

ATTACHMENT E.1

Emissions to Atmosphere

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ATTACHMENT E.1

Emissions to Atmosphere

(NOTE: Drawing No. 2084-2613 - *Proposed Emission Points* (Attached in 'Application Drawings', Tab 15), shows all emission points associated with the Waste Facility, subject to this Waste Licence Application).

- The facility subject to this application is not proposed to have any point (or stack) emissions to atmosphere. Due to the nature of the facility (i.e. a Material Recovery Facility for Inert Material), it will not have: landfill gas emissions, landfill leachate emissions, composting emissions (including odour and bioaerosols), infectious organisms/pathogen emissions, thermal oxidiser emissions, emissions from wastewater/leachate treatment, emissions from any pressure release valves on waste liquid tanks, or cleaning operation emissions.

The only emissions expected to atmosphere will be the typical exhaust emissions from the one piece of plant onsite (Hitachi 200 excavator) and from the haulage trucks delivering inert material to the site for recovery/reclamation. As stated in Section D.1.d above, it is estimated that only approximately 25 truckloads of inert material will be accepted at the facility per week. This low level of traffic movement's to/from the site will mean very low emissions from haulage trucks to the atmosphere. The plant on site (Hitachi 200 excavator) will only be used intermittently on daily/weekly basis, thus is not expected to produce high levels of emissions to the atmosphere. This machine will be serviced regularly, to ensure exhaust emissions are kept to a minimum.

The unloading of material from the haulage trucks, and the subsequent movement /spreading of the inert material over the area of the deposition site may produce dust, but this would be classified more as an Environmental Nuisance, rather than an emission to atmosphere, and will be dealt with under Section E.6 of this Waste Licence Application.

- *Table E.1(i) - Landfill Gas Flare Emissions to Atmosphere*, overleaf, is Not Applicable to this Waste Licence Application, as it does not concern a landfill facility.

- *Table E.1(ii) - Main Emissions to Atmosphere*, overleaf, is Not Applicable to this Waste Licence Application, for as stated above, is not proposed to have any point (or stack) emissions to atmosphere from the facility.
- *Table E.1(iii) - Main Emissions to Atmosphere - Chemical Characteristics of the Emission*, overleaf, is Not Applicable to this Waste Licence Application, for as stated above, is not proposed to have any point (or stack) emissions to atmosphere from the facility.
- *Table E.1(iv) - Emissions to Atmosphere - Minor/Fugitive*, overleaf, contains one emission point, which is the exhaust of the onsite plant (Hitachi 200 excavator). As this machine is mobile, a Grid Reference location cannot be given. The quantity of exhaust emissions has not been calculated, as the plant is used so intermittently onsite.

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TABLE E.1(i) LANDFILL GAS FLARE EMISSIONS TO ATMOSPHERE
Emission Point:

Emission Point Ref. N ^o :	
Location :	
Grid Ref. (12 digit, 6E,6N):	
Vent Details Diameter:	NOT APPLICABLE
Height above Ground(m):	
Date of commencement of emission:	

Characteristics of Emission :

CO		mg/m ³
Total organic carbon (TOC)		mg/m ³
NOx		mg/Nm ³ 0°C. 3% O ₂ (Liquid or Gas), 6% O ₂ (Solid Fuel)
Maximum volume of emission		m ³ /hr
Temperature	°C(max)	°C(min) °C(avg)

(i) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up/shutdown to be included*):

Periods of Emission (avg)	_____ min/hr _____ hr/day _____ day/yr
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TABLE E.1(ii) MAIN EMISSIONS TO ATMOSPHERE (1 Page for each emission point)

Emission Point Ref. N ^o :	
Source of Emission:	
Location :	
Grid Ref. (12 digit, 6E,6N):	
Vent Details Diameter:	NOT APPLICABLE
Height above Ground(m):	
Date of commencement:	

Characteristics of Emission :

(i) Volume to be emitted:			
Average/day	m ³ /d	Maximum/day	m ³ /d
Maximum rate/hour	m ³ /h	Min efflux velocity	m.sec ⁻¹
(ii) Other factors			
Temperature	°C(max)	°C(min)	°C(avg)
For Combustion Sources:			
Volume terms expressed as : <input type="checkbox"/> wet. <input type="checkbox"/> dry. _____ %O ₂			

(iii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ min/hr _____ hr/day _____ day/yr
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TABLE E.1(iii): MAIN EMISSIONS TO ATMOSPHERE - Chemical characteristics of the emission (1 table per emission point)

Emission Point Reference Number: _____

Parameter	Prior to treatment ⁽¹⁾				Brief description of treatment	As discharged ⁽¹⁾					
	mg/Nm ³		kg/h			mg/Nm ³		kg/h.		kg/year	
	Avg	Max	Avg	Max		Avg	Max	Avg	Max	Avg	Max
<p style="color: red; font-size: small;">Consent of copyright owner required for any other use.</p> <p style="color: red; font-size: small;">For inspection purposes only.</p> <p style="font-size: large; font-weight: bold; color: blue;">NOT APPLICABLE</p>											

1. Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0°C,101.3kPa). Wet/dry should be the same as given in Table E.1(ii) unless clearly stated otherwise.

TABLE E.1(iv): EMISSIONS TO ATMOSPHERE - Minor /Fugitive

Emission point Reference Numbers	Description	Emission details ¹				Abatement system employed
		material	mg/Nm ³⁽²⁾	kg/h.	kg/year	
Hitachi 200 Excavator	Exhaust from Excavator	Typical Exhaust	-	-	-	Machine to be serviced regularly to reduce exhaust emissions

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- 1 The maximum emission should be stated for each material emitted, the concentration should be based on the maximum 30 minute mean.
- 2 Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0°C/101.3kPa). Wet/dry should be clearly stated. Include reference oxygen conditions for combustion sources.

ATTACHMENT E.2

Emissions to Surface Waters

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ATTACHMENT E.2

Emissions to Surface Waters

(NOTE: Drawing No. 2084-2613 - *Proposed Emission Points* (Attached in 'Application Drawings', Tab 15), shows all emission points associated with the Waste Facility, subject to this Waste Licence Application).

- The site is presently drained by a number of open surface water drains, as can be seen on Drawing No. 2084-2601 & Drawing No. 2084-2613 (attached in 'Application Drawings', Tab 15). An open drain surrounds the perimeter of the entire deposition site (with the exception of the northwest corner of the site), and a no. of open drains are cut into the site in a north-south direction. The open drains, drain into the local Clooneen River (which runs along the northern site application boundary in an easterly direction), at five locations.

These five locations (as shown on Drawing No 2084-2613, attached in 'Application Drawings', Tab 15) represent five no. emission points to surface water (Clooneen River) from the site (EMSW-1, EMSW-2, EMSW-3, EMSW-4 & EMSW-5).

It is proposed to excavate 5 no. 'Settlement Ponds' on the drainage channels, prior to their emission to the main surface water body (Clooneen River), as shown on Drawing No. 2084-2614 (attached in 'Application Drawings', Tab 15). The purpose of these Settlement Ponds is to allow suspended solids drop out of solution, prior to the surface water discharging from the site, into the Clooneen River.

As discussed in Section D.1.c above, all runoff from the proposed concrete hardstand area will be directed through a petrol interceptor, prior to discharge into the surface water drainage system, as shown on Drawing No. 2084-2613 (attached in 'Application Drawings', Tab 15). The outlet from the petrol interceptor will also be classified as an Emission Point (EMPI).

