



ROADSTONE LIMITED

**HUNTSTOWN QUARRY
NORTH ROAD
FINGLAS
DUBLIN 11**

EXTRACTIVE WASTE MANAGEMENT PLAN

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FEBRUARY 2021

Prepared by:
Roadstone Limited
Fortunestown
Tallaght
Dublin 24

1. Purpose:

The purpose of this Extractive Waste Management Plan (WMP) is to ensure that Roadstone Ltd (Roadstone) is in compliance with the Waste Management (Management of Waste from the Extractive Industries) Regulations 2009 (the Regulations) by the provision of measures, procedures and guidance to prevent or reduce as far possible any adverse effects on the environment, in particular water, air, soil, fauna and flora and landscape, and any resultant risks to human health, brought about as a result of the management of extractive material at Huntstown Quarry.

2. Scope:

“Extractive waste” is referred to in the Regulations as “waste resulting from prospecting, extraction, treatment and storage of mineral resources and the working of quarries”. Waste is defined in Section 4 of the Waste Management Act 1996 and means any substance or object which the holder discards, intends or is required to discard.

3. Responsibilities:

Responsibilities resulting from this WMP are assigned to the Location Manager.

4. Location Details:

- a. **Geographic Location:** This location is positioned at grid co-ordinates 310987E; 241562N.
- b. **Map:** Refer to Appendix 1.
- c. **Rock Type:** Limestone.
- d. **Products:** The following are the main products produced at this Location: Stone, Blocks and Concrete.
- e. **Commencement Date:** Circa 1974.

5. Planning/Environmental Consents:

The following is a list of relevant Planning/Environmental Consents applicable to this Location:

Reference	Description
FW12A/0022	Continuance of quarrying, block, concrete and asphalt production
F02A/0602	C&D waste recovery facility
FW16A/0120	Increase to importation rate of inert soil & stone to 1,500,000 tonnes per annum
FW17A/0012	Increase to intake of C&D to 95,000 tonnes per annum and C&D materials processing shed
FW17A/0226	Extension to permitted North Quarry extraction area (completed)
WPW.F.008	Water Discharge Licence – North Quarry
WPW.F.075	Water Discharge Licence – South Quarry
WFP-FG-09-0006-01	C&D waste permit
W0277-03	Waste licence to accept inert soils & stones and C&D materials

6. Classification of Extracted Material:

There is no intention on behalf of the Operator to discard, where possible, any material extracted from this Quarry. There is a waste facility present at this Quarry, however, it is hoped that all material extracted at this Quarry will either be used for rehabilitation and/or construction processes or will be processed for eventual sale. C&D type waste materials resulting from the operation of the block and concrete plants may occasionally need to be sent to the C&D waste permit facility.

Extracted material will fall into the following categories:

- a. **Stripping:** This is material excavated in order to expose the underlying bedrock. Stripping is comprised of:
 - i. **Top Soil:** This material is stripped in order to expose the underlying subsoil &/or rock and is used to assist in the following:
 - i. Construction of Screening berms: to assist in visual mitigation.
 - ii. Construction of Noise attenuation berms.
 - iii. Construction of Safety berms alongside haul roads and quarry faces.
 - iv. Construction of water settlement ponds.Upon completion of construction, it will be seeded to ensure minimum loss and to prevent wind blow of dust.
 - ii. **Sub-soil:** This material is stripped in order to expose the underlying rock and is used to assist in the construction of those items listed above.
- b. **Extremely weathered Rock:** This is material which may exist below the top soil and sub soil layers but above the bedrock. Where possible, this material will be processed for sale or for use in ancillary products. Where the quality of

this material does not lend itself to these end uses, it will be used for the same purposes as is sub soil.

- c. **Rock:** This is the material which comprises all saleable products from the quarry. Rock is processed into a wide range of individual products which are stored within the confines of the quarry prior to sale or prior to use in ancillary processes. Whilst in storage, stockpiles of product are maintained in order to ensure mound stability, minimal visual intrusion and minimal environmental impact.
- d. **Silt or rock fines:**
 - i. This material originates from the various quarrying activities (blasting, drilling, crushing etc) on site and can become suspended in surface water. It must be removed from the surface water prior to discharge off-site or reuse in other on-site processes and this takes place in settlement ponds. Similar material can also become concentrated as a result of the washing of extracted aggregates and in the outflow of water from the wheel wash.
 - ii. Settlement ponds are cleaned out on a regular basis to ensure adequate capacity within the pond to allow sufficient retention time to ensure adequate settlement of fines.
 - iii. All material removed from settlement ponds is temporarily stored to allow natural outflow of retained moisture. Following this short storage period, the material is mixed with other low grade material and is used as follows, where there is a definite and identified requirement:
 - i. Construction of Screening berms: to assist in visual mitigation.
 - ii. Construction of Noise attenuation berms.
 - iii. Construction of Safety berms alongside haul roads and quarry faces.
 - iv. In all instances, the silt material will be covered with soil and seeded to ensure the elimination of wind blown dust and to allow the development of vegetation. All construction will be designed and implemented to ensure adequate mound stability, minimal visual intrusion and minimal environmental impact.

