

ROADSTONE WOOD LTD.

RESPONSE TO ARTICLE 14(2)(B)(II) OF THE WASTE MANAGEMENT (LICENSING) REGULATIONS 2004, AS AMENDED

MULLAGHCRONE QUARRY

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August 2011

TOBIN CONSULTING ENGINEERS



REPORT

PROJECT:

**RESPONSE TO ARTICLE 14(2)(B)(II) OF THE
WASTE MANAGEMENT (LICENSING)
REGULATIONS 2004, AS AMENDED**

CLIENT:

Roadstone Wood
Mullaghcrone Quarry,
Donore
County Meath

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DOCUMENT AMENDMENT RECORD

Client:	Roadstone Wood
Project:	Application for Waste Licence
Title:	Response to Article 14(2)(B)(II) of the Waste Management (Licensing) Regulations 2004, as amended

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PROJECT NUMBER: 6622				DOCUMENT REF: Final			
Final	Article 14 Response	JD	29/08/11	ST	29/08/11 1	DG	29/08/11
Revision	Description & Rationale	Originated	Date	Checked	Date	Authorised	Date
TOBIN Consulting Engineers							

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1 INTRODUCTION

A Waste Licence Application was submitted to the EPA for a Waste Licence Facility, located at Mullaghcrone Quarry, Donore, Co. Meath. The EPA issued a Notice on 11th August 2011 in accordance with Article 14(2)(B)(II) of the Waste Management (Licensing) Regulations 2004, as amended. A response to this Notice and a revised non-technical is included in this document.

2 RESPONSE TO ARTICLE 14(2)(B)(II)

Item 1: *With reference to Article 12(1) (f) of the Waste Management (Licensing) Regulations, provide a revised Table B.7.1 and Table H.1 (A) (updated versions of which are attached and are also available in the 2011 waste licence application form at www.epa.ie) identifying the relevant classes of activity according to the Third and Fourth Schedules to the amended Waste Management Acts 1996 to 2011. (Amendment to the Acts was introduced by regulation 24 of the European Communities (Waste Directive) Regulations 2011). Please find attached a hardcopy of Table B.7.1 and Table H.1 (A) for your information.*

Response to Item 1:

Table B.7.1 and Table H.1 (A) have been updated as requested and are attached in Appendix 1. As defined by the Waste Management Act (1996) the principal activity undertaken at the site is Class 2 of the Fourth Schedule of the Waste Management Act (1996), namely:

Principal Activity

The **principle** activity to be carried out at the facility will be:

Class R 10: Land treatment resulting in benefit to agriculture or ecological improvement.

The recovery activities at the proposed Construction and Demolition Facility will be in accordance with the Fourth Schedule of the Waste Management Act 1996. The C&D activity to be carried out at the facility will be:

Class R 5: Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials.

Other activities from the Fourth Schedule will include:

Class R 4: Recycling or reclamation of metals and metal compounds.

Class R 13: Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).

Item 2: Provide information to address the requirements of Article 12(1)(v) of the Waste Management (Licensing) Regulations, 2004, as amended, in relation to a description of how the waste hierarchy in Section 21A of the amended Waste Management Acts 1996 to 2011 is applied. Please have regard to the requirements of Section 29(2A) of the amended Acts in addressing this item. (Amendment to the Regulations was introduced by Regulations 57 and amendment to the Acts regarding Sections 21A and 29(2A) by Regulations 7 and 14 respectively of the European Communities (Waste Directive) Regulations 2011).

Response to Item 2:

SI 126 of 2011 - European Communities (Waste Directive) Regulations 2011 gives effect to Directive 2008/98/EC of the European Parliament and substantially amends the Waste Management Acts of 1996-2011. The Waste Hierarchy as set out in Section 21A of the amended Waste Management Acts 1996 to 2011 is as follows;

21A. (1) *The following waste hierarchy shall apply as a priority order in waste prevention and management legislation and policy:*

- (a) *prevention;*
- (b) *preparing for re-use;*
- (c) *recycling;*
- (d) *other recovery (including energy recovery); and*
- (e) *disposal.*

Prevention of waste is largely beyond the scope of authority of the applicant however Mullaghcrone Quarry by its inherent nature operates to the highest possible level of the waste hierarchy. The principal activity is the operation of an soil recovery and C&D recycling facility to accept and process inert soil and stones and inert C&D material and is considered a recycling activity. The definition of recycling as set out in Section 5 of the European Communities (Waste Directive) Regulations 2011 is as follows;

‘recycling’— (a) subject to paragraph (b), means any recovery operation by which waste materials are reprocessed into products, materials or substances, whether for the original or other purposes, including the reprocessing of organic material,
(b) does not include—
(i) energy recovery, and
(ii) the reprocessing into materials that are to be used as fuels or for backfilling operations;

‘recovery’—
(a) means any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy, and
(b) without prejudice to the generality of paragraph (a), includes the recovery operations listed in the Fourth Schedule, and ‘waste recovery activity’ shall be construed accordingly;

Paragraph 31 of Directive 2008/98/EC states the following in relation to waste hierarchy

'The waste hierarchy generally lays down a priority order of what constitutes the best overall environmental option in waste legislation and policy, while departing from such hierarchy may be necessary for specific waste streams when justified for reasons of, inter alia, technical feasibility, economic viability and environmental protection'.

Based on the information provided the proposed waste licence facility will deliver the best overall environmental outcome as defined in Paragraph 31 of 2008/98/EC.

C & D waste is a very significant component of the overall waste stream, particularly in relation to building construction, renovation and demolition. Very large quantities of this waste are being landfilled, despite potential resource value and a shortage of land fill space. The technology for the segregation and recovery of C&D waste is well established and readily accessible and there is a ready reuse market for aggregates, as fill for road, drainage and other construction projects. Recycling of construction and demolition waste, including re-use of road construction materials, provides an increasing source of raw materials. Mullaghcrone Quarry is established as a soil and stones and C&D recycling facility. The continuance of operations within the Mullaghcrone Quarry site is considered to represent a viable option for a waste licence, in terms of location, availability, existing markets, technical characteristics and manageable environmental impacts.

Similarly inert soil and stones is a very significant component of the overall waste stream. Very large quantities of this waste are being landfilled, despite potential resource value and a shortage of land fill space. The proposed soil and stones operation will result in the restoration of a large area for agricultural use which would otherwise be under utilised and unproductive. The proposed facility will also provide for the regulation of the recovery of soil and stones, which are generated through infrastructure and construction projects in the North East region.

Other Items: Your reply to this notice should include a revised non-technical summary which reflects the information you supply in compliance with this notice, insofar as that information impinges on the non-technical summary.

Response to Other Items:

The non technical summary has been revised and is included in Appendix 2. The revised details can be found in section 1.3 of the revised NTS.

APPENDIX 1

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A.1.1 Specify the class or classes of activity in Table B.7.1, in accordance with the Third Schedule or Fourth Schedule to the Waste Management Acts 1996 to 20010, as amended by the European Communities (Waste Directive) Regulations, 2011, to which the application relates (check the relevant box(es) and mark the principal activity with a ‘P’).

