external environmental audits carried out by trained personnel. This will include auditing compliance with the Companies Environmental Policy;
- Where there are no recognised standards or environmental parameters the Company will establish well defined and where possible quantifiable standards, to ensure environmental concerns are controlled as far as is reasonably practicable. This will be important where there are subjective concerns to deal with or where, as may be the case in overseas operations, no environmental legislation exists;
- Use production methods and processes which have minimum impact on the environment and those affected by the company's operations where practical and where possible develop and improve operations to minimise waste and dispose of it safely to prevent pollution. To this end the Company will where possible or feasible use recycled or sustainable materials;
- Take responsible action to report and correct environmental incidents when they occur and ensure that employees and contractors follow Company policies and report any environmental concerns to facilitate rapid response;
- The Company throughout its operations will use all energy resources conscientiously and efficiently;
- Ensure that industry best practices, techniques and methods are employed and that these are reviewed and implemented when appropriate;
- The Company will seek to communicate and liaise with the local community;
- Wherever possible the Company will seek to influence the customer to adopt cost effective environmentally positive materials and solutions.

When planning how to achieve its environmental objectives, the company will determine:

- what will be done;
- what resources will be required;
- who will be responsible;
- when it will be completed;
- how the results will be evaluated, including indicators for monitoring progress towards achievement of its measurable environmental objectives.



The Senior Management Team are responsible for defining the list of environmental objectives and making any subsequent changes to it. Environmental objectives are reviewed at the annual

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Management Review Meeting and at regular interim management meetings where specific trend targets are communicated.

7 SUPPORT

7.1 Resources

The Lagan Materials Ltd. Directors will ensure that sufficient resources are allocated to the EMS to ensure its satisfactory operation and continually improve its effectiveness. This will include internal resource but may also include external resource where necessary.

7.2 Competence

Personnel who are assigned responsibilities defined in the environmental management system and organisational chart are assessed for competency on the basis of appropriate education, training, skills and experience.

The Depot Manager and the Regional Manager will be responsible for identifying training needs. They will ensure that all personnel whose work may create a significant impact upon the environment have received appropriate training covering all aspects of the permit and planning conditions where applicable.

Lagan Materials Ltd. retains appropriate documented information as evidence of competence on file at the site.

7.3 Awareness

The Company will establish and maintain procedures to make its employees and sub-contractors at each relevant function and level aware of the importance of conformance with the Company's environmental policy and procedures and with the requirements of the Company's environmental management system.

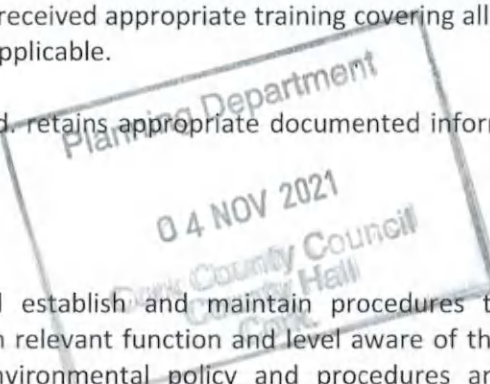
The Company will ensure that employees and sub-contractors are aware of the significant environmental impacts, actual and potential of their work activities and the environmental benefits of improved environmental performance.


The Company will ensure that employees and sub-contractors are fully aware of their roles and responsibilities in achieving conformance with the environmental and quality policy, procedures and requirements of the Company's environmental and quality management system. This will include awareness of emergency preparedness and response requirements and the potential consequences of departure from specified operating procedures, including not fulfilling the organisations compliance obligations.

All members of staff will be made fully aware of the operational procedures and methods used by the Company to ensure that the environmental impact of its operations will be minimised. Staff will be aware of the requirements of the quality system.

This will entail ensuring that the person chosen to perform a task which could cause significant environmental impacts is competent on the basis of appropriate education, training and/or experience.

7.4 Communication



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7.4.1 General

The company will establish, implement and maintain the procedures needed for internal and external communication relevant to the EMS including:

- on what it will communicate;
- when to communicate;
- with whom to communicate;
- how to communicate.

Communication of information will be categorised as external or internal.