- A copy of *Table E.2(i) - Emissions to Surface Waters* is attached overleaf for each of the Emission Points EMSW-1, EMSW-2, EMSW-3,

EMSW-4, EMSW-5 & EMPI. Information on the 'Flow Rate' in the receiving water (Clooneen River) is not provided, as there is no flow data available from the OPW or the EPA Hydrometric Section. 'Assimilative Capacities' cannot be calculated, due to the lack of flow data available for the Clooneen River, and due to the fact that the discharge from the site is not continuous or consistent at any of the emission points. The 'Volumes to be Emitted' and the 'Periods of Emission' cannot be stated, as they are fully dependant on rainfall amount and the site drainage.

- A copy of *Table E.2(ii) - Emissions to Surface Waters - Characteristics of the Emission* is attached overleaf for each of the Emission Points EMSW-1, EMSW-2, EMSW-3, EMSW-4, EMSW-5 & EMPI. As stated on the Table attached "The 'Characteristics of the Emission' are unknown, as all surface water drains were 'Dry' during the Surface Water Sampling Exercise at the site. Once the 5 no. Settlement Ponds are constructed on the site, water samples can be taken at each 'Emission Point' Upstream (= Prior to Treatment') and Downstream (= As Discharged) of the Settlement Ponds. However, this is only possible following rainfall, when there is water in the Surface Water Drains.

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TABLE E.2(i): EMISSIONS TO SURFACE WATERS
(One page for each emission)

Emission Point:

Emission Point Ref. N ^o :	EM-SW-1
Source of Emission:	Site Surface Water Drain
Location :	Northwest Corner of Site
Grid Ref. (10 digit, 5E,5N):	E469551.110, N835999.209
Name of receiving waters:	Clooneen River
Flow rate in receiving waters:	<p>_____ m³.sec⁻¹ Dry Weather Flow</p> <p>_____ m³.sec⁻¹ 95%ile flow</p> <p>No Hydrometric Information Available on Clooneen River</p>
Available waste assimilative capacity:	<p>_____ kg/day</p> <p>No Hydrometric Information Available on Clooneen River & Emissions Not Continuous or Consistant</p>

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Emission Details:

(i) Volume to be emitted			Unknown - Dependant on Rainfall Amount & Site Drainage	
Normal/day	m ³	Maximum/day	m ³	
Maximum rate/hour	m ³			

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (start-up /shutdown to be included):

Periods of Emission (avg)	_____ min/hr _____ hr/day _____ day/yr	
Unknown - Dependant on Rainfall Amount & Site Drainage		

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TABLE E.2(i): EMISSIONS TO SURFACE WATERS
(One page for each emission)

Emission Point:

Emission Point Ref. N ^o :	EM-SW-2
Source of Emission:	Site Surface Water Drain
Location :	Northern Boundary of Site
Grid Ref. (10 digit, 5E,5N):	E469651.695, N835941.765
Name of receiving waters:	Clooneen River
Flow rate in receiving waters:	<p>_____ m³.sec⁻¹ Dry Weather Flow _____ m³.sec⁻¹ 95%ile flow</p> <p>No Hydrometric Information Available on Clooneen River</p>
Available waste assimilative capacity:	<p>_____ kg/day</p> <p>No Hydrometric Information Available on Clooneen River & Emissions Not Continuous or Consistant</p>

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Emission Details:

(i) Volume to be emitted Unknown - Dependant on Rainfall Amount & Site Drainage			
Normal/day	m ³	Maximum/day	m ³
Maximum rate/hour	m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ min/hr _____ hr/day _____ day/yr
	Unknown - Dependant on Rainfall Amount & Site Drainage

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TABLE E.2(i): EMISSIONS TO SURFACE WATERS
(One page for each emission)

Emission Point:

Emission Point Ref. N ^o :	EM-SW-3
Source of Emission:	Site Surface Water Drain
Location :	Northern Boundary of Site
Grid Ref. (10 digit, 5E,5N):	E469889.929, N835947.901
Name of receiving waters:	Clooneen River
Flow rate in receiving waters:	<div style="text-align: right;">_____ m³.sec⁻¹ Dry Weather Flow</div> <div style="text-align: right;">_____ m³.sec⁻¹ 95%ile flow</div> <p>No Hydrometric Information Available on Clooneen River</p>
Available waste assimilative capacity:	<div style="text-align: right;">kg/day</div> <p>No Hydrometric Information Available on Clooneen River & Emissions Not Continuous or Consistant</p>

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Emission Details:

(i) Volume to be emitted Unknown - Dependant on Rainfall Amount & Site Drainage			
Normal/day	m ³	Maximum/day	m ³
Maximum rate/hour	m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ min/hr _____ hr/day _____ day/yr
	Unknown - Dependant on Rainfall Amount & Site Drainage

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TABLE E.2(i): EMISSIONS TO SURFACE WATERS
(One page for each emission)

Emission Point:

Emission Point Ref. N ^o :	EM-SW-4
Source of Emission:	Site Surface Water Drain
Location :	Northeast Corner of Site
Grid Ref. (10 digit, 5E,5N):	E470245.848, N835970.331
Name of receiving waters:	Clooneen River
Flow rate in receiving waters:	<p>_____ m³.sec⁻¹ Dry Weather Flow _____ m³.sec⁻¹ 95%ile flow</p> <p>No Hydrometric Information Available on Clooneen River</p>
Available waste assimilative capacity:	<p>_____ kg/day</p> <p>No Hydrometric Information Available on Clooneen River & Emissions Not Continuous or Consistant</p>

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Emission Details:

(i) Volume to be emitted Unknown - Dependant on Rainfall Amount & Site Drainage			
Normal/day	m ³	Maximum/day	m ³
Maximum rate/hour	m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ min/hr _____ hr/day _____ day/yr
	Unknown - Dependant on Rainfall Amount & Site Drainage

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TABLE E.2(i): EMISSIONS TO SURFACE WATERS
(One page for each emission)

Emission Point:

Emission Point Ref. N ^o :	EM-SW-5
Source of Emission:	Site Surface Water Drain
Location :	Northeast Corner of Site
Grid Ref. (10 digit, 5E,5N):	E470279.007, N835943.645
Name of receiving waters:	Clooneen River
Flow rate in receiving waters:	_____ m ³ .sec ⁻¹ Dry Weather Flow _____ m ³ .sec ⁻¹ 95%ile flow
Available waste assimilative capacity:	No Hydrometric Information Available on Clooneen River No Hydrometric Information Available on Clooneen River & Emissions Not Continuous or Constant kg/day

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Emission Details:

(i) Volume to be emitted Unknown - Dependant on Rainfall Amount & Site Drainage			
Normal/day	m ³	Maximum/day	m ³
Maximum rate/hour	m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ min/hr _____ hr/day _____ day/yr
	Unknown - Dependant on Rainfall Amount & Site Drainage

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TABLE E.2(i): EMISSIONS TO SURFACE WATERS
(One page for each emission)

Emission Point:

Emission Point Ref. N ^o :	EM-PI
Source of Emission:	Outflow from Petrol Interceptor
Location :	To Northeast of Site Entrance
Grid Ref. (10 digit, 5E,5N):	E470058.360, N835752.664
Name of receiving waters:	Drainage Channel, followed by Clooneen River
Flow rate in receiving waters:	_____ m ³ .sec ⁻¹ Dry Weather Flow _____ m ³ .sec ⁻¹ 95%ile flow No Hydrometric Information Available on Clooneen River
Available waste assimilative capacity:	kg/day No Hydrometric Information Available on Clooneen River & Emissions Not Continuous or Consistant

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Emission Details:

(i) Volume to be emitted Unknown - Dependant on Rainfall Amount & Site Drainage			
Normal/day	m ³	Maximum/day	m ³
Maximum rate/hour	m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ min/hr _____ hr/day _____ day/yr
	Unknown - Dependant on Rainfall Amount & Site Drainage

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TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission (1 table per emission point)

Emission point reference number : EM-SW-1

The 'Characteristics of the Emission' are unknown, as all surface water drains were 'Dry' during the Surface Water Sampling Exercise at the site. Once the 5 No. Settlement Ponds are constructed on the site, water samples can be taken at each 'Emission Point' upstream (= 'Prior to Treatment') and downstream (= 'As Discharged') of the Settlement Ponds. However, this is only possible following rainfall, when there is water in the Surface Water Drains.