7. Mitigation Measures

A. **Slope Stability:**

- i. The aim of a safety berm is to provide edge protection in order to ensure a vehicle does not leave a roadway. As a result, the stability of a safety berm slope is one of the most important factors taken into account during the design and construction phases.
- ii. Other berms such as noise attenuation and visual screening berms are also designed and constructed with safety as a priority in order to ensure that they do not endanger people in their vicinity.

- iii. Roadstone complies with existing Quarries Legislation by carrying out systematic reviews of stockpile construction and maintenance. This includes:
 - 1. Hazard Identification.
 - 2. Stability of adjacent structures.
 - 3. Control Measures
 - 4. Procedures for Loading from and Working at Stockpiles.

B. Environmental Management System:

This Location is operated in accordance with an ISO 14001 accredited Environmental Management System (EMS). Under this EMS, the following items are monitored on a regular basis:

- i. Noise emissions
- ii. Dust emissions
- iii. Blast vibration and air overpressure
- iv. Surface water monitoring
- v. Groundwater monitoring

C. Pollution Prevention:

- i. This Quarry is operated in accordance with existing planning permission conditions including limits set on emissions of dust. Any extracted material stored in constructed berms is seeded in order to encourage the growth of vegetation and to minimise wind blown dust.
- ii. This quarry is operated in accordance with an existing water discharge licence which includes limits set on the emission of particulates and other matter.
- iii. Wheel wash.
- iv. Management of this Quarry is carried out under the obligations contained within these site specific controls and in line with the EPA Environmental Management Guidelines and the Irish Concrete Federation Environmental Code.

D. Monitoring:

- i. As part of this Quarry's compliance with the permission & licence referred to above, regular monitoring of emissions is carried out and where called for, reported to the Local Authority.
- ii. Monitoring requirements are also stipulated in the Quarry site specific Environmental Management System (EMS).
- iii. These monitoring schedules ensure a methodology of continuous improvement is in place at this Quarry.

E. Financial Guarantee:

- i. Where requested by the Local Authority, a bond is in place to ensure the satisfactory restoration of this Quarry.
- ii. A bond is in place in respect of the inert soil and stone waste licence facility.

8. Closure Plan

The closure plan for the site, including rehabilitation, after-closure procedures and monitoring is as follows:

1. All extractive non-saleable material produced on site will eventually be used in the rehabilitation of the site including the quarry void.
2. To ensure the long-term integrity of the slopes at the restoration site, precautions will be incorporated both at the design stage and during backfilling operations as detailed below.

i. Design Considerations / Stability Assessment

- a) Stability of slopes prior to, during and following restoration of the quarry will be a key consideration during the design process.
- b) The following factors will be taken into account during the design process: -
 - nature of substrata, i.e. the presence of any historical mining and quarrying, presence of superficial deposits, variation in the water table, geotechnical and hydraulic properties of any materials to be utilised at the site;
 - stability of inert waste materials, i.e. stability of temporary slopes during backfilling;
 - stability of capping and restoration layers, i.e. final surface gradients and effects of soil settlement.

ii. Operational Techniques

- a) The following operational techniques to ensure stability of the backfilled materials, will be adopted at the site: -
 - Compaction: Extractive material will be levelled and compacted as soon as possible after placement within the quarry void. This will minimise any future settlement, increase the density and strength of the backfill materials and enhance stability;
 - Large objects: All larger inert extractive material (boulders etc.) will be broken / crushed to ensure that voids do not develop in the backfilled soil mass;

iii. Monitoring Techniques

- a) The following action will be taken to monitor the stability and settlement of the soil slopes: -
 - Visual inspections will be carried out at regular intervals to identify the following: -
 - evidence of instability or movement (back scarps or toe bulging)
 - evidence of differential settlement causing depressions in the restored landform or damage to the drainage system.

iv. Action Plan

a) In the event that stability or settlement problems are discovered, appropriate remedial action will be taken as detailed below-

a. Instability of Waste Mass

If there is visual evidence of movement within the inert soil mass, or evidence from the regular topographical surveys, the situation will be reviewed by a competent engineer, and appropriate remedial action will be taken in agreement with Fingal County Council.

The action taken will depend upon the severity of the movement, the timescales over which the unstable mass will remain unsupported, and the consequences of failure.

Action taken may include one or more of the following: -

- the situation will continue to be monitored through regular visual inspections and/or topographical surveys;
- prohibition of operations at the base of the slope, which may place operatives at potential risk;
- adjustment to phasing of restoration operations to provide additional support to the inert soil mass as soon as possible;
- engineering work to reduce the gradient of the slope;
- revised design for future phases to reduce slope gradients.

v. Records

Records will be maintained as follows: -

- the results of visual inspections and topographical surveys;
- stability problems including date, nature and suspected cause of the problem; and
- details on the corrective action taken, and any subsequent changes to site design or operational procedures.