Attachment B.7 should identify the principle activity and include a brief technical description of each of the other activities specified. **There can only be one principal activity.**

Table B.7.1 Third and Fourth Schedules of the Waste Management Acts 1996 to 2010

Waste Management Acts 1996 to 2010					
Third Schedule Waste Disposal Operations		Y/N	Fourth Schedule Waste Recovery Operations		Y/N
D 1	Deposit into or on to land (e.g. including landfill, etc.).		R 1	<p>Use principally as a fuel or other means to generate energy: This includes incineration facilities dedicated to the processing of municipal solid waste only where their energy efficiency is equal to or above:</p> <ul style="list-style-type: none"> - 0.60 for installations in operation and permitted in accordance with applicable Community acts before 1 January 2009, - 0.65 for installations permitted after 31 December 2008, <p>using the following formula, applied in accordance with the reference document on Best Available Techniques for Waste Incineration: Energy efficiency = $(E_p - (E_f + E_i)) / (0.97 \times (E_w + E_f))$ where—</p> <p>‘E_p’ means annual energy produced as heat or electricity and is calculated with energy in the form of electricity being multiplied by 2.6 and heat produced for commercial use multiplied by 1.1(GJ/year),</p> <p>‘E_f’ means annual energy input to the system from fuels contributing to the production of steam (GJ/year),</p> <p>‘E_w’ means annual energy contained in the treated waste calculated using the net calorific value of the waste (GJ/year),</p> <p>‘E_i’ means annual energy imported excluding E_w and B_f(GJ/year),</p> <p>‘0.97’ is a factor accounting for energy losses due to bottom ash and radiation.</p>	
D 2	Land treatment (e.g. biodegradation of liquid or sludgy discards in soils, etc.).		R 2	Solvent reclamation/regeneration.	
D 3	Deep injection (e.g. injection of pumpable discards into wells, salt domes or naturally occurring repositories, etc.).		R 3	Recycling /reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and	

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				pyrolysis using the components as chemicals.	
D 4	Surface impoundment (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons, etc.).		R 4	Recycling/reclamation of metals and metal compounds.	Y
D 5	Specially engineered landfill (e.g. placement into lined discrete cells which are capped and isolated from one another and the environment, etc.).		R 5	Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials.	Y
D 6	Release into a water body except seas/oceans.		R 6	Regeneration of acids or bases.	
D 7	Release to seas/oceans including sea-bed insertion.		R 7	Recovery of components used for pollution abatement.	
D 8	Biological treatment not specified elsewhere in this Schedule which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12.		R 8	Recovery of components from catalysts.	
D 9	Physico-chemical treatment not specified elsewhere in this Schedule which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12 (e.g. evaporation, drying, calcinations, etc.).		R 9	Oil re-refining or other reuses of oil.	
D 10	Incineration on land.		R 10	Land treatment resulting in benefit to agriculture or ecological improvement.	Y
D 11	Incineration at sea (this operation is prohibited by EU legislation and international conventions).		R 11	Use of waste obtained from any of the operations numbered R 1 to R 10.	
D 12	Permanent storage (e.g. emplacement of containers in a mine, etc).		R 12	Exchange of waste for submission to any of the operations numbered R 1 to R 11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11).	
D 13	Blending or mixing prior to submission to any of the operations numbered D 1 to D 12 (if there is no other D code appropriate, this can include preliminary operations prior to disposal including pre-processing such as, amongst others, sorting, crushing, compacting, pelletising, drying, shredding, conditioning or separating prior to submission to any of the operations numbered D1 to D12).		R 13	Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).	Y
D 14	Repackaging prior to submission to any of the operations numbered D 1 to D 13.				
D 15	Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage (being preliminary storage according				

	to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).				
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The reclamation activities at the proposed land restoration facility will be in according to the Fourth Schedule of the Waste Management Act 1996-2010. The principle activity to be carried out at the facility will be:

Class R 10: Land treatment resulting in benefit to agriculture or ecological improvement.

The recovery activities at the proposed Construction and Demolition will be in according to the Fourth Schedule of the Waste Management Act 1996. The C&D **activity** to be carried out at the facility will be:

Class R 5: Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials.

Other activities from the Fourth Schedule will include:

Class R 4: *Recycling or reclamation of metals and metal compounds.*

Class R 13: *Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).*

Details of the proposed waste licence facility are provided in Section 1.3 of the Non Technical Summary.

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SECTION F MATERIALS HANDLING

H.1 Waste Types and Quantities – Existing & Proposed

Provide an estimation of the quantity of waste likely to be handled in relation to each class of activity applied for. This information should be included in Table H.1(a).

Table H.1(a). Quantities of Waste in Relation to Each Class of Activity Applied for

Waste Management Acts 1996 to 2010 3rd Schedule (Disposal) Operations			Waste Management Acts 1996 to 2010 4th Schedule (Recovery) Operations		
Class of Activity Applied For		Quantity (tpa)	Class of Activity Applied For		Quantity (tpa)
Class D 1			Class R 1		
Class D 2			Class R 2		
Class D 3			Class R 3		
Class D 4			Class R 4		2,000
Class D 5			Class R 5		47,000
Class D 6			Class R 6		
Class D 7			Class R 7		
Class D 8			Class R 8		
Class D 9			Class R 9		
Class D 10			Class R 10		100,000
Class D 11			Class R 11		
Class D 12			Class R 12		
Class D 13			Class R 13		1,000
Class D 14					
Class D 15					

In Table H. 1 (B) provide the annual amount of waste handled/to be handled at the facility. Additional information should be included in **Attachment H.1**. The tonnage per annum should be given of that expected for the life of the licence, with at least the next five years tonnages provided. For Landfill Review applications provide an estimate of the quantity of waste already deposited in (i) lined cells; (ii) unlined cells.

Table H.1(B) Annual Quantities and Nature of Waste

Year	Non-hazardous waste (tonnes per annum)	Hazardous waste (tonnes per annum)	Total annual quantity of waste (tonnes per annum)
Not Applicable			

Not Applicable			
Not Applicable			

A detailed inventory of the types and quantities of wastes currently handled at the site and proposed to be handled should be submitted as Table H.1 (C).

Table H.1 (c) Waste Types and Quantities

WASTE TYPE	TONNES PER ANNUM (existing)	TONNES PER ANNUM (proposed)	TOTAL (over life of site) tonnes
Household	Not Applicable		
Commercial	Not Applicable		
Sewage Sludge	Not Applicable		
Construction and Demolition		50,000	1,000,000
Industrial Non-Hazardous Sludges	Not Applicable		
Industrial Non-Hazardous Solids	Not Applicable		
Hazardous *(Specify detail in Table H 1.2)	Not Applicable		
Inert Waste imported for restoration purposes			

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COMPLETE FOR LANDFILL & CONTAMINATED LAND FACILITIES ONLY

*** Table H.1.2 Hazardous Waste Types and Quantities**

HAZARDOUS WASTE	DETAILED DESCRIPTION * REFERENCE SHOULD BE MADE TO THE RELEVANT EUROPEAN WASTE CATALOGUE CODES AS PRESENTED BY COMMISSION DECISION 2000/532/EC	Tonnes Per Annum (Existing)	(Tonnes Per Annum Proposed)
Waste Oil	Not Applicable		
Oil filters	Not Applicable		
Asbestos	Not Applicable		
Paint and Ink	Not Applicable		
Batteries	Not Applicable		
Fluorescent Light Bulbs	Not Applicable		

Contaminated Soils	Not Applicable		
OTHER HAZARDOUS WASTE (APPLICANT TO SPECIFY)			
Not Applicable			

Attachment H.1 should contain any relevant additional information.