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	

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TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission (1 table per emission point)

Emission point reference number : EM-SW-2

The 'Characteristics of the Emission' are unknown, as all surface water drains were 'Dry' during the Surface Water Sampling Exercise at the site. Once the 5 No. Settlement Ponds are constructed on the site, water samples can be taken at each 'Emission Point' upstream (= 'Prior to Treatment') and downstream (= 'As Discharged') of the Settlement Ponds. However, this is only possible following rainfall, when there is water in the Surface Water Drains.

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	

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TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission (1 table per emission point)

Emission point reference number : EM-SW-3

The 'Characteristics of the Emission' are unknown, as all surface water drains were 'Dry' during the Surface Water Sampling Exercise at the site. Once the 5 No. Settlement Ponds are constructed on the site, water samples can be taken at each 'Emission Point' upstream (= 'Prior to Treatment') and downstream (= 'As Discharged') of the Settlement Ponds. However, this is only possible following rainfall, when there is water in the Surface Water Drains.

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	

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TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission (1 table per emission point)

Emission point reference number : EM-SW-4

The 'Characteristics of the Emission' are unknown, as all surface water drains were 'Dry' during the Surface Water Sampling Exercise at the site. Once the 5 No. Settlement Ponds are constructed on the site, water samples can be taken at each 'Emission Point' upstream (= 'Prior to Treatment') and downstream (= 'As Discharged') of the Settlement Ponds. However, this is only possible following rainfall, when there is water in the Surface Water Drains.

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	



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TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission (1 table per emission point)

Emission point reference number : EM-SW-5

The 'Characteristics of the Emission' are unknown, as all surface water drains were 'Dry' during the Surface Water Sampling Exercise at the site. Once the 5 No. Settlement Ponds are constructed on the site, water samples can be taken at each 'Emission Point' upstream (= 'Prior to Treatment') and downstream (= 'As Discharged') of the Settlement Ponds. However, this is only possible following rainfall, when there is water in the Surface Water Drains.

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	

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TABLE E.2(ii): EMISSIONS TO SURFACE WATERS - Characteristics of the emission (1 table per emission point)

Emission point reference number : EM-PI

The 'Characteristics of the Emission' are unknown, as the Concrete Hardstand Area and the Petrol Interceptor have not been constructed yet.

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	

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ATTACHMENT E.3

Emissions to Sewer

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ATTACHMENT E.3

Emissions to Sewer

(NOTE: Drawing No. 2084-2613 - *Proposed Emission Points* (Attached in 'Application Drawings', Tab 15), shows all emission points associated with the Waste Facility, subject to this Waste Licence Application).

- There are no Emissions to Sewer (existing or proposed) from this Waste Licence Application site.
- *Table E.3(i) - Emissions to Sewer*, overleaf is Not Applicable, as there are no Emissions to Sewer (existing or proposed) from this Waste Licence Application site.
- *Table E.3(j) - Emissions to Sewer - Characteristics of the Emission*, overleaf is Not Applicable, as there are no Emissions to Sewer (existing or proposed) from this Waste Licence Application site.

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TABLE E.3(i): EMISSIONS TO SEWER(One page for each emission)

NOT APPLICABLE -

There are no Emissions to Sewer from the Waste Licence Application Site

Emission Point:

Emission Point Ref. N ^o :	
Location of connection to sewer :	
Grid Ref. (10 digit, 5E,5N):	
Name of sewage undertaker:	

Emission Details:

(i) Volume to be emitted			
Normal/day	m ³	Maximum/day	m ³
Maximum rate/hour	m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ min/hr	_____ hr/day	_____ day/yr
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TABLE E.3(ii): EMISSIONS TO SEWER - Characteristics of the emission (1 table per emission point)

NOT APPLICABLE -
There are no Emissions to Sewer from the Waste Licence Application Site

Emission point reference number : _____

Parameter	Prior to treatment				As discharged				% Efficiency
	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	Max. hourly average (mg/l)	Max. daily average (mg/l)	kg/day	kg/year	
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ATTACHMENT E.4

Emissions to Groundwater

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ATTACHMENT E.4

Emissions to Groundwater

(NOTE: Drawing No. 2084-2613 - *Proposed Emission Points* (Attached in 'Application Drawings', Tab 15), shows all emission points associated with the Waste Facility, subject to this Waste Licence Application).

- There are no Emissions to Groundwater (existing or proposed) from this Waste Licence Application site.
- *Table E.4(i) - Emissions to Groundwater*, overleaf is Not Applicable, as there are no Emissions to Groundwater (existing or proposed) from this Waste Licence Application site.

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TABLE E.4(i): EMISSIONS TO GROUNDWATER (1 Page for each emission point)

NOT APPLICABLE -
There are no Emissions to Groundwater from the Waste Licence Application Site
Emission Point or Area:

Emission Point/Area Ref. N°:	
Emission Pathway: (borehole, well, percolation area, soakaway, landspreading, etc.)	
Location :	
Grid Ref. (10 digit, 5E,5N):	
Elevation of discharge: (relative to Ordnance Datum)	
Aquifer classification for receiving groundwater body:	
Groundwater vulnerability assessment (including vulnerability rating):	
Identity and proximity of groundwater sources at risk (wells, springs, etc):	
Identity and proximity of surface water bodies at risk:	

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NOT APPLICABLE - There are no Emissions to Groundwater from the Waste Licence Application Site

Emission Details:

(i) Volume to be emitted			
Normal/day	m ³	Maximum/day	m ³
Maximum rate/hour	m ³		

(ii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (start-up /shutdown to be included):

Periods of Emission (avg)	min/hr	hr/day	day/yr
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ATTACHMENT E.5

Noise Emissions

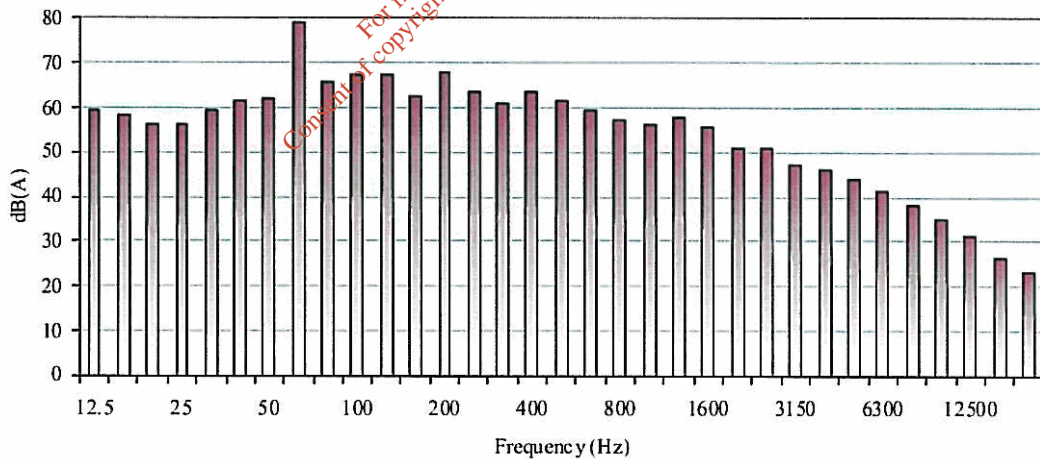
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ATTACHMENT E.5

Noise Emissions

(NOTE: Drawing No. 2084-2613 - *Proposed Emission Points* (Attached in 'Application Drawings', Tab 15), shows all emission points associated with the Waste Facility, subject to this Waste Licence Application).

