NON TECHNICAL SUMMARY

Drogheda Landfill Site Licence Review

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09 June 2021

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Contents

Tables

Appendices

1 NON TECHNICAL SUMMARY

1.1 Background and Nature of the Activity

Drogheda Landfill Site opened in 1983 and ceased accepting waste for disposal at the landfill since the waste licence was granted on 30th December 1999 as required by the Waste Management (Licensing) Regulations, 1997. Civic Waste Facility is operated at the site.

Louth County Council are applying to change the boundary of the landfill to take in an additional 1.22 hectares of land where historically waste was land filled by Drogheda Borough Council. This land has been purchased by Louth County Council from a third party and specified engineering works have been submitted to the EPA for approval to cap this area and provide appropriate monitoring including gas and groundwater's. These works cannot be undertaken until review of licence in relation to the boundary change has be completed.

Site Location and Layout are shown on Drawing No's IBR01237/100 and IBR01237/101. The National Grid Reference for the facility is 307013E 276405N.

The site is located within Louth County Council planning authority and the activity constitutes development but is exempted development. An Environmental Impact Assessment (EIS) has not been prepared in support of this application. An Appropriate Assessment Screening has been prepared and this document is contained as appendices to this application.

1.2 Class of Activity

The licensed disposal activities, in accordance with the Third Schedule of the Waste Management Act, 1996, are restricted to those listed as per Schedule A: Waste Activities in the current licence as follows;

- **D15** (**Class 13)** Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced

Licensed waste recovery activities, in accordance with the Fourth Schedule of the Waste Management Act, 1996, are restricted to those listed as follows;

- **R3 (Class 2)** Recycling or reclamation of organic substances, which are not used as solvents (including composting and other biological transformation processes).
- **R4 (Class 3)**Recycling or reclamation of metals and metal compounds.
- **R5 (Class 4)** Recycling or reclamation of other inorganic materials.
- **R10 (Class 10)** The treatment of waste on land with a consequential benefit for an agricultural activity or ecological system.
- **R11 (Class 11)** Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.
- **R13 (Class 13)** Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collecting, on the premises where such waste is produced.

1.3 The installation/facility (plant, methods, processes, abatement, recovery and treatment systems & operating procedures for the activity), with emphasis on the main measures to avoid, reduce &, if possible, offset the major adverse effects on the environment

1.3.1 Landfill

The site ceased to accept waste for disposal when the waste licence was granted in December 1999. The only materials accepted at the site were inert wastes, which was utilised for capping at the site. Phase 1 capping works were completed in September 2007. Approximately 15,000m^2 of capping (Phase 2) in the former CRH lands to the north of the site was completed in December 2016.

Phase 3 capping works will be undertaken on a further area which has been acquired by Louth County Council. The capping of this area will deal with all areas of waste deposited outside the boundary to the Northern part of the site. This consists of an area encompassing approximately 14,000m^2.

1.3.2 Landfill Gas Management

Landfill gas is produced as a result of biodegradation of the organic fraction within the waste body. An active landfill collection and flaring system was agreed with the Agency in February 2001.

The permanent gas extraction system was installed at the facility during 2006. A network of gas wells have been installed on the site for use in an active gas extraction system. These wells will be extended or shortened where necessary to ensure the top level is above the level of the final cap.

The wells are connected via 63mm diameter pipework to a 250mm diameter main gas collection pipe. The gas wells are connected to this flare through a system of connecting pipework and manifolds (to allow better maintenance and to reduce the number of control points on the landfill site) to be installed after final capping of the site takes place. Self-dewatering well heads are used with wells where the connecting pipework falls towards the well.

A 750m^3 enclosed flare unit located in an enclosed compound adjacent to the site office and Supervisory Control and Data Acquisition (SCADA) system has been installed. The enclosed LFG flare has been commissioned and field balancing is being undertaken. The enclosed flare is designed to operate continuously with landfill gas as the primary fuel source. The landfill gas flare consists of:

- Flame Arrestor
- Slam Shut Valve
- Ignition System and Flame Detection.
- Flare Stack and Flare Lining System.
- Gas Filter
- Gas Blower
- Dewatering System
- Non Return Valves
- Flow meter
- SCADA System

A permanent gas monitoring system has been installed in the site buildings.

Landfill gas production within the landfill waste body has depleted since waste filling ceased in 1999 and therefore the 750m^3/hr flare was replaced with a 150m^3/hr low calorific high temperature flare with a combustion chamber temperature of between 1,000 and 1,100^{o}C, minimum residence time will be 0.3 seconds and operating range for methane of 12 to 35% in August 2020.