It should be noted that an applicant may be issued with a licence which restricts the type of wastes which may be deposited.

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APPENDIX 2

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NON TECHNICAL SUMMARY

**WASTE LICENCE APPLICATION,
MULLAGHCRONE QUARRY, DONORE, CO. MEATH.**

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August 2011

TOBIN CONSULTING ENGINEERS



REPORT

PROJECT: Waste Licence Application, Mullaghcrone Quarry

CLIENT: **Roadstone Wood**
Mullaghcrone Quarry, Donore
County Meath

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DOCUMENT AMENDMENT RECORD

Client:	Roadstone Wood
Project:	Application for Waste Licence
Title:	NON TECHNICAL SUMMARY

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PROJECT NUMBER: 6222				DOCUMENT REF: 6222 TR0002			
A	Issue for Submission	JD	29-05-11	ST	30-05-11	DG	30-05-11
Revision	Description & Rationale	Originated	Date	Checked	Date	Authorised	Date
TOBIN Consulting Engineers							

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1 INTRODUCTION

1.1 GENERAL

TOBIN Consulting Engineers has prepared this Environmental Impact Statement (EIS) for a waste licence area located in the townlands of Cruicerath and Platin, Donore, County Meath. The proposed area is located in the southwest part of Roadstone Wood's Mullaghcrone Quarry.

The location of the quarry in relation to the surrounding regional setting is shown on Figure 1.1.

The site is located in the southeast of County Meath. The first site entrance to Mullaghcrone Quarry, 'the Donore entrance', which is on the northern boundary of the site, is located approximately 1 km northwest of the village of Donore, County Meath (see Figure 1.1). The second site entrance to Mullaghcrone Quarry, the 'Platin Entrance', which is located along the southern boundary of the site, is located approximately 1.5km southwest of the village of Donore, County Meath (see Drawing No. 1.2). With respect to other population centres, the quarry is approximately 4km north of Duleek, 4km southwest of Drogheda and 9.5km east of Slane.

The property is in the ownership of Roadstone Wood. The area of the overall Roadstone Wood property extends to 93.8ha and is bound by a local road (L1601) to the north; Platin Quarry to the south, agricultural land to the west and by a local county road (L5612) to the east (see Figure 1.2).

The lands included in this EIS apply to 11.7 ha deposition area and 3.6 ha associated facilities/haulage routes within the property ownership (15.3 ha total). The EIS is prepared for waste licence development comprising soil & stones and C&D material. The waste licence will involve the future infilling of 1,200,000 m³. By maintaining an average infilling rate of 100,000 tonnes per annum, with C&D comprising 50,000 tonnes per annum, this will allow the waste licence to continue for approximately 20 years.

1.2 SITE LOCATION

The proposed Waste Licence application area is located in a semi-rural to industrial area in the townlands of Cruicerath and Platin, which is approximately 600m to the southeast of Donore Village. The location of the site in relation to its geographic surrounds is shown on Figure 1.1 (Regional Site Location Map).

The R152 Regional Road passes through Duleek Village approximately 1.5km to the southeast, with the M1 located 2km to the east of the proposed waste licence area. This national route provides a proximal route for vehicles accessing or exiting the site. Mullaghcrone Quarry is accessed from two site entrances: the L1601 along the northern site boundary and the L5612 along the southeast boundary.

The site is relatively well screened by the existing topography and hedgerows/trees. The natural screening of the site was accounted for in the infilling design.

On the basis of current and anticipated demand, infill operations will be maintained at an annual average of 100,000 tonnes over a 20 year lifetime. Allowing for variations in demand over the lifetime of the operation, permission is sought to facilitate infilling over this period.

The proposed development will also involve the progressive restoration of lands during the infilling operation. Restoration works will be commensurate with the infill of materials in these areas.

1.3 RECYCLING AND RECOVERY ACTIVITIES

The reclamation activities at the proposed land restoration facility will be in accordance with the Fourth Schedule of the Waste Management Act 1996-2010. The **principle** activity to be carried out at the facility will be:

Class R 10: Land treatment resulting in benefit to agriculture or ecological improvement.

The recovery activities at the proposed Construction and Demolition will be in accordance with the Fourth Schedule of the Waste Management Act 1996. The C&D activity to be carried out at the facility will be:

Class R 5: Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials.

Other activities from the Fourth Schedule will include:

Class R 4: Recycling or reclamation of metals and metal compounds.

Class R 13: Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).

Statutory Instrument 126 of 2011 - European Communities (Waste Directive) Regulations 2011 gives effect to Directive 2008/98/EC of the European Parliament and substantially amends the Waste Management Acts of 1996-2011. The Waste Hierarchy as set out in Section 21A of the amended Waste Management Acts 1996 to 2011 is as follows;

21A. (1) The following waste hierarchy shall apply as a priority order in waste prevention and management legislation and policy:

- (a) prevention;*
- (b) preparing for re-use;*
- (c) recycling;*
- (d) other recovery (including energy recovery); and*
- (e) disposal.*

Prevention of waste is largely beyond the scope of authority of the applicant however Mullaghcrone Quarry by its inherent nature operates to the highest possible level of the waste hierarchy. The principal activity is the operation of an soil recovery and C&D recycling facility to accept and process inert soil and stones and inert C&D material and is considered a recycling activity. The definition of recycling as set out in Section 5 of the European Communities (Waste Directive) Regulations 2011 is as follows;

'recycling'— (a) subject to paragraph (b), means any recovery operation by which waste materials are reprocessed into products, materials or substances, whether for the original or other purposes, including the reprocessing of organic material,
(b) does not include—

- (i) energy recovery, and
- (ii) the reprocessing into materials that are to be used as fuels or for backfilling operations;

'recovery'—

- (a) means any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy, and
- (b) without prejudice to the generality of paragraph (a), includes the recovery operations listed in the Fourth Schedule, and 'waste recovery activity' shall be construed accordingly;

Paragraph 31 of Directive 2008/98/EC states the following in relation to waste hierarchy

'The waste hierarchy generally lays down a priority order of what constitutes the best overall environmental option in waste legislation and policy, while departing from such hierarchy may be necessary for specific waste streams when justified for reasons of, inter alia, technical feasibility, economic viability and environmental protection'.

Based on the information provided the proposed waste licence facility will deliver the best overall environmental outcome as defined in Paragraph 31 of 2008/98/EC.

