



OFFICE OF ENVIRONMENTAL SUSTAINABILITY

Environmental Licensing Programme Memorandum

To:	Dr Eimear Cotter, Director
From:	Suzanne Wylde, Inspector, Environmental Licensing Programme
Date:	26 August 2019
RE:	Request for a Technical Amendment to a Waste Licence Register Number W0013-01, held by Galway City Council.

1. Introduction

A Waste Licence (Register Number W0013-01) was first granted to Galway City Council on 28th August 2003. The licence was amended on 15th January 2013, (Technical Amendment A) to bring the licence into compliance with the requirements of the Environmental Objectives (Surface Waters) and Environmental Objectives (Groundwater) Regulations.

The licence was granted for the restoration of the landfill and Galway City Council were permitted by the licence to accept inert waste only for the purposes of restoring the facility. The licence also provided for the acceptance of waste at a civic waste facility and the development of composting operations at the facility.

2. Request for Technical Amendment

The EPA received a technical amendment request from Galway City Council on 5th April 2019 to reduce the licence boundary of the site, removing the composting facility from the licensed boundary.

The request also requested removal of the following from the licence:

- i. Class 6 and Class 7 from the licensed activities permitted Part I Licensed Activities of the licence.

Class 6.	<i>Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule:</i> <i>This activity is limited to the treatment of leachate at the facility.</i>
Class 7.	<i>Physico-chemical treatment not referred to elsewhere in this Schedule (including evaporation, drying and calcination) which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 10 of this Schedule:</i> <i>This activity is limited to the treatment of leachate at the facility.</i>

ii. Conditions 1.7.3, 3.17 and 5.5:

Condition 1.7.3 Composting

1.7.3.1 Waste shall only be accepted for composting between the hours of 8.00 a.m. to 6.00 p.m. Monday to Saturday inclusive.

Condition 3.17 Compost facility

- 3.17.1 Prior to any waste being accepted for composting at the facility, appropriate infrastructure for the composting of waste shall be established and maintained at the facility.*
- 3.17.2 The entire compost area must be hardstand and all drainage shall either be recirculated back into the composting process or drain to the leachate treatment system.*
- 3.17.3 Prior to the commencement of composting operations at the facility, the licensee shall submit a report to the Agency for its agreement, which shall assess the need for enclosure and odour management of the proposed composting operations (including waste reception, curing and storage) at the facility. Any recommendations arising from this report shall be implemented within a timeframe to be agreed with the Agency.*
- 3.17.4 The licensee shall provide and maintain an air extraction and air abatement system for the treatment of odours arising from the composting operations. Monitoring of the abatement system shall be carried out as specified in Schedule D: Monitoring, of this licence.*

Condition 5.5 Composting

- 5.5.1 Only source segregated organic waste (including green waste) shall be composted at the facility.*
- 5.5.2 All wastes (with the exception of green waste) accepted for organic waste composting shall be introduced into the compost process within 24 hours of acceptance at the facility.*
- 5.5.3 Unless otherwise agreed with the Agency, the waste being composted shall be exposed to a temperature of >60 °C for a period of at least 6 days.*
- 5.5.4 No waste shall be left uncovered in the composting area from the close of operation on Saturday until Monday morning opening unless otherwise agreed with the Agency.*
- 5.5.5 Compost and Stabilised Biowaste shall comply with the Quality Standards as specified in Schedule F: Standards for Compost and Stabilised Biowaste Quality, of this licence, unless otherwise agreed with the Agency.*
- 5.5.6 Compost of Class 1 Standard shall be considered a product, and shall be used according to best agronomic practice.*
- 5.5.7 Compost of Class 2 Standard shall be considered a product, and shall be used according to best agronomic practice. Unless otherwise agreed with the Agency, it shall be used in a quantity not exceeding 30 tonnes dry matter per hectare (on a three year average).*
- 5.5.8 Subject to the prior agreement of the Agency, Stabilised Biowaste may be used in artificial soils or in land applications that are not used for food and fodder crop production.*
- 5.5.9 Compost not reaching the standards designated Class 1 or Class 2, and Stabilised Biowaste shall be considered a waste and the details recorded as required under Condition 10.6.*

iii. Row 2, Organic Waste for Composting from *Schedule A.1 Waste Acceptance*, as below:

A.1 Waste Acceptance - Waste Categories and Quantities

Waste Type	Maximum (Tonnes Per Annum)
Inert materials to be used for the purposes of remediation and restoration of the facility	To be agreed with the Agency under Condition 4.1
Organic Waste for Composting	9,500^{Note 1}
Civic Waste Facility	8,500 ^{Note 1}

Note 1: Unless otherwise agreed with the Agency.

iv. Schedule C.6 Emission limit values for composting process as follows:

C.6 Emission Limits Values for Composting process

Emission Point reference no: To be agreed with the Agency

Minimum discharge height: To be agreed with the Agency

Parameter	Emission Limit Value
Ammonia	50 mg/m ³
Hydrogen sulphide	5 mg/m ³
Mercaptans	5 mg/m ³

v. Schedule D.2 Dust, Bioaerosols and odour:

D.2 Dust, Bioaerosols & Odour

Table D.2.1 Monitoring Locations

Monitoring Locations
Four dust deposition monitoring points along boundary of facility ^{Note 1}
One dust deposition monitoring point at nearest sensitive location ^{Note 1}
PM ₁₀ and Bioaerosol monitoring locations ^{Note 2}
Odour monitoring ^{Note 3}

Note 1: Locations to be agreed with the Agency.

Note 2: Monitoring for PM₁₀ and bioaerosols should be carried out at one upwind and two downwind locations to be agreed with the Agency.

Note 3: Odour monitoring should be carried out at the following locations: (i) composting air abatement system (ii) waste reception/mixing area (iii) one upwind and (iv) two downwind locations. The locations should be agreed with the Agency.

Table D.2.2 Dust, Bioaerosol and Odour Monitoring Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
Dust deposition (mg/m ² /day)	Three times a year ^{Note 2}	Standard Method ^{Note 1}
PM₁₀ (µg/m ³)	Annually ^{Note 5}	See Note 4
<i>Aspergillus fumigatus</i>	Annually ^{Note 5}	Grab sample ^{Note 3}
Mesophilic bacteria	Annually ^{Note 5}	Grab sample ^{Note 3}
Odour	Annually ^{Note 5}	Olfactometric

Note 1: Standard method VDI2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute). A modification (not included in the standard) which 2 methoxy ethanol may be employed to eliminate interference due to algae growth in the gauge.

Note 2: Twice during the period May to September or as otherwise agreed with the Agency.

Note 3: Enumeration of colonies to be carried out as described in 'Standardised Protocol for the Sampling and Enumeration of Airborne Micro-organisms at composting Facilities' the UK Composting Association 1999.

Note 4: As described in prEN12341 "Air Quality - field test procedure to demonstrate reference equivalence of sampling methods for PM10 fraction of particulate matter" or an alternative agreed in writing with the Agency.

Note 5: Monitoring for odour, PM₁₀ and bioaerosols shall be carried out prior to the commencement of composting at the facility and thereafter on an annual basis.

Table D.2.3 Monitoring Frequency and Technique for Emissions from Composting Air Abatement System^{Note1}

Parameter	Monitoring Frequency	Analysis Method/Technique
Bed Media		
Odour assessment ^{Note 2}	Daily	Subjective Inspection
Condition and depth of biofilter ^{Note 3}	Daily	Visual Inspection
Moisture content	Quarterly	Standard laboratory method
pH	Quarterly	pH probe
Ammonia	Quarterly	Standard laboratory method
Total viable counts	Quarterly	Standard laboratory method
Inlet and Outlet Gas		
Ammonia	Quarterly	Colorimetric Indicator Tubes
Hydrogen sulphide	Quarterly	Colorimetric Indicator Tubes
Mercaptans	Quarterly	Colorimetric Indicator Tubes
Odour measurement	Annually	Olfactometric

Note 1: All analyses shall be carried out by a competent laboratory using standard and internationally acceptable techniques. The testing laboratory and the testing technique shall be agreed with the Agency in advance.

Note 2: This subjective assessment should be carried out by an appropriately trained staff member.