1.3.3 Civic Waste Facility Site Infrastructure

The main access to the CWF and landfill site is from the Collon Road, the entrances of the CWF consists of 8m wide and 2m high paladin gates which are kept locked when the site is not operational.

An enquiry/administrative office has been provided at the entrance of the facility, which contains CCTV (Static and Pan Tilt and Zoom cameras), telephone, facsimile and SCADA system for the Enclosed Landfill Flare. A fire extinguisher and first aid box are also provided. The office is used to process and store documentation.

1.3.3.1 Enquires/Administrative Office

- Weighbridge (16m wide).
- Parking for employees
- Site identification board
- Security fencing
- Site rules

1.3.3.2 Civic Waste Facility

The CWF consist of

- Recycling building with individual labelled slots of different waste
- Recycling service yard
- Designated storage area for WEEE
- Collection bins for Wood/Greenery/ Scrap Metal
- Collecting bays for glass
- Waste inspection and waste quarantine area

A fire hydrant is located beside the Enquires/Administrative Office. CWF recycles, cardboard, paper, plastic, aluminium cans, steel cans, textiles and footwear, white goods, WEEE, glass, wood, green waste wood, plant matter and other vegetation and scrap metal.

The Civic Waste Facility is open;

- Monday - Friday 9.30am - 6.00pm
- Saturday 9.00am – 3.00pm

The following are accepted at the Civic Waste Facility;

- cardboard,
- magazines/paper,

- glass (green, brown, clear),
- aluminium cans,
- steel food tins,
- domestic plastics,
- textiles (e.g. clothes) and footwear,
- batteries,
- scrap metal,
- wood,
- electrical and domestic appliances,
- green garden waste,
- miscellaneous.

All waste deposited at the Civic Waste Facility are placed;

- Into a receptacle for recovery, or
- Into a designated inspection area.

The storage containers and storage areas are clearly labelled with yellow backgrounds and black/green writing to indicate their content.

There are samples or signage describing the type of waste which can deposited into each container.

1.3.3.3 Waste Acceptance Procedures

The waste acceptance procedure for the Civic Waste Facility is as follows

- Incoming Recyclables/Waste to be inspected by trained staff member, if suitable directed to designate clearly labelled areas. Information is given to members of the public how best to segregate at source.
- Unsuitable material e.g. Hazard material is not accepted,

If this material was to be found, member of staff would remove, with appropriate PPE and place in quarantine area/bin measuring 2m x 3m has capacity to hold 2 tons. The quarantine area is located at rear of building. This material would then be collected by a suitable licence holder and brought to licence facility.

1.4 The raw and auxiliary materials, substances, preparations, fuels & energy which will be produced by or utilized in the activity

Drogheda Landfill Site has been in operation since 1983 and has ceased accepting waste for disposal since the waste licence was granted on 30th December 1999 as required by the Waste Management (Licensing) Regulations, 1997. A Civic Waste Facility is operated at the site. Energy used from fossil fuels in 2020 was 29,170 Kwh of electricity for civic amenity site and the enclosed landfill gas flare.

1.5 The sources of emissions from the installation

Louth County Council are applying to change the boundary of the landfill to take in an additional 1.22 hectares of land where historically waste was land filled by Drogheda Borough Council. A specified engineering works

has been submitted to the EPA for approval to cap this area and provides appropriate monitoring including gas and groundwater. There will be no changes to the sources of emissions from the facility. Louth County Council will operate the facility to comply with emission standards and limits set out in the Waste licence were applicable.

1.6 The environmental conditions of the site of the installation

A hydrogeology review was undertaken for the site in 2015. A site conditioning report has been completed as part of the review application. Concentrations of contaminates in the former quarry void do not indicate a significant impact from the waste body. The majority of contaminants are within the DWR, IGV and GTV limits from the applicable regulations. Those parameters monitored on a quarterly basis which exceed the limits show a falling trend over time. Surface water results from the capped area are within their relative thresholds and do not indicate an impact from the landfill except for elevated barium, chromium, iron, and manganese concentration at SW4.

1.7 The nature & quantities of existing and proposed emissions from the installation into each medium as well as a summary of the assessment of the effects of the emissions on the environment as a whole,

Louth County Council are applying to change the boundary of the landfill. There will be no changes to existing emissions from the site. A hydrogeology review was undertaken for the site in 2015. A site conditioning report has been completed as part of the review application.