C & D waste is a very significant component of the overall waste stream, particularly in relation to building construction, renovation and demolition. Very large quantities of this waste are being landfilled, despite potential resource value and a shortage of land fill space. The technology for the segregation and recovery of C&D waste is well established and readily accessible and there is a ready reuse market for aggregates, as fill for road, drainage and other construction projects. Recycling of construction and demolition waste, including re-use of road construction materials, provides an increasing source of raw materials. Mullaghcrone Quarry is established as a soil and stones and C&D recycling facility. The continuance of operations within the Mullaghcrone Quarry site is considered to represent a viable option for a waste licence, in terms of location, availability, existing markets, technical characteristics and manageable environmental impacts.

Similarly inert soil and stones is a very significant component of the overall waste stream. Very large quantities of this waste are being landfilled, despite potential resource value and a shortage of land fill space. The proposed soil and stones operation will result in the restoration of a large area for agricultural use which would otherwise be under utilised and unproductive. The proposed facility will also provide for the regulation of the recovery of soil and stones, which are generated through infrastructure and construction projects in the North East region.

2 EXISTING SITE AND PROPOSED DEVELOPMENT

2.1 THE SITE

The application area is contained within Mullaghcrone Quarry, owned by Roadstone Wood, as shown on Figure 1.2 above. The total site application boundary including haul roads encompasses an area of 15.3 hectares. The application area is comprised of 11.7 hectares previously used for waste permit purposes and 3.6 hectares of haulage road and associated facilities.

The geomorphological terrain is characterised by undulating to hilly landform, with the hills underlain by clay till material and limestone bedrock.

The application area is bound by Mullaghcrone Quarry to the north which is the main access point for vehicles accessing the proposed development.

Platin Quarry operated by Irish Cement Ltd., forms the southern boundary with agricultural land located to the west. The land-use adjacent to the application area is predominantly a land restoration area and a limestone quarry.

Donore village is located approximately 1 km to the northwest of the development entrance. The R152 Regional Road runs in a general northeast to southwest direction through Duleek Village.

2.2 APPLICATION AREA

The site is located in the townlands of Cruicerath and Platin, Donore Co. Meath. The site is approximately 1 km to the southeast of Donore Village.

The total site application boundary encompasses an area of approximately 15.3 ha. The application area is at present used for C&D Waste Permit purposes. There are no houses within the site boundary.

The EIS has been prepared for a waste licence application, comprising infilling of soil and stones, C&D recovery, landscaping measures and visual screening.

2.3 THE OPERATION

The infilling area will be developed in 4 No. infilling phases. The reserve life is approximately 20 years.

Waste Infilling

Phase 1 and Phase 2 are within the Area B landbank (refer to Fig. 1.2). The infilling will progress in a west to east direction, in accordance with the recommendations from the Landscape and Visual Assessment Consultants.

A volumetric assessment of the void space has been undertaken, which is calculated to be approximately 1,200,000m³ within the target infilling area. This equates to 1,800,000 tonnes of material. The infilling of this material will continue the operations by approximately 20 years.

The infill of material will be 30m – 70m above the watertable. Therefore all working in this area will be on a dry working platform. It is not proposed that water management systems or controls are required in this area. Any rainfall onto this area will readily infiltrate to ground.

Following infill in this area the land will be restored. Topsoil will be spread over the infilled area and the land will be returned to grassland for agricultural use.

Operational Procedures

The infilling and transport equipment to be used in the proposed waste licence will consist of: -

- 2 No. Bulldozers;
- 2 No Dump trucks; and

- 2 No. front-end loaders.

The import of materials to the site will be undertaken under contract to Roadstone Wood.

As part of the waste licence, but separate to the physical infilling operation, waste licence activities will utilise the existing wheelwash, weighbridge, garage and administration/security portacabin office located close to the southern quarry entrance from the L5612.

2.4 WORKING HOURS

The proposed working hours for the proposed development will be as follows: -

- 07.00 to 19.00 hours, Monday to Friday; and
- 07.00 to 15.00 hours on Saturday.
- The quarry will not be operated on Sundays and Public Holidays unless warranted by exceptional circumstances and this will be agreed in advance with the Local Authority.

2.5 EMPLOYMENT

The proposed waste licence area will secure approximately 10 people, both directly on-site and for haulage.

Indirect employment will be generated as a result of the Waste Licence activity, in terms of contract transport drivers, suppliers of products and services, machinery suppliers, environmental monitoring, etc.

2.6 SITE SECURITY

The site boundary is fenced along the entrance to the quarry and at the quarry boundaries. Warning signs will be located and maintained at the perimeter fencing providing notice of the proposed on-site Waste Licence operations.

The security measures employed will ensure that accidental entry to the site is prohibited. Regular inspections of the site security arrangement will be undertaken by site operatives and repaired immediately if any damage is noted.

2.7 HEALTH AND SAFETY

The primary concern of Roadstone Wood is the safety and protection of employees, end users, the public, and the environment, with regard to all aspects of the infill, storage, transportation and use of aggregate products and the transportation of construction aggregates. The quarry will operate under the relevant health and safety legislation, i.e. *The Safety, Health and Welfare at Work Act, 2005*, *The Mines and Quarries Act, 1965* and subsequent Quarries Regulations relating to safety health and safety, training, appropriate site management etc.

All personnel will be appropriately trained and certified in the safe handling, transportation and processing of aggregate materials. All personnel will be thoroughly trained on the properties of all materials and products being handled within the quarry, and will be trained to react in the unlikely event of an unplanned incident.

2.8 TRAFFIC CONTROL AND TRANSPORT ROUTES

All traffic will enter and leave the quarry via the existing entrances from the L1601 and L5612, and proceed along the internal haul road to the proposed waste licence area.

All vehicles using the site will pass through a wheelwash. The public road network will be cleaned, when necessary, of any dirt and debris as a result of the spillage due to the haulage of materials to and from the site.

The following mitigation measures will be employed to ensure traffic associated with the development will not impact negatively on the environment.

- Continuation of the adequate on-site parking will be provided for employees and visitors cars;
- Provision of on-site speed restrictions;
- Ensuring that all HGVs are not overloaded; and
- Checking public roads in the vicinity for signs of spillages.

In addition to the above, a road sweeper will be periodically contracted to sweep the road near the entrances on the L1601 and L5612 roadway leading to the R152 National Secondary road.

2.9 SITE ROADS AND HARDSTANDING

The internal roads are tarmaced/concreted from the site entrances to the weighbridge and security barriers. Haul roads are constructed of crushed stone/site won material with relatively minor quantities of construction and demolition waste, principally oversize or recovered (ie. crushed and screened) concrete and bricks.

2.10 MATERIAL INSPECTION AND QUARANTINE

All imported materials will be inspected as it enters the site. It will also be inspected when tipped in the C&D processing area and soil and stones area.

Waste Quarantine Areas

If inappropriate material is identified during inspection, it will be removed to a waste quarantine area before removal from site. It is proposed to use skips on an existing covered and secure hardstand area for storage of quarantine rejected waste. The waste skips will be stored within an existing, secure covered garage at the proposed facility.