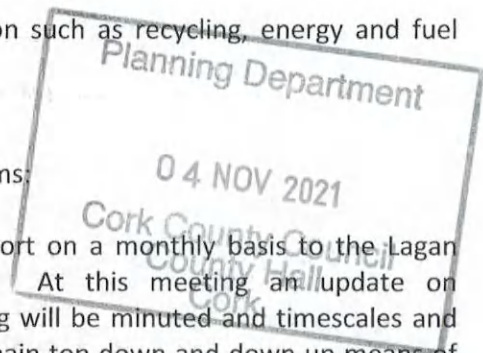
7.4.2 Internal communication

The Company has identified the importance of communication with respect to the functioning of it's EMS and have identified the following points as important to communicate:

1. Environmental Policy and Lagan Materials Ltd. corporate profile that is committed to achieving certification to ISO 14001 in all Companies within the Group.
2. Established Targets and Objectives
3. Measurable environmental performance evaluation such as recycling, energy and fuel savings etc.
4. Independent verification of communicated results.

Internal communication will or can take the following forms:

1. The Regional Manager & Operations Director report on a monthly basis to the Lagan Group Board member responsible for environment. At this meeting an update on environmental matters will be provided and this meeting will be minuted and timescales and agendas set for subsequent meetings. This will be the main top down and down up means of communication.
2. The Board can be contacted at anytime in the case of emergency situations.
3. Internal memo's and network e-mail system communicate all internal information and it is Corporate Policy to utilise this means of communication, as it is secure, fast, traceable and recorded. This will be the main means of communication at a managerial level.
4. Communication to persons / employees who do have access to the network will be by payslip inserts, verbal discussions, issued operational procedures and notice boards.
5. Internal audits and associated interviews will also be used as a means of communication both to and from employees.
6. A statement of compliance with the requirements of the sites permits will be communicated at monthly management meetings.




7.4.3 External communication

External communication will be concerned primarily with communication with the Local Authority, local residents and adjacent businesses including farmers.

External communication will or can take the following forms:

1. Face to face meetings
2. Specific written communication
3. E-mail where appropriate.
4. Phone calls. These calls will be recorded.

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5. Lagan Group publications and press releases will be used to highlight the fact that Group policy is for all 'in house' Companies to achieve ISO 14001.

The communication processes for the company will consider its compliance obligations and ensure that communicated environmental information is reliable and consistent with information generated within the EMS. The company will respond to relevant communications on its EMS and shall retain documented information as evidence of its communications.

7.5 Documented information

7.5.1 General

The Company will establish and maintain information that will describe the 'core' elements of the management system and their interaction and will, through the documentation provide direction to the related documentation.

The Company will establish and maintain procedures and will be able to demonstrate the systems in place to ensure that environmental reports required by government regulations and policies are routinely prepared and submitted, as appropriate, on a timely basis.

7.5.2 Creating and updating


All documentation will be created to ensure appropriate identification and description, format and media. Documented procedures have been established to:

- Approve documents for adequacy prior to issue.
- Review and update as necessary and re-approve documents.
- Ensure that changes and that the current revision status of documents are identified.
- Ensure that relevant versions of applicable documents are available at points of use.
- Ensure that documents remain legible, readily identifiable.
- Ensure that documents of external origin are identified and their distribution controlled.
- Prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.

7.5.3 Control of documented information

The Company will establish and maintain procedures for controlling all documents required by the ISO 14001 standards to ensure that documents are:

1. Easily located and retrievable.
2. They are made as soon as is reasonably practicable.
3. They will be periodically reviewed, revised as necessary and approved for adequacy by authorised personnel.
4. The current versions of relevant documents will be available at all locations where operations essential to the effective functioning of the system are performed.

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5. Obsolete documents will be removed promptly from all points of use or otherwise to assure against unintended use.
6. Obsolete documents will be retained for legal and or knowledge preservation purposes and will be suitably identified.
7. A specific file will be established for Environmental documentation including monitoring reports, checklists and communication details with Environmental Protection Agency, Council, etc.

Documentation will be legible, dated (with dates of revision) and readily identifiable. They will be maintained in an orderly manner and will be retained for a period of time specified as specified in the Document Control Matrix/Table.