- The only Noise Emission from the facility will be mobile plant (Hitachi 200 excavator).
- The figure below illustrates the Frequency Analysis for the noise source (Hitachi 200 excavator) on site measured at a distance of 5m. A pure tone was recorded at 63Hz although this was due to an external source as it was previously recorded at monitoring location N4 while the site was non-operational (Refer to noise monitoring report in Appendix I.6). This pure tone was not audible during monitoring and was noted once noise results had been downloaded.



Frequency Analysis at Hitachi 200 - distance of 5m

- *Table E.5(i) - Noise Emissions - Noise Sources Summary Sheet*, is attached overleaf



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Table E.5(i): NOISE EMISSIONS - Noise sources summary sheet

Source	Emission point Ref. No	Equipment Ref. No	Sound Pressure ¹ dBA at reference distance	Octave bands (Hz) Sound Pressure ¹ Levels dB(unweighted) per band									Impulsive or tonal qualities	Periods of Emission
				31.5	63	125	250	500	1K	2K	4K	8K		
Hitachi 200	-	-	At a distance of 5m =Leq 67.8	59.3	78.9	67.3	63.6	61.8	56.1	51.1	46.0	38.0	Tonal component recorded at 63Hz (external source – not audible during monitoring)	Daytime

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1. For items of plant sound power levels may be used.

ATTACHMENT E.6

Environmental Nuisances

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ATTACHMENT E.6

Environmental Nuisances

E.6.a Bird Control:

Due to the inert nature of the material (construction & demolition waste and wastes resulting from quarrying activities) to be recovered/reclaimed at the proposed Waste Licenced Facility, it is not expected that birds will present an Environmental Nuisance.

E.6.b Dust Control:

The unloading of material from the haulage trucks, and the subsequent movement/spreading of the inert material over the area of the deposition site, may produce dust on the site, during periods of dry weather.

It is proposed that during extended periods of dry weather, a tractor with water bowser would be brought onto the Waste Licenced site to sprinkle water over hardcore areas and the access road, to dampen down any dust. As the deposition site is located at a distance from the main Belmullet-Ballyglass Road, it is not expected (even during periods of extended dry weather) that any dust emanating from the site would reach the main road.

E.6.c Fire Control:

Due to the inert nature of the material (construction & demolition waste and wastes resulting from quarrying activities) to be recovered/reclaimed at the proposed Waste Licenced Facility (all non-flammable), there is very little risk of fire breaking out on the site. However, a fire extinguisher will be stored in the cabin of the site plant (Hitachi 200 excavator) and within the site Portocabin.

E.6.d Litter Control:

Due to the inert nature of the material (construction & demolition waste and wastes resulting from quarrying activities) to be recovered/reclaimed at the

proposed Waste Licenced Facility, it is not expected that litter will present an Environmental Nuisance.

In any case, it is proposed that the Deputy Facility Manager/Machine Operative will 'walk the site' once a week and recover any litter identified, for authorised disposal offsite.

E.6.e Traffic Control:

As discussed in Section D.1.d above: - *"Based on the proposed annual intake of 24,900 Tonnes, it is expected that there will be approximately 1,245 truckloads of inert material delivered to the site on an annual basis (i.e. ca. 25 truckloads per week)".* This equates to approximately 5 no. truck loads per day. Such a small number of truck movements is not expected to have any effect on traffic in the area of the site.

E.6.f Vermin Control:

Due to the inert nature of the material (construction & demolition waste and wastes resulting from quarrying activities) to be recovered/reclaimed at the proposed Waste Licenced Facility, it is not expected that vermin will present an Environmental Nuisance.

E.6.g Road Cleansing:

It is proposed to develop a hardcore area (with a surface dressing of clean broken stone), close to the entrance gate of the deposition site, as shown on Drawing No. 2084-2612 (attached in 'Application Drawings', Tab 15). This will allow haulage trucks to enter the site, turn, and deposit their material, along the perimeter of the hardcore area. It is not proposed to allow haulage trucks beyond the hardcore area at the entrance to the deposition site. It is therefore not expected that the wheels of the truck will come in contact with soils, etc. Any debris that may be attached to the haulage trucks is expected to fall off during the trucks movement over the hardcore material on the access roadway, i.e. before the trucks move offsite onto the Belmullet-Ballyglass main road.

Based on the above, 'Road Cleansing' is not expected to be required on the site, or on the surrounding roads.

ATTACHMENT F.1

Treatment, Abatement and Control Systems

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ATTACHMENT F.1

Treatment, Abatement and Control Systems

- Sections E.1 - E.6 (and their associated Attachments) of this Waste Licence Application discuss the potential 'Emissions' associated with the proposed facility. The Sections conclude that the main emissions from the facility will be to Surface Water at 6 no. locations (5 no. from site surface water drains - EMSW-1, EMSW-2, EMSW-3, EMSW-4 & EMSW-5, and 1 no. from the proposed petrol interceptor - EMPI). There will be a Noise Emission from the plant onsite (Hitachi 200 excavator) and a fugitive/minor emission to the atmosphere from the exhaust of this machine. Dust produced by the unloading of material from the haulage trucks, and the subsequent movement/spreading of the inert material over the area of the deposition site, was seen more as an 'Environmental Nuisance' rather than an emission from the proposed facility.
- The Treatment/Abatement/Control System proposed to manage the emissions to surface water were discussed in Section E.2 above:

"It is proposed to excavate 5 no. Settlement Ponds on the drainage channels, prior to their emission to the main surface water body (Clooneen River) as shown on Drawing No. 2084-2614 (attached in 'Application Drawings', Tab 15). The purpose of these Settlement Ponds is to allow suspended solids drop out of solution, prior to the surface water discharging from the site.

As discussed in Section D.1.c above, all runoff from the proposed concrete hardstand area will be directed through a petrol interceptor, prior to discharge into the site surface water drainage system, as shown on Drawing No. 2084-2613 (attached in 'Application Drawings', Tab 15)".

- It is proposed to manage the emissions from the facility plant (i.e. Hitachi 200 excavator) (Noise & Exhaust) by ensuring that the machine is serviced regularly in order to ensure that exhaust emissions are kept to a minimum, and that the engine produces the lowest noise levels possible.

- It is proposed to manage the environmental nuisance caused by dust by bringing a tractor with water bowser onto site during extended periods of dry weather, to sprinkle water over hardcore areas and the access road, to dampen down any dust.
- *Table F.1 - Abatement/Treatment Control* is attached overleaf.