Laboratory Testing

Laboratory testing of soil, surface water and groundwater will be undertaken off-site at an ILAB/UKAS accredited laboratory. Any validation testing and laboratory testing required to confirm classification of waste as inert will also be undertaken by the same laboratory. All samples taken on-site will be forwarded to the laboratory and test results will typically be forwarded to site within ten working days.

2.11 EXISTING SERVICES AND FUEL STORAGE

Much of the infrastructure required for the proposed waste licence activity is already in place at Mullaghcrone Quarry including a weighbridge, wheelwash, mobile crushing plant, offices, garage etc. The location of the existing infrastructure is included on Figure 2.1 of the EIS. All heavy good vehicles (HGVs) bringing materials to or from the existing C&D waste recovery facility are required to pass over the existing weighbridge.

A vehicle wheelwash is in operation at Mullaghcrone Quarry. This wheelwash is operated in a closed loop system, to minimise water requirements. A macadam surface is present from the public road to the wheelwash to minimise soiling of road surfaces. HGV vehicles pass over the roller bar system and are sprayed from the jet washers on both sides and beneath the trucks. Wash water is then treated to remove suspended solids in a settlement tank. Treated water is then recirculated to the water tower for re-use in the wheelwash.

At Mullaghcrone Quarry, telephone lines are connected to the Eircom national network providing phone, fax and Internet access. The Electricity Supply Board (ESB) supplies electricity to this site from a 10 kV line crossing the site. With regard to the application area, vehicles on site and mobile plant are operated by fuel.

The existing fuel storage area is located in a bunded area within a hardstand area close to the main concrete batching area. A fuel contractor delivers fuel to the bunded fuel storage area at regular intervals. This will eliminate the requirement for bunded fuel tanks within the waste infill area.

Marked Gas Oil is stored on site in a single 18,600 litre aboveground storage tank (AST). This AST holds the fuel supply for all plant and equipment operating within the site.

A secondary containment system, in the form of an impermeable concrete-lined bund, has been constructed around the AST to ensure that any spillage during loading or any leakage is adequately contained within the bund. The capacity of the bund is approximately 29,300 litres (Dimensions 7.6m x 2.66m x 1.5m), which is 150% of the volume of the AST. Any spillage gathered within the AST bund will be pumped out by an approved contractor (e.g. Atlas Oil, etc) and transported off-site for treatment.

All oil drums and barrels containing hydrocarbons will be contained within a housed bund unit. Lubricant, gear, engine and waste oil will be stored in bunded units within the maintenance garage. Oil drums in the maintenance garage and workshop will be located on spill trays. Spill kits will be provided in close proximity to all bulk liquid storage areas to ensure, in the unlikely event of a spillage, that the contamination is confined to the immediate area. Absorbents will be used in the event of an oil spill to contain and mop up the area. These absorbents will then be placed in a clearly marked contaminated waste bin. All waste oil will be removed from the site by a permitted contractor. These waste streams would include those that are contaminated with oils, i.e. oily rags.

Staff responsible for the fuel storage facility are trained in proper fuel handling and spillage response procedures.

2.12 SEWAGE AND WASTEWATER TREATMENT

It is proposed to continue to utilise the existing wastewater treatment plant at the site. The septic tank, mechanical aeration system and percolation area within Mullaghcrone Quarry accepts sewage from the canteen and toilet blocks within the site. It should be noted that of the 25-30 direct and indirect employees, only 5 full time employees use the toilet facilities on a regular basis. As the number of employees will remain the same at Mullaghcrone no amendments are required to the wastewater treatment system.

2.13 WATER MANAGEMENT SYSTEM

Surface Water

All rainwater falling within the site will be contained within the site boundaries, due to the low elevation of the quarry void, relative to the surrounding natural topographic elevation. Due to the nature of the rock this captured water percolates to ground. The groundwater table is approximately 50 m below ground level at the quarry.

Owing to the free draining nature of the ground (i.e. the site is dominated by limestone deposits), rainwater freely infiltrates to ground. Therefore, where works are conducted above the watertable there are no requirements for water management.

Water consumption within the quarry is low. It is estimated that the drinking water requirement within the quarry would not exceed 60 litres/person/day. Therefore, for a maximum of 10 persons on site per day, the potable water consumption is 0.6m³/day. The mains water source is supplied from the River Boyne at Roughgrange as part of the East Meath Water Supply Scheme.

In order to minimise soiling of roads and to minimise dust emissions from the site, a wheelwash is in operation within Mullaghcrone Quarry. All vehicles leaving the site are directed through the wheelwash. Delivery vehicles, operated under contract to Roadstone Wood, who do not adhere to the strict Roadstone Wood protocol, are subject to sanction.

The washwater is contained within an impermeable sump. As required the wheelwash is replenished with water from the on-site borehole. There are no uncontrolled emissions from the wheelwash system.

2.14 WASTE MANAGEMENT

C&D area

Since there is an existing permit covering the C&D waste recovery activity, operations can continue to operate in their present format.

Recovery and re-cycling activities at the application site will involve loading of previously stockpiled "unprocessed" material into a crushing plant using a front-end loader. Material

produced by the crushing plant will then be transported by front-end loader to 'processed' stockpiles. Recycled material will be loaded and dispatched from 'processed' stockpiles.

Rebars separated from concrete will be stored in a designated location. No sorting of materials other than the separation of rebars from concrete will be undertaken on site, as all material will be sorted and segregated at source before being brought to the application site.

The pre-sorted materials brought to the application site will be stored on-site prior to processing (crushing). Processed material will also be stockpiled prior to transportation off site to markets. Rebar from reinforced concrete will be stored, prior to being removed by a licensed contractor.

The purpose of the proposed operation is to recover and recycle particular elements of construction and demolition waste through pre-sorting of materials at source prior to transportation to the application site.

The objective of Roadstone Wood is to do this in a manner that is sustainable and environmentally friendly, in line with the high environmental standards set by the company for all of its operations. Safeguards to ensure that only suitable material is received on site include but are not limited to:

- Materials to be recovered and recycled will only be accepted from approved Contractors who are aware of the need for and who undertake strict segregation and sorting of waste prior to transporting it to the application site.
- An internal licensing operation will be put in place to ensure that only approved Contractors may use the proposed facility.
- All material arriving on site will be subject to a visual inspection on site prior to and during unloading.
- Any Contractor who carries unacceptable waste to the application site will be refused further use of the facility.

Soil and Stones

This material will be used for the restoration of the quarry lands adjacent to the C&D facility, i.e. at the clay disposal area.

All inert waste will be dealt with in accordance with the relevant legislation and other controls. All recyclable wastes will be segregated and collected by licensed/permited waste contractors. Domestic waste will be removed off-site by a contractor with the requisite waste collection permit.

The following measures will be implemented at the site to ensure waste on site is managed to a high standard:

- Materials to be recovered will only be accepted from approved Contractors who are aware of the need for and who undertake strict segregation and sorting prior to transporting it to the application site.
- An internal licensing operation will be put in place to ensure that only approved Contractors may use the proposed facility.