Note 3: The biofilter shall be examined to ensure that no channelling is evident, and that moisture content is adequate. Watering, turning, restructuring and the addition of supplementary bed materials, or total bed replacement shall be carried out, as required, subject to bed performance.

Table D.2.4 Monitoring Frequency for Composting Process

Parameter	Monitoring Frequency	Monitoring equipment/method
Temperature	Continuous	Temperature probe/recorder
Moisture	Daily	Subjective by operator.

vi. Schedule D.3. Noise:

D.3 Noise

Table D.3.1 Noise Monitoring Locations

Monitoring Locations
N1, N2, N3, N4, N5 (Halting site) ^{Note 1} N6 (Nearest Noise Sensitive location) ^{Note 1}

Note 1: To be agreed with the Agency.

Table D.3.2 Noise Monitoring Frequency and Technique

Parameter	Monitoring Frequency	Analysis Method/Technique
L(A) _{EQ} [30 minutes]	Annual	Standard ^{Note 1}
L(A) ₁₀ [30 minutes]	Annual	Standard ^{Note 1}
L(A) ₉₀ [30 minutes]	Annual	Standard ^{Note 1}
Frequency Analysis(1/3 Octave band analysis)	Annual	Standard ^{Note 1}

Note 1: "International Standards Organisation. ISO 1996. Acoustics - description and Measurement of Environmental noise. Parts 1, 2 and 3."

vii. Rows 11, 12 & 13 of Schedule E as follows:

Schedule E: Recording and Reporting to the Agency

Report	Reporting Frequency Note1	Report Submission Date
Environmental Management System Updates	Annually	One month after the end of the year reported on.
Annual Environment Report (AER)	Annually	Thirteen months from the date of grant of licence and one month after the end of each year thereafter.
Record of incidents	As they occur	Within five days of the incident.
Bund, tank and container integrity assessment	Every three years	Six months from the date of grant of licence and one month after end of the three-year period being reported on.
Specified Engineering Works reports	As they arise	Prior to the works commencing.
Monitoring of landfill gas	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Surface Water Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Groundwater Quality	Quarterly	Ten days after end of the quarter being reported on.
Monitoring of Leachate	Quarterly	Ten days after end of the quarter being reported on.
Meteorological Monitoring	Annually	One month after end of the year being reported on.
Dust Monitoring	Three times a year	Ten days after the period being reported on
PM₁₀ and Bioaerosol monitoring	Annually	One month after end of the year being reported on.
Noise Monitoring	Annually	One month after end of the year being reported on.
Any other monitoring	As they occur	Within ten days of obtaining results.

Note 1: Unless altered at the request of the Agency.

3. Consultation with the Office of Environmental Enforcement (OEE)

I have consulted with the OEE in relation to this technical amendment request. The OEE confirmed that this request cannot be accommodated under the conditions of the licence. They also confirmed that there are no legal proceedings in train in respect of this licence.

The OEE carried out an exit audit on 7th June 2019. The exit audit found the licensee to be compliant with the licence. The exit audit noted that the compost facility in question opened in 2004 and was closed in 2015. The area in question has not been used for composting for some time. The storage areas have been cleared of waste and the pipework has been decommissioned. The facility was in clean condition throughout. All the waste processing work had been carried out on a concrete slab. The OEE inspector identified two corrective actions relating to the removal of a small amount of organic material and the removal of a small amount of metal. The licensee confirmed that these corrective actions have been completed.

4. Appropriate Assessment

Appendix 1 lists the European Sites assessed, their associated qualifying interests and conservation objectives.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity, individually or in combination with other plans or projects is likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Site(s) in particular Lough Corrib SAC, Galway Bay Complex SAC, Ross Lake and Woods SAC, Gortnandarragh Limestone Pavement SAC, Connemara Bog Complex SAC, Lough Corrib SPA, Inner Galway Bay SPA and Cregganna Marsh SPA.

The activity is not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, that it can be excluded, on the basis of objective information, that the activity, individually or in combination with other plans or projects, will have a significant effect on any European Site and accordingly determined that an Appropriate Assessment of the activity was not required. The reason for this determination is to reduce the licensed site boundary which will not result in a material change in the nature of the discharges from the facility.