9. Review of WMP:

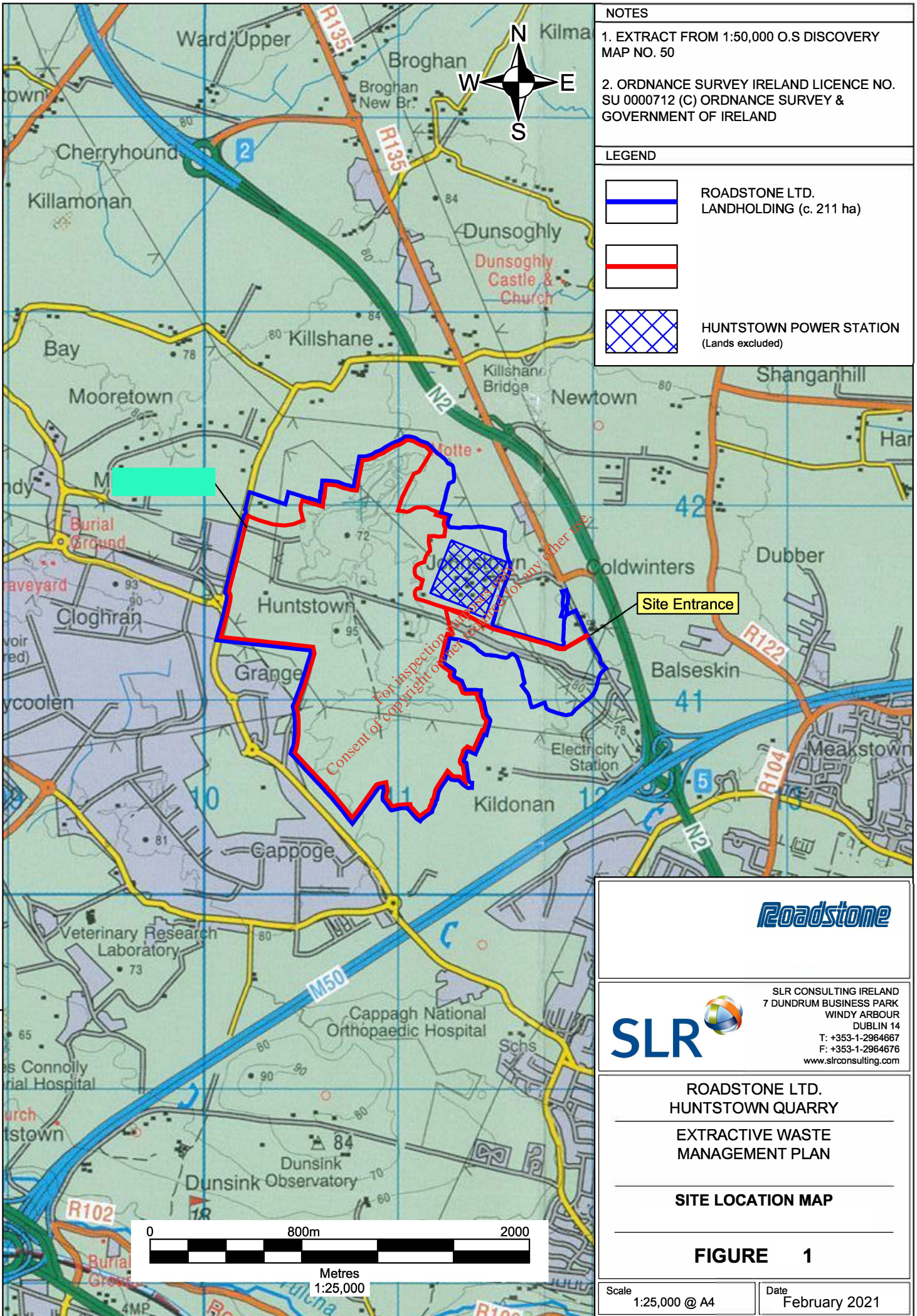
The WMP will be reviewed every five (5) years and amended, as appropriate, in the event of substantial changes to the operation of Huntstown Quarry.

Fingal County Council will be notified in the event that any amendments are made to the WMP.

Appendix 1

Location Map

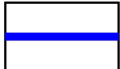
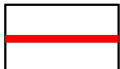

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NOTES

- EXTRACT FROM 1:50,000 O.S DISCOVERY MAP NO. 50
- ORDNANCE SURVEY IRELAND LICENCE NO. SU 000712 (C) ORDNANCE SURVEY & GOVERNMENT OF IRELAND

LEGEND

-  ROADSTONE LTD. LANDHOLDING (c. 211 ha)
- 
-  HUNTSTOWN POWER STATION (Lands excluded)



SLR 

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

**ROADSTONE LTD.
 HUNTSTOWN QUARRY**

**EXTRACTIVE WASTE
 MANAGEMENT PLAN**

SITE LOCATION MAP

FIGURE 1

Scale: 1:25,000 @ A4 Date: February 2021

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