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TABLE F.1: ABATEMENT / TREATMENT CONTROL

Emission point reference number : Emissions to Surface Water
(from Site Surface Water Drains)
(EMSW-1, EMSW-2, EMSW-3, EMSW-4 & EMSW-5)

Control ¹ parameter	Equipment ²	Equipment maintenance	Equipment calibration	Equipment back-up
Water Quality (Suspended Solids)	Settlement Ponds	To be Cleared with Excavator Biannually	Not Required	Not Required

Control ¹ parameter	Monitoring to be carried out ³	Monitoring equipment	Monitoring equipment calibration
Water Quality (Suspended Solids)	Quarterly (i.e. 4 times per annum)	Bucket (Samples to be sent to Laboratory for Analysis)	Not Required (Samples to be sent to Laboratory for Analysis)

- ¹ List the operating parameters of the treatment / abatement system which control its function.
² List the equipment necessary for the proper function of the abatement / treatment system.
³ List the monitoring of the control parameter to be carried out.

TABLE F.1: ABATEMENT / TREATMENT CONTROL

Emission point reference number : Emissions to Surface Water
(from Concrete Hardstand/Petrol Interceptor)
(EMPI)

Control ¹ parameter	Equipment ²	Equipment maintenance	Equipment calibration	Equipment back-up
Water Quality (Hydrocarbons)	Petrol Interceptor	To be Emptied Biannually or When Required	Not Required	Not Required

Control ¹ parameter	Monitoring to be carried out ³	Monitoring equipment	Monitoring equipment calibration
Water Quality (Hydrocarbons)	Quarterly (i.e. 4 times per annum)	Bucket (Samples to be sent to Laboratory for Analysis)	Not Required (Samples to be sent to Laboratory for Analysis)

¹ List the operating parameters of the treatment / abatement system which control its function.

² List the equipment necessary for the proper function of the abatement / treatment system.

³ List the monitoring of the control parameter to be carried out.

ATTACHMENT F.2

Monitoring and Sampling Points

Air

(To Include Dust & Odour)

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ATTACHMENT F.2

Monitoring and Sampling Points Air (To Include Dust & Odour)

(NOTE: Drawing No. 2084-2606 - *Proposed Environmental Monitoring Locations* (Attached in 'Application Drawings', Tab 15), shows all proposed monitoring locations associated with the Waste Facility, subject to this Waste Licence Application).

- Three No. 'Dust Monitoring' locations are proposed close to the boundary of the Waste Licence Application site:

Monitoring Point:	Grid Reference Location:
D1	E469465.824 N835704.061
D2	E469966.514 N835705.678
D3	E470255.744 N835929.960

It is proposed to monitor for 'Settlement Dust', by the Bergerhoff Method at these locations, biannually.

- *Table F.2.a – Emissions Monitoring And Sampling Points – Air – Dust* is attached overleaf.
- 'Odour Monitoring' is not proposed for the facility. Due to the inert nature of the material (construction & demolition waste and wastes resulting from quarrying activities) to be recovered/reclaimed at the proposed Waste Licensed Facility, it is not expected that there will be any odour emissions.
- *Table F.2.b – Emissions Monitoring And Sampling Points – Air – Odour*, overleaf is Not Applicable, as there are not expected to be any Odour Emissions from this Waste Licence Application site.



WASTE Application Form

TABLE F.2a: EMISSIONS MONITORING AND SAMPLING POINTS - (1 table per media)

AIR - DUST

Emission Point Reference No(s) : D1, D2 & D3

Parameter	Monitoring frequency	Accessibility of Sampling Points
Settlement Dust (Bergerhoff Method)	Biannually	Easily Accessible (Dust Monitoring Stands in Place)

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TABLE F.2b: EMISSIONS MONITORING AND SAMPLING POINTS - (1 table per media)

AIR - ODOUR

NOT APPLICABLE -

**No Odour Emissions are Expected from the Waste Licence Application Site,
Due to the Inert Nature of the Material Proposed to be Accepted at the Facility.**

Emission Point Reference No(s). : _____

Parameter	Monitoring frequency	Accessibility of Sampling Points

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ATTACHMENT F.3

Monitoring and Sampling Points Surface Water

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ATTACHMENT F.3

Monitoring and Sampling Points Surface Water

(NOTE: Drawing No. 2084-2606 - *Proposed Environmental Monitoring Locations* (Attached in 'Application Drawings', Tab 15), shows all proposed monitoring locations associated with the Waste Facility, subject to this Waste Licence Application).

- Four No. 'Surface Water Monitoring' locations are proposed in the Clooneen River, which runs in an easterly direction, along the northern boundary of the Waste Licence Application site.

Monitoring Point:	Grid Reference Location:
SW1	E469552.459 N836024.337
SW2	E469898.874 N835978.089
SW3	E470263.519 N835956.711
SW4	E470297.078 N835935.629

SW-1 is located upstream of the site. SW-2 is located along the northern boundary of the site, downstream of the main surface water drainage outlet from the site and SW-3 & SW-4 are located at the northwest corner of the site, SW-3 downstream of a surface water drain outlet from the site, and SW-4 downstream of the final surface water drain outlet from the site.

It is proposed to sample river water at each of the above monitoring locations 4-times per annum (quarterly) for the following parameters:

Total Suspended Solids;
PH;
Electrical Conductivity;
Dissolved Oxygen (DO);

The main potential source of contamination to the surface water exiting the site would be 'Suspended Solids', which can have a negative effect on the fish-life in the Clooneen River.

- *Table F.3 – Emissions Monitoring And Sampling Points – Surface Water,* is attached overleaf.

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WASTE Application Form

TABLE F.3: EMISSIONS MONITORING AND SAMPLING POINTS - (1 table per media)

SURFACE WATER

Emission Point Reference No(s) : SW-1, SW-2, SW-3 & SW-4

Parameter	Monitoring frequency	Accessibility of Sampling Points
Total Suspended Solids	Quarterly	Easily Accessible
pH	Quarterly	Easily Accessible
Electrical Conductivity	Quarterly	Easily Accessible
Dissolved Oxygen (DO)	Quarterly	Easily Accessible

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ATTACHMENT F.4

Monitoring and Sampling Points Sewer Discharge

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ATTACHMENT F.4

Monitoring and Sampling Points Sewer Discharge

(NOTE: Drawing No. 2084-2606 - *Proposed Environmental Monitoring Locations* (Attached in 'Application Drawings', Tab 15), shows all proposed monitoring locations associated with the Waste Facility, subject to this Waste Licence Application).

- There are no Emissions to Sewer (existing or proposed) from this Waste Licence Application site. Therefore, monitoring of Sewer Discharge is not required.
- *Table F.4 – Emissions Monitoring And Sampling Points – Sewer*, overleaf is Not Applicable, as there are no Emissions to Sewer (existing or proposed) from this Waste Licence Application site.

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TABLE F.4: EMISSIONS MONITORING AND SAMPLING POINTS - (1 table per media)

SEWER DISCHARGE

NOT APPLICABLE -
There are no Emissions to Sewer (existing or proposed) from the Waste Licence Application Site

Emission Point Reference No(s) : _____

Parameter	Monitoring frequency	Accessibility of Sampling Points

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ATTACHMENT F.5

Monitoring and Sampling Points Groundwater

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ATTACHMENT F.5

Monitoring and Sampling Points Groundwater

(NOTE: Drawing No. 2084-2606 - *Proposed Environmental Monitoring Locations* (Attached in 'Application Drawings', Tab 15), shows all proposed monitoring locations associated with the Waste Facility, subject to this Waste Licence Application).

- There are no Emissions to Groundwater (existing or proposed) from this Waste Licence Application site. Therefore, monitoring of Groundwater is not required.
- *Table F.5 – Emissions Monitoring And Sampling Points – Groundwater*, overleaf is Not Applicable, as there are no Emissions to Groundwater (existing or proposed) from this Waste Licence Application site.