Procedures have been established concerning the creation and modification of the various types of document. These procedures are detailed below:

- The EMP manual, master copy (Issue 01) will be filed at the relevant site and a copy will be available at the Company headquarters.
- The amendment number of the EMP Manual will only change when an amendment had been made to the text or layout of the document itself. This amendment must be agreed by all parties involved.
- The Depot Procedures will each have an amendment number. This number will be clearly stated in the Depot Procedure Contents Page.

8 OPERATION

8.1 Operational planning and control

The company will carry out the following to ensure a consistent life cycle perspective:

- establish controls as appropriate to ensure its environmental requirements are addressed in the design and development process for the product or service considering each life cycle;
- determine its environmental requirements for the procurement of products and services;
- communicate its relevant environmental requirements to external providers and contractors;
- consider the need to provide information about potential significant environmental impacts associated with the transportation or delivery, use, end-of-life treatment and final disposal of its products and services.

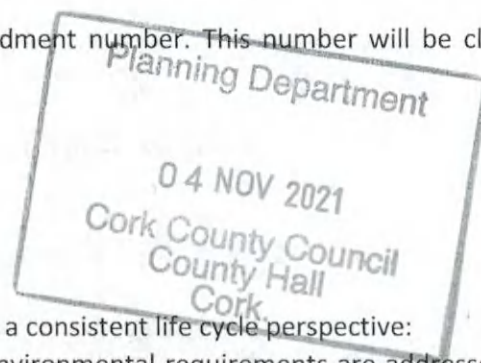
The Company will wherever possible adopt procedures based on the Pollution Prevention Guidelines including the measures outlined below.


Management & site control

A copy of the Environmental Policy Statement will be displayed in the weighbridge or other appropriate location. All work will be carried out in compliance with the Company's Health and Safety requirements.

The Company will, at the planning stage, define all methods of working to prevent the potential of pollution in all its forms.

Rules defined for the site set out in the sites permit conditions form the key operational issues of operating hours, site contacts, approved site extents and operating plans, monitoring and reporting requirements.



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Human Beings

The likely significant direct effects on human beings associated with the site relate to potential impacts on water, air quality, noise, landscape change, and public and employee health and safety. Indirect impacts relate to potential effects on flora and fauna. These impacts are addressed as follows:

- Fencing will be maintained around the lands being excavated for the safety of the general public and to prevent livestock straying into the excavated areas.
- All work will be carried out in compliance with the Company's Health and Safety requirements.
- The nature and extent of potential impacts envisaged in respect of water, air quality, noise and landscape are addressed in detail in the Depot Procedures for the site presented in Section 2 of the Environmental Management Plan.

There are specific conditions relating to management, monitoring and control of site ecology, surface water discharges, trade effluent discharges and groundwater dewatering and management, air quality and air emissions management, noise and vibration, landscaping, traffic and archaeology all of which are covered in the Depot Procedures.

Incidents, Communications and Complaints

A Log of all communications received from and issued to the Public will be maintained. In particular, records will be maintained to document any environmental concerns raised by members of the local community. The Company will investigate, take samples as appropriate and provide feedback by way of corrective actions and communication with the interested party as appropriate.

Fuel, Oil, Bitumen and Chemical Storage

The Depot manages the storage of fuels and chemicals in accordance with Depot Procedure – Management of Fuel, Oils, Bitumen and Chemical Storage.

Energy Consumption

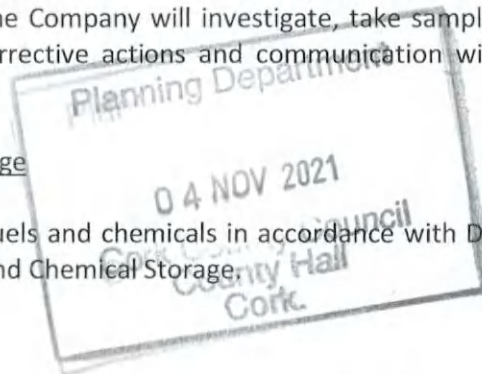
Using energy efficiently and thereby reducing unnecessary pollution is recognised as one of the most effective ways of slowing down global warming. There is a specific Depot Procedure developed to deal with energy conservation methods.


Waste Management

The Waste Management Depot Procedure details how waste management is carried out.