- All material arriving on site will be subject to a visual inspection on site prior to and during unloading.
- Any Contractor who carries unacceptable waste to the application site will be refused further use of the facility.

2.15 SITE MANAGEMENT

A competent management structure will be in place on site at all times, under the direction and supervision of the Quarry Manager.

2.16 SITE ACCOMODATION

The existing welfare, site office and canteen at Mullaghcrone Quarry will serve the proposed waste licence facility. All administration and management for the waste recovery facility will be based at the site office for the duration of the waste licence. Staff changing, washing and cooking facilities will be provided at the separate canteen facility, located east of the site office and weighbridge.

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3 ALTERNATIVES

Schedule 6 of the Planning and Development Regulation (2001) specify that the EIS should include *'An outline of the main alternatives studied by the developer and an indication of the main reasons for his or her choice, taking account the effects on the environment'*.

The EPA publication, Guidelines on the information to be contained in Environmental Impact Statements, states *'The consideration of alternatives also needs to be set within the parameters of the availability of land (it may be the only suitable land available to the developer) or the need for the project to accommodate demands or opportunities which are site specific. Such considerations should be on the basis of alternatives within the site, e.g. design, layout'*.

The future design of infilling and the mitigation measures proposed in this EIS are designed to ensure that the continued workings within the site do not impinge on the adjacent environment. This design by avoidance and reduction is considered an appropriate consideration of alternatives.

The proposed application area has been defined as the best available area for land restoration and infill using soil and stones material within the surrounding area. Mullaghcrone Quarry has operated under waste permits since 2004 and its economic continuance over this time demonstrates a market for such an activity. Based on the previous waste permits there is a proven market for this activity. The proposed waste licence will secure the facility into the future.

Mullaghcrone Quarry is established as an infilling site for soil and stones and C&D waste recycling activities. Owing to its use as a waste permit area, examination of greenfield alternatives for Waste Licence is not considered appropriate. Creation of new sources of supply, by developing greenfield sites, is problematic from environmental and community perspectives. The continuance of operations within the Mullaghcrone Quarry site is considered to represent a viable option for a waste licence, in terms of location, availability, existing markets, technical characteristics and manageable environmental impacts.

Recycling of construction and demolition waste, including re-use of road construction materials, provides an increasing source of raw materials. In the absence of this facility and the continuing national, regional and local growth over the medium to long term, together with the National Development Plan, alternative sites would have to be sourced, thereby involving possibly greater haul distances, with consequent cost and road nuisance impacts.

HUMAN BEINGS / SOCIO-ECONOMIC

3.1 INTRODUCTION

Human Beings are a vital element to be considered as part of the EIA process. The purpose of this assessment is to examine the existing environment, the potential impacts of the proposed waste licence activities at Mullaghcrone Quarry, at Cruicerath and Platin, Donore, County Meath, on human beings. This section will provide an assessment of socio-economic issues that may be affected by the proposed development. This section will focus on population, employment and tourism and amenities.

The use of soil and stones from the proposed waste licence facility for the restoration of the quarry is a sustainable operation and in line with the objectives and policies of Meath County Council in their current development plan.

The proposed development will consist of the filling of previously quarried areas with material from the soil and stones waste licence facility which will be graded to imitate a naturally formed 'hillock', to blend with the surrounding undulating agricultural landscape. It will revert back to agricultural use.

The application site presents as an area of disturbed ground due to the quarrying activities which forms part of a larger area of disturbed ground. This portion of the quarry will now be restored to agricultural land similar to the existing agricultural land surrounding the site.

The subject site, at present has a low level of visual amenity and no level of recreational amenity. The proposed restoration will constitute a significant and neutral impact on the visual amenity of the area and will have no impact on the recreational amenity of the area. The proposed waste licence activities will not impinge on the buffer zone outlined in the Donore Local Area Plan 2009-2015 or the Brú na Bóinne World Heritage site.

The operation of the waste licence will have limited to no effects on the local population, as similar waste permit activities have previously operated or are currently operated at the site. The waste licence will be managed in such a way as to limit the impact of its operation on the surrounding environment.

There are no tourist amenities, walking routes or cycling routes in immediate proximity to the proposed waste licence facility and therefore the operation of a waste licence facility will not have a negative impact on amenities and tourism to the area.

4 FLORA & FAUNA

The site consists of a previously quarried area which has been partly filled with subsoil and rock material. Habitats on the site consist pre-dominantly of disturbed ground. Partly surrounding the site are semi natural habitats including scrub and hedgerows. These described surrounding habitats which are considered the only key ecological receptors will be avoided by the development.

The proposed site does not lie within or adjacent to any area that has been designated for nature conservation under Irish or European legislation. The nearest designated site is the River Boyne and Blackwater cSAC which lies some 1.1km to the north. No impacts will arise to Natura 2000 sites in the vicinity of the development as potential surface waters from the site do not flow towards Natura 2000 sites - refer to mitigation in Chapter 8 Water.

No sensitive ecological receptors exist within the site which are likely to be impacted. Hedgerows described will be retained.

The key bird and potential mammal habitat (including bat forage habitat) is hedgerows on the site boundary, which will be retained as part of any proposed development.

Following full implementation of existing mitigation and management practises on the site no residual impacts are expected to key ecological receptors surrounding the site.

5 SOILS AND GEOLOGY

Soil and subsoil was previously removed from the application area during the quarrying process. Quarrying within the existing site, for which planning permission was previously granted, has continued to a floor level of approximately 45m OD at its deepest level. All infilling within the proposed waste licence area will be undertaken above the natural watertable.

It is proposed to utilise existing plant and equipment already on-site (or replacements of mobile equipment) during the lifetime of the waste licence. Due to the nature of the infilling operation, the geological environment will be impacted by the proposed waste license. However this site has been utilised for quarrying activity since 1978 and the proposed waste licence will merely restore the worked out quarry. This impact will be phased with the gradual working from the west to the east of the site.

There are no identified geological or geomorphological heritage features within or adjacent to the site.

Over the lifetime of the expired soil and stones and the existing C&D waste permit there has been an alteration to the geological environment and such conditions are envisaged to continue. The impact of the existing facilities is considered to be low. The infilled area will be used to create landscape berms to screen the site from its surrounding environment, along with agricultural lands.

6 WATER

There are no surface water features located within the boundary of the proposed site, and there is no visible off-site surface water drainage from the site. All water percolates to groundwater within the site and in the surrounding area. A number of quarry settlement ponds are located to the north of the site.

On a regional scale, Mullaghcrone Quarry is situated within the surface water catchment area of the River Nanny. The catchment divide between the River Nanny and the River Boyne occurs to the north of Mullaghcrone Quarry.