1.8 The proposed technology and other techniques to prevent or eliminate, or where this is not practicable, limit, reduce or abate emissions from the installation

Landfill gas production within the landfill waste body has depleted since waste filling ceased in 1999. The 750m^3/hr flare installed in 2005 is now considered oversized for the volume of landfill gas produced and as a consequence only runs on a daily timed on/off operating cycle. In order to maintain gas extraction and oxidisation of same on a continuous basis, it is decided to remove the existing 750m^3/hr gas flare and replace with a 150m^3/hr low calorific high temperature flare. This was installed in 2020.

1.9 Summary of the quantity and nature of wastes which may be produced or accepted at the installation

Tables 1.1 and 1.2 provide the quantities of waste accepted for recycling at Drogheda Civic Waste Facility since 2006.

Table 1.1 Waste Quantities (Tonnes) at Civic Waste Facility

Waste Types	2006	2007	2008	2009	2010	2011	2012
Accepted for recycling	1,405		3,170	3,521	4,020	3,447	3,086
To landfill/ incinerator					52		390
Waste Types	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Accepted for recycling	2,578	2,622	2,726	2,530	2,521	2,616	
To landfill/ incinerator	387	317	166	61	65	72	

Table 1.2 Waste Quantities (Tonnes) at Civic Waste Facility 2020

List of Waste Code	Quantity (Tonnes)	Waste Description	Disposal or Recovery
20 03 01 A	62	Mixed residual waste	D05 - Specifically engineering landfill, non-hazardous waste.
20 02 01	1032	Garden (green) waste	R03 - Composting (aerobic)
15 01 01	248	Cardboard & paper (segregated packaging waste only) e.g. cardboard boxes	R03 - Other recycling or reclamation of organic substances which are not used as solvents (to end-of-waste)
20 01 01	106	Cardboard & paper (non-packaging waste only) e.g. news & pams	R03 - Other recycling or reclamation of organic substances which are not used as solvents (to end-of-waste)
15 01 07	237	Glass (segregated packaging waste only) e.g. glass bottles	R05 - Inorganic materials recycling or reclamation (to end-of-waste)
15 01 04	46	Aluminium and steel cans (mixed) (segregated packaging waste)	R04 - Metal and metal component recycling or reclamation (to end-of-waste)
20 01 40 C	258	Other municipal metals (non-packaging)	R04 - Metal and metal component recycling or reclamation (to end-of-waste)
15 01 02	339	Plastic (segregated packaging waste only) e.g. PET bottles	R03 - Other recycling or reclamation of organic substances which are not used as solvents (to end-of-waste)
20 01 10 & 20 01 11	9	Clothes/textiles for recovery or disposal	R03 - Other recycling or reclamation of organic substances which are not used as solvents (to end-of-waste)
15 01 03	157	Wood (segregated packaging waste) e.g. pallets, wooden crates	R03 - Other recycling or reclamation of organic substances which are not used as solvents (to end-of-waste)
20 01 38	292	Wood (non-packaging waste, municipal)	R03 - Other recycling or reclamation of organic substances which are not used as solvents (to end-of-waste)
16 06 01*	7	Lead batteries	R04 - Metal and metal component recycling or reclamation (to end-of-waste)

1.10 Measures to ensure that waste production is avoided in accordance with the waste hierarchy in Council Directive 98/2008/EC on waste and section 21A of the Waste Management Act 1996, as amended; where waste is generated, it is prepared for re-use, recycled or recovered or, where that is technically & economically impossible, it is disposed of while avoiding or reducing any impact on the environment (applicants should provide this information in the context of the Waste Management Act 1996, as amended)

The waste acceptance procedure for the Civic Waste Facility is as per 1.3.3.3. All wastes are sent for recovery as per Table 1.2 above. Only mixed residual waste is sent for disposal.

1.11 All the appropriate preventive measures are taken against pollution, in particular through application of the Best Available Techniques (BAT) or BAT Conclusions Decision where applicable

The site is unlined but has been restored with a cap and landfill gas extraction system. Louth County Council will employ BAT to limit, abate or reduce an emission from the activity concerned where applicable.

1.12 The necessary measures are to be taken under abnormal operating conditions, including start up, shutdown, leaks, malfunctions, breakdowns and momentary stoppages.