8.2 Emergency preparedness and response

In order to prevent and mitigate the environmental impacts of accidents and emergency situations the Company has established and maintains procedures to identify and respond to these situations. The Emergency Preparedness and response Depot Procedure details how this function is managed.



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The Company will review and revise, where necessary its emergency preparedness and response procedures. Special emphasis will be placed on such reviews and revisions should an accident or emergency situation actually arise.

Where practical or applicable to do so the Company will periodically test these procedures.

In addition to emergency response procedures developed the Company will provide staff with emergency and event-based instructions. Management will also ensure that if an employee is absent from work that his or her roles in an emergency event is reassigned to another adequately trained employee.

9 PERFORMANCE EVALUATION

9.1 Monitoring, measurement, analysis and evaluation

9.1.1 General

Checking and corrective actions will be used by the Company to evaluate its performance with respect to established targets and objectives.

To enable the Company to comply with all conditions and objectives and to track environmental performance, relevant to operational controls and conformance with the Company's objectives and targets, documented procedures will be established and maintained to monitor and measure on a regular basis the key characteristics of its operations and activities that have a significant impact on the environment.

All inspection, measuring and test equipment used by the Company will be calibrated and maintained in a manner that will ensure that measurements taken can be verified.

Procedures will be established and maintained describing how each item of measuring equipment is calibrated and maintained.


The Company will establish and maintain procedures for periodically evaluating compliance with relevant environmental legislation and regulations. The detailed procedures to be followed, in respect of monitoring for the purpose of demonstrating compliance with Permits/Licences etc are outlined in Depot Procedures Manual. Monitoring procedures, recording and reporting procedures and specific procedures for dealing with non-compliances and corrective actions are outlined in these procedures.

The company will communicate its relevant environmental performance information both internally and externally as required and will also retain documented information as evidence of the monitoring, measurement, analysis and evaluation results.

9.1.2 Evaluation of compliance

Consistent with its commitment to compliance, the Company will periodically evaluate compliance with applicable legal requirements and other requirements to which it subscribes and will maintain records of these evaluations. The company will also maintain a knowledge and understanding of its compliance status.



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The company will prepare an Annual Compliance report which will evaluate compliance with all the site specific legal and other requirements relative to the environment.

9.2 Internal audit

9.2.1 General

The Company places great emphasis on the importance and need for regular internal auditing of the EMS. To this end and to comply with the requirements of ISO 14001 the Company will establish and maintain procedures for ensuring that management system audits are carried out in order to achieve the following goals:

- a) To determine whether or not the environmental management systems are conforming to planned arrangements for environmental management. (including the requirements of ISO 14001)
- b) To determine whether or not the system has been properly implemented and maintained.

9.2.2 Internal audit programme

Results of internal and external audits will be used to provide information to management as a means of improving the system and ensuring that adequate measures are taken to ensure that audit findings are acted upon in a manner that is effective and designed to prevent reoccurrence were this is applicable.

This procedure covers the conduct of internal quality audits of the EMS in all areas of the Company's activities, to ensure that the EMS is systematically reviewed on a regular basis to check its continuing suitability and effectiveness.

1 The Head of Planning and Environment shall establish an Internal Audit Schedule covering all elements of the Environmental Management System and at least one site per set of audits. The timescale should be such that all elements of the System are audited at least twice per year.

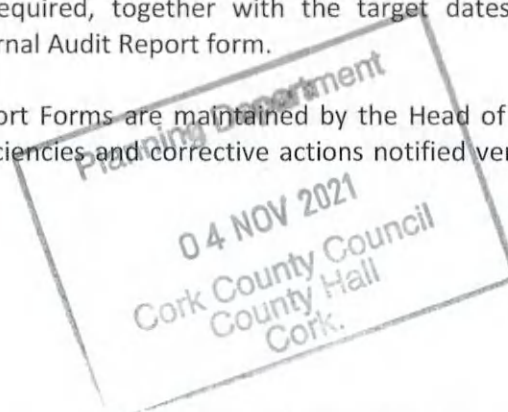
2 Audits will normally be carried out by the Operations Director or Auditor however; other appropriately trained personnel may carry out audits in areas other than their own.