The large dewatering programme within Platin Quarry, immediately to the south of Mullaghcrone Quarry, is considered to have a significant impact on the watertable in this area. The Mullaghcrone Quarry site is considered to be within the zone of contribution for the dewatering undertaken within Platin Quarry. This means that all water percolating to ground is transmitted towards Platin Quarry and pumped out to discharge. At present, Platin Quarry dewateres 4,400m³/day-6,300m³/day to maintain a 0m OD groundwater level and Irish Cement Ltd. has been granted planning permission to excavate bedrock to a final floor level of -20mOD. Platin Quarry is licenced to discharge 28,000 m³/day of water. The Platin Quarry groundwater abstraction is carried out in accordance with its planning permissions and its IPPC licence. Groundwater is used to supply the cooling tower for use in the factory. Groundwater not used for cooling is discharged via the common effluent pipe to the River Nanny. The rate at which the Platin Quarry is dewatered varies with the amount of rainfall.

Within Mullaghcrone Quarry, groundwater flow direction based on hydrogeological studies and groundwater monitoring programmes is towards Platin Quarry to the south east. Groundwater levels and quality are monitored as part of the planning permission for Platin Quarry.

All water infiltrating to ground flows towards the south and is considered to be dewatered by operations at Platin Quarry. All water abstracted at Platin Quarry is ultimately discharged to the River Nanny, under permission by Meath County Council.

In general the groundwater quality of the underlying aquifer is good.

The proposed waste licence facility will not operate below the local groundwater watertable.

Mullaghcrone Quarry has operated a number of C&D and soil and stones waste permit facilities since 2004. The proposed development is consistent with C&D waste recovery operations currently undertaken within the site and it is not proposed to alter the C&D processing or screening methods or the previously operated soil and stones (waste permit expired) methodology at the site.

The operation of waste licence activities within the quarry will not result in any workings below the watertable. The proposed waste licence has the potential to alter the surface water drainage at the site. It is proposed to deal with this issue by the installation of toe drains and settlement ponds

for storm water flow. The settlement ponds will manage storm water at the site and allow water to slowly infiltrate to groundwater.

The potential impact on private wells is an important factor to be considered in the development. However, based on the information available, the risk to the private wells is considered to be low/negligible as there are no private wells located between the proposed waste licence area and the ICL groundwater abstraction point at Platin Quarry. Therefore the risk to private boreholes is negligible.

The main water source for the East Meath Water Supply Scheme is the abstraction from the River Boyne at Roughgrange. It is considered that there is no credible risk of impact on this abstraction source as a result of infilling the quarry void or the operation of the C&D facility.

The movement of vehicles within the application area represents a potential risk to groundwater, from potential leakages or spillages of fuel or oil to ground. This potential impact is addressed in the mitigation measures and through operational procedures already in place.

All vehicles using the site will be required to pass through a wheelwash located towards the east of the site. This infrastructure will be utilised to ensure the vehicles do not cause soiling of roads.

All potentially polluting materials will be contained within bounded areas, to ensure full containment in the event of total cumulative failure of tanks.

Spill kits are retained on site to ensure that all potential spillages or leakages are dealt with immediately and staff are trained in their proper use. The servicing of vehicles on site is confined to designated and suitably protected areas; which are located either inside the garage building or on the concrete apron at the front of this building.

7 AIR QUALITY

All developments, including waste licence facilities, have the potential to adversely affect air quality in the surrounding area of operations. Baseline dust monitoring on site and in the vicinity of sensitive receptors is available for 2010. Results indicate that dust levels are below the compliance threshold limit.

Dust emissions from the proposed development will be kept within the recommended limit value at all monitoring locations and all reasonable steps will be taken as far as is reasonably practical to minimise dust emissions.

In summary the following mitigation measures are proposed:

- Heavy Goods Vehicles (HGV's) exiting the site will pass through the established wheelwash. This ensures that dust emissions are not generated from the tyres of vehicles emanating from the site. It also ensures that they do not carry excess soil and material onto the public road network.
- The provision of on-site speed limits will prevent unnecessary generation of fugitive dust emissions.

- An on-site water sprinkler system will be used to ensure that all internal hauls roads and access routes are sprayed with water in periods of dry weather to help suppress dust emissions.
- Minimising drop heights of material.
- Access routes will be regularly inspected and cleaned when necessary.
- A complaints register is maintained on-site and any complaints relating to dust emissions will be immediately dealt with.

8 CLIMATE

On a local, regional and global scale, the climate will not be altered by the activities of the waste licence. The waste licence industry (soil and stones, C&D) is not a significant industrial generator of greenhouse gases. There will be no net contribution to greenhouse gas emissions. Therefore, this industry will not be impacted by the limits of greenhouse emissions under the Kyoto protocol.

The waste licence area will not create any temperature inversions, alter any current wind circulation patterns nor affect the sunshine or any other climatic factors in the area beyond the site boundaries of the proposed site.

8.1.1 Mitigation Measures

As there will be no significant impact on the local or global climate, there are no mitigation measures proposed other than the operation of the facility to DoEHLG and EPA guidelines.

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9 NOISE & VIBRATION

The Mullaghcrone Quarry site has been operated for rock extraction since the original planning permission was granted by Meath County Council in 1978. The effects of noise and vibration as pertain to the proposed activities, are examined in this assessment.

Noise monitoring conducted as part of the waste permit, granted recently by Meath County Council at Mullaghcrone Quarry, demonstrates that all noise levels measured are below the relevant guidance.

Noise levels are predicted to be comfortable within the applicable target criterion. There is no significant vibration impact associated with the proposed activities. As such the predicted residual impact is expected to be a slight, long term noise impact. Site activities will be effectively managed to ensure that all potential noise and vibration impacts are minimised to acceptable levels. There are no significant adverse or unacceptable noise or vibration impacts predicted at local sensitive receptors or on local livestock in the vicinity of the site as a result of the proposed waste licence.

10 MATERIAL ASSETS

10.1 INTRODUCTION

Material assets are those resources available to the local community. This section focuses on the impact of the working of the Mullaghcrone Waste Licence application on waste production, treatment and disposal.

There is the potential for impacts to arise from inert waste if there is no management in place. Examples of this would be poor housekeeping, or loss of containment. The impacts in any event are unlikely to be significant.

11 CULTURAL HERITAGE, ARCHAEOLOGY & ARCHITECTURAL HERITAGE

An established construction materials industry operation is already in place at Mullaghcrone Quarry under the previous waste permits, with all the necessary infrastructure and environmental management measures in place to minimise the environmental impacts of such an operation.

There are no designated or non-designated structures situated in the application area. The closest Protected Structure, the Donore Parochial House, is situated more than 490m north-west from the proposed development. The structures are too distant to be directly or indirectly impacted by the proposed development.

There are no impacts on designated structures. There are four non-designated structures indicated on the 1909 OS mapping along the Donore road site access route. However these

structures are within either 50km or 80km speed limit zones and are protected by stone or concrete walls, so that traffic does not represent a potential indirect impact.

The development will have no direct impact on any known items of cultural heritage, archaeological sites, monuments or artefacts or designated or undesignated structures.

If the proposed development were not to proceed there would be no negative impact on the cultural heritage.