The Environmental Management System (EMS) for the facility was updated in 2007 to take into consideration works undertaken at the site and submitted to the EPA. A Fire Prevention Plan for the facility was reviewed and updated on 15th November 2017. An Emergency Response Procedure/Fire Response Plan for the facility was reviewed and updated on 10th January 2018. All, reports/records in relation to the facility are maintained. Louth County Council will maintain EMS for the aftercare of the site.

A 150m^3/hr low calorific high temperature flare is located in an enclosed compound adjacent to the site office and Supervisory Control and Data Acquisition (SCADA) system has been installed.

1.13 The necessary measures to be taken on and following permanent cessation of activities to avoid any risk of environmental pollution & return the site of the activity to a satisfactory state or the state established in the baseline report if required

As a Local Authority, Louth County Council is fully committed to the on-going investment as required by this facility to ensure that it is properly managed environmentally. The landfill site is closed and has been restored. Louth County Council are in a position to meet current foreseeable aftercare costs.

1.14 Measures planned to monitor emissions into the environment

Groundwater, surface water, leachate, sewer, landfill gas, dust and noise are currently being undertaken as listed in Waste Licence W0033-01 and Drawing IBR1237/103A Monitoring Locations.

1.15 Measures to comply with an environmental quality standard

The site is closed. The site is unlined and has been capped. A Hydrogeological Risk Assessment (HRA) of Drogheda Landfill Site was undertaken in 2015 based on previous investigation reports and monitoring data between 2006 and 2014. This report found that based on the recorded groundwater quality data to date at Drogheda Landfill, there was no sustained upward trends in groundwater contaminant export from the site.

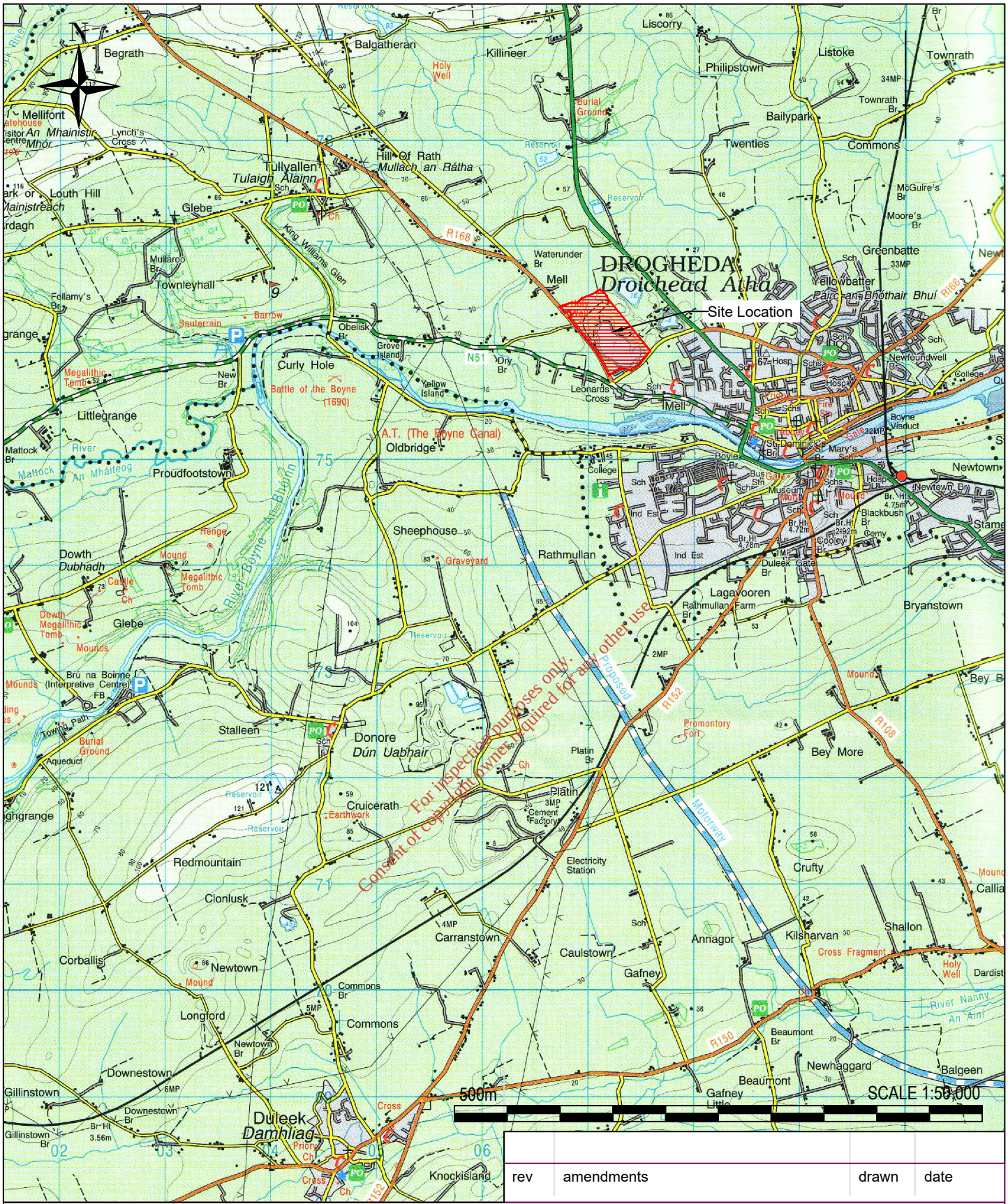
The Environmental Management System (EMS) for the facility was updated in 2007 to take into consideration works undertaken at the site and submitted to the EPA. A Fire Prevention Plan for the facility was reviewed and updated on 15th November 2017. An Emergency Response Procedure/Fire Response Plan for the facility was reviewed and updated on 10th January 2018.