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WASTE Application Form

TABLE F.5: EMISSIONS MONITORING AND SAMPLING POINTS - (1 table per media)

GROUNDWATER

NOT APPLICABLE -

There are no Emissions to Groundwater (existing or proposed) from the Waste Licence Application Site

Emission Point Reference No(s) : _____

Parameter	Monitoring frequency	Accessibility of Sampling Points

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ATTACHMENT F.6

Monitoring and Sampling Points Noise

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ATTACHMENT F.6

Monitoring and Sampling Points Noise

(NOTE: Drawing No. 2084-2606 - *Proposed Environmental Monitoring Locations* (Attached in 'Application Drawings', Tab 15), shows all proposed monitoring locations associated with the Waste Facility, subject to this Waste Licence Application).

- Three No. 'Noise Monitoring' locations are proposed close to the boundary of the Waste Licence Application site:

Monitoring Point:	Grid Reference Location:
N1	E469488.392 N835689.268
N2	E469963.326 N835727.868
N3	E470234.691 N835923.115

- Two No. 'Noise Monitoring' locations are proposed at the Nearest Noise Sensitive Locations (i.e. the closest 2 no. residences):

Monitoring Point:	Grid Reference Location:
N4	E470221.416 N836643.320
N5	E469743.123 N835108.874

- It is proposed to monitor noise at the above locations biannually for:
 $L(A)_{eq}$, $L(A)_{10}$ & $L(A)_{90}$.
- *Table F.6 – Emissions Monitoring And Sampling Points – Noise*, is attached overleaf.



WASTE Application Form

TABLE F.6: EMISSIONS MONITORING AND SAMPLING POINTS - (1 table per media)

NOISE

Emission Point Reference No(s) : N1, N2, N3, N4 & N5

Parameter	Monitoring frequency	Accessibility of Sampling Points
L(A)_{eq}	Annually	Easily Accessible
L(A)₁₀	Annually	Easily Accessible
L(A)₉₀	Annually	Easily Accessible

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ATTACHMENT F.7

Monitoring and Sampling Points Meteorological Data

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ATTACHMENT F.7

Monitoring and Sampling Points Meteorological Data

(NOTE: Drawing No. 2084-2606 - *Proposed Environmental Monitoring Locations* (Attached in 'Application Drawings', Tab 15), shows all proposed monitoring locations associated with the Waste Facility, subject to this Waste Licence Application).

- Site Monitoring of Meteorological Data on the Waste Licence Application site is not proposed. Met Eireann have an official 'Weather Station' in Belmullet, within close proximity to the proposed facility. Any Meteorological Data that is required for reporting purposes (e.g. the Waste Licence 'Annual Environmental Review' (AER)) can be attained from this Met Eireann Weather Station.
- *Table F.7 – Emissions Monitoring And Sampling Points – Meteorological Data*, overleaf is Not Applicable, as it is not proposed to monitor Meteorological Data on the proposed Waste Licence Site.

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TABLE F.7: EMISSIONS MONITORING AND SAMPLING POINTS - (1 table per media)

METEOROLOGICAL DATA

NOT APPLICABLE -

It is not proposed to Monitor Meteorological Data at the Proposed Waste Licence Site, But to Use Information Obtained from the Met Eireann Weather Station at Belmullet, when Required.

Emission Point Reference No(s) : _____

Parameter	Monitoring frequency	Accessibility of Sampling Points

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ATTACHMENT F.8

Monitoring and Sampling Points Leachate

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ATTACHMENT F.8

Monitoring and Sampling Points Leachate

(NOTE: Drawing No. 2084-2606 - *Proposed Environmental Monitoring Locations* (Attached in 'Application Drawings', Tab 15), shows all proposed monitoring locations associated with the Waste Facility, subject to this Waste Licence Application).

- This Waste Licence Application does not relate to a Landfill, and therefore, Section F.8 and Attachment F.8 are Not Applicable.
- *Table F.8 – Emissions Monitoring And Sampling Points – Leachate Data*, overleaf is Not Applicable, as this Waste Licence Application does not relate to a Landfill facility.

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WASTE Application Form

TABLE F.8: EMISSIONS MONITORING AND SAMPLING POINTS - (1 table per media)

LEACHATE

NOT APPLICABLE
(This Waste Licence Application does not relate to a Landfill facility)

Emission Point Reference No(s). : _____

Parameter	Monitoring frequency	Accessibility of Sampling Points

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ATTACHMENT F.9

Monitoring and Sampling Points Landfill Gas

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ATTACHMENT F.9

Monitoring and Sampling Points Landfill Gas

(NOTE: Drawing No. 2084-2606 - *Proposed Environmental Monitoring Locations* (Attached in 'Application Drawings', Tab 15), shows all proposed monitoring locations associated with the Waste Facility, subject to this Waste Licence Application).

- This Waste Licence Application does not relate to a Landfill, and therefore, Section F.9 and Attachment F.9 are Not Applicable.

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ATTACHMENT F.f

Monitoring and Sampling Points Ambient Environmental Monitoring

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ATTACHMENT F.f

Monitoring and Sampling Points Ambient Environmental Monitoring

(NOTE: Drawing No. 2084-2606 - *Proposed Environmental Monitoring Locations* (Attached in 'Application Drawings', Tab 15), shows all proposed monitoring locations associated with the Waste Facility, subject to this Waste Licence Application).

- 'Ambient Environmental Monitoring' is not proposed at the Waste Licence Facility.
- *Table F.f – Fugitive Environment Monitoring And Sampling Locations*, overleaf is Not Applicable, as 'Ambient Environmental Monitoring' is not proposed at the Waste Licence Facility.

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TABLE Ff: Fugitive ENVIRONMENT MONITORING AND SAMPLING LOCATIONS (1 table per media)

NOT APPLICABLE
(Ambient Environmental Monitoring is Not Proposed)

Monitoring Point Reference No : _____

Parameter	Monitoring frequency	Accessibility of Sampling point
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ATTACHMENT G.1

Raw Materials, Substances, Preparations and Energy

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ATTACHMENT G.1

Raw Materials, Substances, Preparations and Energy

- The only fuels required at the proposed Waste Licence Site will be Diesel (ca. 100 Litres/week) and Hydraulic Oil (ca. 40 Litres/annum), to run the onsite plant (Hitachi 200 excavator) and the small generator required to provide electricity to the site accommodation (Portocabin). As stated in Section D.1.g above: *"It is not proposed to store any fuel onsite. A fuel tanker will visit the site, when required and fill the onsite plant (Hitachi 200 excavator). The refuelling will be carried out on the proposed concrete hardstand. As discussed in Section D.1.c above, all runoff from the hardstand area will be directed through a petrol interceptor, prior to discharge into the surface water drainage system"*.
- Water will be provided to the facility (Portocabin) by tanker, and stored in a holding tank.
- Raw Materials including broken stone, sand, concrete blocks and poured concrete will be accepted at the facility to complete construction of the proposed broken stone hardcore turning area for trucks (inside the main entrance gate) and for the proposed concrete hardstand area (base for Portocabin, Portoloo, Waste Quarantine Area, and Machine Refuelling Area). These works are proposed to be completed within the first two working weeks of the Waste Licence being granted. Following these works, it is not expected that any other 'Raw Materials' will be accepted at the facility.
- All Inert Materials (construction & demolition waste and wastes resulting from quarrying activities) accepted at the facility will be recovered/reclaimed, by being spread out over the site, in compliance with Waste Licence Application Drawings (Attached in 'Application Drawings', Tab 15). There will be no 'Product Materials' produced by this recovery/reclamation process.
- No chemicals (e.g. Insecticides, Herbicides, Rat Poisons, Cleaning Agents, Water Treatment Chemicals, Cooling Water/Boiling Water Additives, Laboratory Chemicals, etc.) will be required or accepted at the facility.