12 TRAFFIC AND ROAD ASSESSMENT

The objective of this section of the EIS is to assess the impact the proposed waste licence facility at Mullaghcrone Quarry has with respect to traffic and the local road network. This section will calculate the expected volume of traffic that will be generated by the proposed facility and assess the impact that this traffic will have on the operational capacity of the road network in the vicinity of the development.

The following measures are proposed:

- Adequate parking for both cars and HGVs should continue to be provided within the quarry.
- Appropriate warning signs indicating the presence of both quarry entrances for traffic approaching from both directions should be erected
- Vegetation at both quarry entrances will be cut back to increase visibility splays.
- Road markings and signage be provided at the quarry entrances and road markings to be reinstated.

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13 LANDSCAPE AND VISUAL IMPACT

13.1 INTRODUCTION

This section of the Environmental Report summarises the landscape and visual impact of the proposed Waste License facility to aid in the restoration of an existing excavated quarry to revert back to agricultural land. It describes the impact on the visual and landscape amenity of the subject site itself and the contiguous area. It also describes the landscape character of the subject site and its hinterland.

The analysis of the site environment, taken together with its hinterland, was based on a site visit, an examination of available aerial photography, Ordnance Survey mapping data, and a detailed topographical survey of the site itself.

Given the nature of the site and its associated activities the topography varies in correlation with the excavation works being carried out at a particular time. The proposed waste licence area encompasses a worked out quarry area with partial restoration under the previous waste permits.

The general land-use in this area to the southwest of Drogheda is one of agriculture with a concentration of extractive land uses in the immediate vicinity of the application site.

The subject site itself is visually unremarkable being part of a much larger site used for extractive purposes. The visual character is typical of a quarry of this nature with the primary visual feature being the screening berms colonised by recolonising vegetation, access tracks for machinery and the steep side slopes of the quarried areas. The surrounding landscape outside the boundary of the quarry generally consists of a series of small-scaled agricultural paddocks with hedgerows typical of much of the landscape of this part of County Meath. Immediately to the south of the application site is a portion of land which has been previously landscaped by Irish Cement.

The existing low visually amenity value of the quarry will be replaced by an agricultural field similar to the surrounding agricultural land with hedgerow planting to provide a new ecological habitat to the wildlife in the area.

The proposed hedgerow planting will be subject to on-going maintenance strategies and monitoring, to ensure the satisfactory establishment of the planting installation and therefore the effectiveness of its screening potential over time.

The application site presents as small portion of a larger tract of land containing deep excavations and disturbed ground due to the ongoing quarrying activities in the area. The proposed restoration will form part of an ongoing restoration plan over the lifespan of the quarry when all the disturbed land will eventually be restored to agriculture or similar usage. The restoration to agricultural land will have a moderate and positive landscape and visual impact on the receiving environment.

14 INTERACTION OF THE FOREGOING

This Non Technical Summary (NTS) has been prepared by TOBIN Consulting Engineers on behalf of Roadstone Wood for a waste licence facility at Mullaghcrone Quarry and will accompany a waste licence application to the EPA.

The potential environmental impacts of the proposed waste licence, including the measures proposed to mitigate these impacts have been outlined in this report. This section discusses the potential for interaction between impacts of the different environmental aspects.

14.1 HUMAN BEINGS / SOCIO ECONOMIC

Human Beings will interact with other environmental topics given the nature of the waste licence facility.

There will be minimal loss of wildlife habitat if the application is granted. The majority of habitat within the waste licence infilling footprint is comprised of recolonising bare ground and spoil and bare ground. The restoration planting proposals will provide a quantity and a range of habitats in excess of that present in the existing environment. Furthermore, natural recolonisation of flora and fauna will occur from surrounding areas. After use strategies have been detailed within this document. See Landscape Restoration Plan in Chapter 14 of the EIS.

Noise and dust control will be in accordance with the EPA guidelines and the applicant will ensure compliance with any specific conditions imposed by the EPA. There will be no changes to the microclimate.

Social and travel patterns, pedestrian or otherwise, will not be disrupted by the use of the waste licence facility as no roads or pedestrian ways will be altered.

The operations within the site will secure employment already in place from the previous and existing waste permits.

14.2 FLORA AND FAUNA

The subject lands largely comprise of recolonising bare ground and spoil and bare ground. Dust impacts on adjacent habitats and fauna are expected to be minor as dust control will be in accordance with EPA guidelines.

14.3 SOIL / GEOLOGY AND HYDROGEOLOGY

There will be an impact on soils due to the proposed waste licence at the quarry. However over the lifetime of the previous soil and stones waste permit and the existing C&D waste permit there has been an alteration to the geological environment and such current conditions are envisaged to continue. The impact of the existing facilities is considered to be low. The infilled area will be used to restore the former quarry area and to screen the site from its surrounding environment.

Dust mitigation measures are identified to mitigate the potential for dust generation from the proposed waste licence facility.

14.4 WATER

The proposed waste licence area will not go below the water table and will remain a dry working area. The proposed waste licence facility will not result in the generation of additional impacts on the wider environment.

14.5 AIR QUALITY AND CLIMATE

The proposed waste licence facility will have no effect on the microclimate in the immediate vicinity of the site. Dust impacts on adjacent habitats and fauna are expected to be minor as dust control will be in accordance with strict EPA guidelines.

Dust suppression measures and an established vehicle wheel wash are proposed to mitigate the impact of wind blown dust around the site. These measures will reduce the impact on human beings and material assets in the community. The waste licence area will adhere to a dust control regime in accordance with the demands of the EPA.

14.6 NOISE AND VIBRATION

Noise will emanate from the working of the machinery as a result of the continuing works, operation of the infilling process, and from the associated vehicular movements.

Noise level thresholds shall be in adherence with the DoEHLG guidelines and EPA standards.

14.7 LANDSCAPE & VISUAL ASSESSMENT

A number of landscape & visual impacts interact with both the local human population, and flora and fauna. These interactions are discussed in Section 14 of the EIS.

14.8 CULTURAL HERITAGE & ARCHAEOLOGY

No direct or indirect impacts warranting specific mitigation were identified during the course of the cultural heritage assessment.

14.9 TRAFFIC AND ROAD ASSESSMENT

Traffic generated from the site will not have a significant impact on traffic on the R152 or the local roads at the quarry entrance. The traffic assessment illustrates that the junction between the R152 and the roads leading to the waste licence facility can accommodate the continued operation of the quarry up to and including 2031. Mitigation measures have been included in Section 13 of the EIS. These measures will ensure that road safety for all road users is maintained.

Dust control measures have been proposed with respect to the access route.

14.10 CONCLUSION

While there is potential for the above impacts to interact and result in a cumulative impact, it is unlikely that any of these cumulative impacts will result in significant environmental degradation.

It should be noted that throughout the EIS potential interaction between various environmental criteria are discussed. The baseline assessment for this project was completed prior to the design

of the waste licence facility, which allowed for the optimisation of the site layout design, within the overall application area. Avoidance of impacts was used throughout the design of the proposed facility. The impact and mitigation measures proposed are designed to further ameliorate the impact of the continuing works and the proposed waste licence facility on the wider environment.

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