All, reports/records in relation to the facility are maintained. Louth County Council will maintain EMS for the aftercare of the site.

1.16 Seveso II Regulations

The EC (Control of Major Accident Hazards involving Dangerous Substances) Regulations (S.I. No. 74 of 2006) do not apply to the proposed activity.

Appendix A



rev	amendments	drawn	date

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Drawing Number: IBR1237/100

Rev: -

Client: Louth County Council

Project: Drogheda Licence Review

Title: Site Location

Project No.	Sheet Size	Drawing Scale	Drawing Status	Drawn By	Checked By	Approved By	Date
IBR1237	A4	1:50,000	Preliminary	MC	AMcG	AMcG	03/07/2020

N

Site Notice Displayed on Entrance Gate to Civic Amenity Site

50m

SCALE 1:2500

NOTES

1. Verifying Dimensions.
   The contractor shall verify dimensions against such other drawings or site conditions as pertain to this part of the work.

2. Existing Services.
   Any information concerning the location of existing services indicated on this drawing is intended for general guidance only. It shall be the responsibility of the contractor to determine and verify the exact horizontal and vertical alignment of all cables, pipes, etc. (both underground and overhead) before work commences.

3. Issue of Drawings.
   Hard copies, dwf and pdf will form a controlled issue of the drawing. All other formats (dwg, dxf etc.) are deemed to be an uncontrolled issue and any work carried out based on these files is at the recipients own risk. RPS will not accept any responsibility for any errors arising from the use of these files, either by human error by the recipient, listing of un-dimensioned measurements, compatibility issues with the recipient's software, and any errors arising when these files are used to aid the recipients drawing production, or setting out on site.

4. Datum.

Proposed Waste Licence Boundary

rev	amendments	check	date

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Client
Louth County Council

Project
Droghed Licence Review

Title
Proposed Waste Licence Boundary

Project Number	Sheet Size	Drawing Scale
IBR1237	A3	1:2500

Drawing Number
IBR1237/101

Drawn By	Status	Revision
MC	Preliminary	-

Checked By	Approved By	Date
AmcG	AMcG	03/07/2020

N

Boreholes BH4A and BH5A to be decommissioned and re-drilled

BH1A
LG1A
N1
DG1
LG2
LG3
LG10
LG9
N2
LG4
LG5
LG8
DG2
S2
BH3A
BH2A
BH4A
CRH04
CRH05
BH5A
L2A
L1A
S1
SW4
SW1
L3A
L4A
L5A
BH7
SW5
BH11A
LG6
LG7
DG3
BH10A
SW3
DG4
BH6A
BH8A
BH9A
N3
SW2

50m

SCALE 1:2500

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4. Datum.

- Proposed Waste Licence Boundary
- L2A Leachate Boreholes
- LG3 Landfill Gas Monitoring Point
- DG1 Dust Monitoring Points
- BH1A Groundwater Boreholes
- N1 Noise Monitoring Points
- SW2 Surfacewater Monitoring Points
- S1 Civic Waste Facility Monitoring
- CRH04 Interim Monitoring Borehole

rev	amendments	check	date

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Client
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Project
Droghed Licence Review

Title
Monitoring Locations

Project Number	Sheet Size	Drawing Scale
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Drawing Number
IBR1237/103

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MC	Preliminary	A

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