3 The audit shall be conducted against the agreed check sheet and audit findings recorded on the check sheet.

4 Prior to the audit the auditor shall check any areas of outstanding action from any previous audit and add these to the check sheet.

5 Audit findings shall be discussed with the personnel in the area under audit. Deficiencies and corrective actions required, together with the target dates for implementation, shall be recorded on the Internal Audit Report form.

6 Internal Audit Report Forms are maintained by the Head of Planning and Environment and confirmation of deficiencies and corrective actions notified verbally to the person responsible by the Auditor.



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7 Progress on the implementation of agreed corrective actions shall be monitored by the Head of Planning and Environment at monthly intervals by reference to the Report Forms. Where actions are not completed the Audit Report form shall be forwarded to the Managing Director for appropriate action.

8 On completion of all actions the report shall be filed for evaluation as part of the Management Review of the EMS.

9.3 Management review

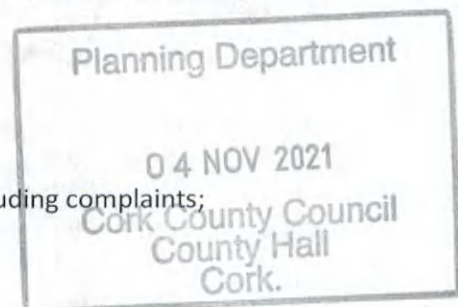
Lagan Materials Ltd. will review the integrated management system at twelve monthly intervals. This review will be comprehensive, documented and will assess all elements of the system.

The review will ensure that:

- the system is effective and complies with the requirements of ISO 14001;
- that sufficient information is available to adequately review the system;
- that the environmental and quality policy statements are still applicable to the Company;
- targets and objectives are being met or require to be changed in light of results of internal audits, changing circumstances, contractual obligations or the need to demonstrate commitment to continual improvement;
- that any system non-conformances, complaints from third parties, legislative non-compliance and audit findings both internal and external have been adequately dealt with and that corrective and preventive actions taken to prevent reoccurrence have been effective.


The management review shall include consideration of:

- a) The status of actions from previous management reviews;
- b) Changes in:
 - 1) External and internal issues that are relevant to the environmental management system;
 - 2) The needs and expectations of interested parties, including compliance obligations;
 - 3) Its significant environmental aspects;
 - 4) Risks and opportunities;
- c) The extent to which environmental objectives have been achieved.
- d) Information on the organisation's environmental performance, including trends in:
 - 1) Nonconformities and corrective actions;
 - 2) Monitoring and measurement results;
 - 3) Fulfilment of its compliance obligations;
 - 4) Audit results;
- e) Adequacy of resources;
- f) Relevant communication(s) from interested parties, including complaints;
- g) Opportunities for continual improvement.



The outputs of the management review shall include:

- Conclusions on the continuing suitability, adequacy and effectiveness of the environmental management system;
- Decisions related to continual improvement opportunities;
- Decisions related to any need for changes to the environmental management system, including resources;
- Actions, if needed, when environmental objectives have not been achieved;

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- Opportunities to improve integration of the environmental management system with other business processes, if needed;
- Any implications for the strategic direction of the organisation.

10 IMPROVEMENT

10.1 General

Lagan Materials Ltd. plan and manage the processes necessary for the continual improvement of the environmental management system. The company facilitates the continual improvement of the EMS using their environmental policy, environmental targets and objectives, audit results, corrective and preventive actions and management reviews.

10.2 Non-conformity and corrective action

The Company will establish and maintain procedures for defining responsibility and authority for dealing with and investigating non-conformance, taking action to mitigate any impacts caused and for initiating and completing corrective and preventive action.

Any corrective and preventive action taken to eliminate or minimise the causes of actual or potential non-conformance will be appropriate to the magnitude of problems and proportional with the impact encountered.


The Company will implement and record any changes in the documented procedures resulting from corrective and preventive action.