- *Table G.1 – Details of Process Related Raw Materials, Intermediates, Products, etc., Used or Generated on the Site, is attached overleaf.*

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Table G.1 Details of Process related Raw Materials, Intermediates, Products, etc., used or generated on the site

NOTE:

Diesel/Hydraulic Oil proposed to be used as fuel for Site Plant (Hitachi 200 excavator) and Generator (for Site Portocabin).
 Water to be stored in holding tank for Site Portocabin.
 Broken Stone, Sand, Concrete Blocks & Poured Concrete to be used within first two weeks, for construction of 'Proposed Broken Stone Hardcore Turning Area for Trucks' and for the 'Proposed Concrete Hardstand Area'.

Ref. N ^o or Code	Material/ Substance ⁽¹⁾	CAS Number	Danger ⁽²⁾ Category	Amount Stored (tonnes)	Annual Usage (tonnes)	Nature of Use	R ⁽³⁾ - Phrase	S ⁽³⁾ - Phrase
-	Fuel – Diesel	68334-30-5	-	None	5m ³	Machine/Generator Fuel	R10 R40 R51/53	S2 S36/37 S62
-	Fuel – Hydraulic Oil	N/A	-	None	0.04m ³	Machine/Generator Fuel	N/A	N/A
-	Water	N/A	-	0.5m ³ (0.5 Tonnes)	3.5m ³ (3.5 Tonnes)	Site Accommodation	N/A	N/A
-	Broken Stone	N/A	-	None	150m ³ (225 Tonnes Once Off)	Hardcore Area	N/A	N/A
-	Sand	N/A	-	None	350 Tonnes Once Off	Concrete Hardstand Area	N/A	N/A
-	Concrete Blocks	N/A	-	None	125 Tonnes Once Off	Concrete Hardstand Area	N/A	N/A
-	Poured Concrete	N/A	-	None	75m ³ 112.5 Tonnes Once Off	Concrete Hardstand Area	N/A	N/A

- Notes: 1. In cases where a material comprises a number of distinct and available dangerous substances, please give details for each component substance.
 2. c.f. Article 2(2) of SI N^o 77/94
 3. c.f. Schedules 2 and 3 of SI N^o 77/94

ATTACHMENT G.2

Energy Efficiency

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ATTACHMENT G.2

Energy Efficiency

- The only 'Energy' proposed to be used at the facility will be that to run the Facility Plant (Hitachi 200 excavator) and the Generator (to provide electricity to the site Portocabin). To ensure energy efficiency, the facility plant engine will be switched off when not in use and the generator will only be used when absolutely necessary. Based on the above, it is anticipated that the proposed facility will be very energy efficient.
- The activity proposed for the Waste Licence Application Site (i.e. the acceptance of Inert Materials (construction & demolition waste and wastes resulting from quarrying activities), which will be recovered/reclaimed, by being spread out over the site, in compliance with Waste Licence Application Drawings (Attached in 'Application Drawings', Tab 15)) will not produce energy.

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ATTACHMENT H.1

Waste Types and Quantities - Existing & Proposed

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ATTACHMENT H.1

Waste Types and Quantities - Existing & Proposed

- The 'Quantities of Waste in Relation to Each Class of Activity Applied for' (as indicated on Table H.1(A) of the Application Form) are:

Class 4 of the Fourth Schedule of the Waste Management Acts 1996 - 2003:

"Recycling or reclamation of other inorganic materials".

It is proposed to accept 24,900 Tonnes per Annum of inert inorganic materials (Construction & Demolition Waste and Wastes from Quarrying Activities) at the facility for recovery/reclamation. 400 Tonnes/Annum of this material may be stored on the site (prior to recovery/reclamation), under Class 13 of the Fourth Schedule, as discussed below. The material will be recovered/reclaimed by spreading the material over the site area, with a consequential benefit for improving the land for agricultural use.

Class 13 of the Fourth Schedule of the Waste Management Acts 1996 - 2003:

"Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced".

As stated above, 400 Tonnes/Annum of the accepted inert inorganic materials (Construction & Demolition Waste and Wastes from Quarrying Activities) may be stored on the site, prior to recovery/reclamation under Class 4 of the Fourth Schedule, discussed above.

- The 'Annual Quantities and Nature of Waste' (as indicated on Table H.1(B) of the Application Form) are 24,900 Tonnes per Annum of Non-Hazardous Waste, over the years 2009 - 2032 (over 24 years).
- The 'Waste Types and Quantities' (as indicated on Table H.1(C) of the Application Form) are that 24,900 Tonnes per Annum of Construction & Demolition Waste are presently being accepted, under existing Mayo County Council Waste Permit PER 144, and 24,900 Tonnes per annum

of Construction & Demolition Waste (& Wastes from Quarrying Activities) are proposed to be accepted under the proposed Waste Licence for the facility. Therefore, it is not proposed to increase the amount of material to be accepted under the Waste Licence.

- It is not proposed to accept any Hazardous Waste at the facility, as indicated on *Table H.1.2 - Hazardous Waste Types and Quantities* in the application form and on *Table H.1(i) - Waste - Hazardous Waste Recovery/Disposal* attached overleaf.
- *Table H.1(ii) - Waste - Other Waste Recovery/Disposal*, overleaf, lists all types of 'Waste Materials' and their associated 'EWC Codes' proposed to be accepted at the facility. It is proposed to accept 575 Tonnes/Month (- ca. 360m³/Month) of 'Waste Resulting from Exploration, Mining, Quarrying, and Physical & Chemical Treatment of Minerals' and 1,500 Tonnes/Month (= ca. 937.5m³/Month) of 'Construction and Demolition Wastes'. All materials accepted will be recovered/reclaimed onsite, by spreading the material over the site area, with a consequential benefit for improving the land for agricultural use.
- **METHOD OF MATERIAL RECOVERY:**

Drawing No. 2084-2607 (Attached in 'Application Drawings', Tab 15) presents the '*Existing Topographic Map of Application Site*'. This application for a Waste Licence, proposes to raise the level of the site by 2m, by spreading out the accepted inert materials (construction & demolition waste and wastes resulting from quarrying activities) (24,900 Tonnes/Annum) over the surface of the 'Area of Deposition'. Drawing No. 2084-2608 - (Attached in 'Application Drawings', Tab 15), shows the '*Proposed Topographic Map of Application Site, Showing Final Ground Levels*' (i.e. with proposed 2m Land Raise shown). Cross Section Locations A-A, B-B, C-C, D-D & E-E are shown on Drawing 2084-2607 & Drawing No. 2084-2608 (Attached in 'Application Drawings', Tab 15), with the Cross Sections presented on Drawing No. 2084-2609, Drawing No. 2084-2610 & Drawing No. 2084-2611 (Attached in 'Application Drawings', Tab 15). The Cross Sections clearly show the Land Raise by 2m, with a slope of 3:1 down to all existing perimeter surface water drains, which will remain untouched. The existing open surface water drains that cut through the Area of Waste Deposition, will also be raised by 2m, as shown on the Cross Section Drawings.

To allow for a proposed 2m Land Raise, it was calculated that a total of 373,039m³ of material would have to be accepted/recovered at the facility. Using a density for Construction & Demolition Waste & Wastes from Quarrying Activities of 1.6 Tonnes/m³, it was calculated that 596,862.5 Tonnes Waste would have to be accepted at the facility for recovery/reclamation. Based on an annual intake of 24,900 Tonnes/Annum, it is calculated that the facility will be active for 24 Years (i.e. 2009 - 2032).

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TABLE H.1(i): WASTE - Hazardous Waste Recovery/Disposal

NOT APPLICABLE

The Facility Subject to this Waste Licence Application will not Accept/Recover/Dispose Hazardous Waste

Waste material	EWC Code	Main source ¹	Quantity		On-site Recovery/Disposal (Method & Location)	Off-site Recovery, reuse or recycling (Method, Location & Undertaker)	Off-site Disposal (Method, Location & Undertaker)
			Tonnes / month	m ³ / month			
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¹ A reference should be made to the main activity / process for each waste.



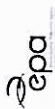
WASTE Application Form

TABLE H.1(ii) WASTE - Other Waste Recovery/Disposal

NOTE:
This Table Presents Wastes Proposed to be Accepted and Recovered/Reclaimed at the Facility

Waste material	EWC Code	Main source ¹	Quantity		On-site recovery/disposal ² (Method & Location)	Off-site Recovery, reuse or recycling (Method, Location & Undertaker)	Off-site Disposal (Method, Location & Undertaker)
			Tonnes / month	m ³ / month			
Waste Resulting from Exploration, Mining, Quarrying, and Physical & Chemical Treatment of Minerals	01 ↓	Quarry	575 Tonnes/Month	360 m3/Month	Onsite Recovery (Spread Out Over Site)	NOT APPLICABLE	NOT APPLICABLE
Waste Sand & Clays	01 04 09	Quarry					
Dusty & Powdery Wastes, other than those mentioned in 01 04 07	01 04 10	Quarry					
Tailings & Other Wastes from Washing & Cleaning of Minerals, other than those mentioned in 01 04 07 & 01 04 11	01 04 12	Quarry					
Construction and Demolition Wastes	17 ↓	Construction & Demolition Sites in Connaught Region	1,500 Tonnes/Month	937.5 m3/Month	Onsite Recovery (Spread Out Over Site)	NOT APPLICABLE	NOT APPLICABLE

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Concrete	17 01 01	Construction & Demolition Sites in Connaught Region							
Bricks	17 01 02	Construction & Demolition Sites in Connaught Region							
Tiles & Ceramics	17 01 03	Construction & Demolition Sites in Connaught Region							
Mixture of Concrete, Bricks, Tiles & Ceramics, other than those mentioned in 17 01 06	17 01 07	Construction & Demolition Sites in Connaught Region							
Soil & Stones, other than those mentioned in 17 05 03	17 05 04	Construction & Demolition Sites in Connaught Region							
Dredging Spoil, other than those mentioned in 17 05 05	17 05 06	Construction & Demolition Sites in Connaught Region							
Mixed Construction & Demolition Wastes, other than those mentioned in 17 09 01, 17 09 02 & 17 09 03	17 09 04	Construction & Demolition Sites in Connaught Region							

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- 1 A reference should be made to the main activity/ process for each waste.
- 2 The method of disposal or recovery should be clearly described and referenced to **Attachment H.1**

ATTACHMENT H.2

Waste Acceptance Procedures

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ATTACHMENT H.2

Waste Acceptance Procedures

- As discussed in Sections D.1.b & D.1.d above: *"It is proposed to develop a hardcore area (with a surface dressing of clean broken stone), close to the entrance gate, as shown on Drawing No. 2084-2612 (attached in 'Application Drawings', Tab 15). This will allow haulage trucks to enter the site, turn, and deposit their material, along the perimeter of the hardcore area"*.

The Deputy Facility Manager/Machine Operative will inspect each load, as it is being deposited, to ensure the material is fully compliant with the Waste Licence. If the material is non-compliant, the Deputy Facility Manager/Machine Operative will insist that the material is reloaded onto the haulage truck and removed from the site, for authorised disposal elsewhere.

Once the haulage trucks deposit their material, along the perimeter of the hardcore area, the excavator will shift the inert material, from where it is deposited by the haulage trucks, and spread it over the area of the deposition site, in compliance with the Waste Licence Application Drawings (attached in 'Application Drawings', Tab 15). If waste objects are identified within the inert material (whilst shifting/reclaiming the material), which are not compliant with the Waste Licence (eg. pieces of wood, plastic, metal), they will be removed and transported to the Waste Quarantine Area (discussed in Section D.1.i above).

The Deputy Facility Manager/Machine Operative will keep a record of all material arriving at the facility, including the following information:

- Date;
- Time;
- Owner Truck;
- Truck Licence Plate No.;
- Type of Material;
- Origin of Material;
- Quantity of Material;

Although it is not proposed to install a weighbridge at the facility, all inert material arriving at the facility will be delivered in haulage trucks owned and operated by Lennon Quarries Ltd. (under Waste Collection Permit CW276, which is presently under review with Mayo County Council). The Deputy Facility Manager/Machine Operative on the Waste Licenced site will have a record of the capacity of each of the trucks, which will allow him to keep an accurate record of volumes/quantities of inert materials (construction & demolition waste and wastes resulting from quarrying activities) being accepted at the facility on a daily basis.

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ATTACHMENT H.3

Waste Handling

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ATTACHMENT H.3

Waste Handling

- As discussed in Section D.2 above: *"The Waste Facility proposed under this Licence Application, is a very simple 'Material Recovery Facility'. The proposed works involve the acceptance of 24,900 tonnes per annum of non-hazardous/inert material (Construction & Demolition Waste and Waste Resulting from Quarrying) and its recovery/reclamation, by spreading material over the deposition site area, with a consequential benefit for improving the land for agricultural use"*. The only Waste Handling involved will be by the Deputy Facility Manager/Machine Operative. On arrival, the haulage trucks will deposit the material close to the site entrance (alongside the hardcore turning area). As discussed in Section H.2 above, The Deputy Facility Manager/Machine Operative will inspect each load, as it is being deposited, to ensure the material is fully compliant with the Waste Licence. If the material is non-compliant, the Deputy Facility Manager/Machine Operative will insist that the material is reloaded onto the haulage truck and removed from the site, for authorised disposal elsewhere.

Once the haulage trucks deposit their material, along the perimeter of the hardcore area, the excavator will shift the inert material, from where it is deposited by the haulage trucks, and spread it over the area of the deposition site, in compliance with the Waste Licence Application Drawings (attached in 'Application Drawings', Tab 15). If waste objects are identified within the inert material, whilst shifting/reclaiming the material, which are not compliant with the Waste Licence (eg. pieces of wood, plastic, metal), they will be removed and transported to the Waste Quarantine Area (discussed in Section D.1.i above).

ATTACHMENT H.4

Waste Arisings

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ATTACHMENT H.4

Waste Arisings

- The only Waste Arisings at the facility subject to this Waste Licence Application will be those materials moved to/stored in the Waste Quarantine Area (e.g. wood, plastics, metals, etc.) and wastes from the facility Portocabin (= office, canteen & store).
- The wastes from the Quarantine Area will be removed by authorised Waste Collection Permit Holders for disposal or recovery to authorised waste facilities.
- The waste arisings from the Portocabin are expected to be quite small, due to the limited nature of the operation (i.e. only one Deputy Facility Manager/Machine Operative onsite). All wastes in the Portocabin will be divided into 'Recyclable Waste' and 'Landfill Waste' and appropriately disposed of/recovered.

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