In addition, the Company will establish procedures to address the following aspects of non-conformance issues

- Tracking and reporting of all compliance issues.
- Planning of corrective action
- Establishing resolution due dates
- Assignment of responsibilities for corrective and preventive action
- Follow-up and tracking systems to verify corrective and preventive actions were implemented and were effective
- Identification of recurring issues, root cause analysis, underlying causes and compliance trends
- Planning of actions to prevent recurrence of compliance issues
- Communication with the regulatory authority on Environmental issues

A pro-forma non-conformance report will be completed in the event of a non-conformance, this will be completed by the Depot Manager (or an appointed deputy) and only signed off when the corrective action taken to prevent recurrence has proven to be effective. The implementation of the corrective action should not be deemed to have been completed until the effectiveness of all the above has been demonstrated and any changes in procedure, documentation etc. completed.

The detailed specific procedures for dealing with environmental non-compliances and corrective actions are outlined in the Depot Procedures Manual.

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Regular scheduled process reviews will take place rather than simply correcting problems after they occur. This element of the EMS will include identification of systematic problems with the implementation of the EMS as well as non-compliance with regulations and legislative requirements. Lagan Materials Ltd. will retain documented information as evidence the nonconformities and any subsequent actions taken and the results of any corrective action.

10.3 Continual improvement

Lagan Materials Ltd. will continually improve the suitability, adequacy and effectiveness of the environmental management system to enhance environmental performance by implementing the findings of the review of the EMS carried out as part of the annual environmental management meeting.

Planning Department
 04 NOV 2021
 Cork County Council
 County Hall
 Cork.



MAKING A MATERIAL
DIFFERENCE

Planning Department

04 NOV 2021

Council

Environment

POLICY STATEMENT

SEPTEMBER 2020

Environment Policy Statement

We are committed to operating our business in a sustainable manner, seeking to protect the environment, prevent pollution, mitigate our environmental impacts on surrounding communities and improve sustainable development.

To support our commitment, we will:

- maintain a robust certified environmental management system, with appropriate policies and procedures that provide a framework to manage risks and to deliver improvements in compliance, competency and sustainable performance;
- comply with all applicable legal and regulatory requirements and codes of practice;
- assess the environmental impacts of our operations and transport fleet and develop effective mitigation plans and controls to monitor, minimise or prevent pollution and environmental harm;
- set objectives and targets and monitor and measure performance regularly to ensure continual improvement and sharing of best practice;
- reduce carbon emissions through optimising energy efficiency, and, where practicable, the use of alternative and renewable energy sources.
- use resources appropriately and sustainably and, where possible, substitute primary resources with alternative materials;
- adopt the waste hierarchy of waste prevention, reuse of materials, recycling, co-processing and energy recovery to minimise waste disposal and maximise productivity;
- use water efficiently, recycle where possible and responsibly manage water discharges;
- develop products that contribute towards improved quality and sustainability in the built environment over their life-cycle;
- develop rehabilitation and restoration plans that consider the needs and expectations of our stakeholders and, where feasible and relevant, work to protect ecosystems, biodiversity and habitats to maximise our contribution to nature conservation;
- engage with our operations' local communities and stakeholders and use local sourcing for products and services where practicable;
- maintain effective communications with our wider stakeholders, encourage dialogue and investigate, monitor and report on our environmental performance;
- comply with the requirements of ISO 14001, ISO 50001 and BES 6001 at applicable sites, and commit to implement ISO 14001 at all relevant newly acquired operational locations within 12 months of commencement of operations.

The Board of Breedon Group is responsible for:

- ensuring an overall environment policy is in place for the Group;
- overseeing the environmental performance of each division within the Group;
- the adequate provision of resources and management arrangements to ensure the effectiveness of the policy.

Each Business Director and Functional Head is responsible for:

- setting objectives that relate to the significant environmental aspects associated with the business and monitoring and reporting on their effectiveness through a programme of management review;
- ensuring that effective resources, arrangements, training and management controls to deliver these requirements are established and implemented across the operations of the business;
- ensuring implementation, communication and compliance with all Group and legal requirements at a local level.

It is the responsibility of everyone who works for the Company to:

- comply with this policy and its associated arrangements as an integral part of their day-to-day duties.

We will bring this policy to the attention of our employees, supply chain partners and relevant interested parties, and review it at least annually to ensure it is appropriate for the business.



Pat Ward, Group Chief Executive
September 2020



LAGAN MATERIALS LTD.

ROSSMORE, CO CORK

ISO 14001: 2015

2. DEPOT PROCEDURES MANUAL