5. Assessment

The exit audit carried out by the OEE concluded that the facility is in compliance with the licence. The OEE were satisfied that the facility has been decommissioned and all waste material removed from the compost area proposed to be removed from the licensed boundary.

The licensee requested that a number of conditions and schedules be removed from the licence relating to the composting activity. These conditions are listed out under *Section 2. Technical Amendment Request* of this report. In relation to these change requests I recommend the following:

Condition/Schedule Number	Delete from licence	Reason
1.7.3	Delete	This relates to the hours of waste acceptance for the composting facility.
3.17	Delete	This relates to infrastructure required for the operation of the compost facility.
5.5	Delete	This relates to the operation and management of the composting facility.
Schedule A.1: <i>Waste Acceptance, row 2</i>	Delete	This relates to the tonnage of organic waste for composting that may be accepted per annum.
Schedule C.6 <i>Emission Limit Values for Composting Process</i>	Delete	This relates to the emission limit values for composting process.
Schedule D.2 <i>Dust, Bioaerosols and Odour</i>	Partially delete	This relates to the monitoring requirements for dust, bioaerosols and

		<p>odour. The licensee shall not be required to carry out bioaerosol monitoring in future as this requirement is typically required on foot of a composting or other biological treatment of waste activity. The schedule also includes monitoring requirements for odour and dust which should be retained. It is not clear from the information in this technical amendment request whether or not odour monitoring would still be a requirement of the licence. Condition 8.2 of the licence allows for the scope of monitoring to be amended under the conditions of the licence if required.</p>
Schedule D.3 <i>Noise</i>	Do not delete	<p>This schedule relates to noise monitoring which cannot be dismissed as a monitoring requirement on foot of the removal of the composting facility. Condition 8.2 of the licence allows for the scope of monitoring to be amended under the conditions of the licence if required.</p>
Schedule E: <i>Recording and Reporting to the Agency</i> (Rows 11, 12, 13)	Delete row 12 only	<p>Rows 11 and 12 of Schedule E relate to the recording and reporting requirements for dust and noise monitoring. The requirements for monitoring these parameters is being retained in the licence, therefore the recording and reporting requirements should be retained.</p>

The changes outlined above are drafted in the recommended technical amendment as attached.

Furthermore, Condition 1.2 of the licence refers to the red line boundary map. This condition has been amended in the attached recommended technical amendment to reflect the revised facility boundary.

6. Recommendation

I recommend that the requested changes be accommodated by technical amendment of Licence Register Number W0013-01 (held by Galway City Council) in accordance with Section 42B(1)(b) of the Waste Management Act 1996, as amended.

I recommend that the licence amendment be approved as set out in the attached Recommended Technical Amendment. The making of the amendment will not result in the

relevant requirements of Section 40(4) of the Waste Management Act 1996 as amended ceasing to be satisfied.

Signed

A handwritten signature in black ink, appearing to read 'Suzanne Wylde', written over a horizontal line.

Suzanne Wylde
Environmental Licensing Programme

Appendix 1: List of European Sites assessed, their associated qualifying interests and conservation objectives.

	European Site (site code)	Distance	Qualifying interests (* denotes a priority habitat)	Conservation objectives
1	Lough Corrib SAC (000297)	<1km	<p>Habitats</p> <p>3110 Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)</p> <p>3130 Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea</p> <p>3140 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.</p> <p>3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation</p> <p>6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)</p> <p>6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)</p> <p>7110 Active raised bogs*</p> <p>7120 Degraded raised bogs still capable of natural regeneration</p> <p>7150 Depressions on peat substrates of the Rhynchosporion</p> <p>7210 Calcareous fens with Cladium mariscus and species of the Caricion davallianae*</p> <p>7220 Petrifying springs with tufa formation (Cratoneurion)*</p> <p>7230 Alkaline fens</p> <p>8240 Limestone pavements*</p>	<p>http://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000297.pdf</p>

			<p>91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles</p> <p>91D0 Bog woodland*</p> <p>Species</p> <p>1096 Brook Lamprey (<i>Lampetra planeri</i>)</p> <p>1092 White-clawed Crayfish (<i>Austropotamobius pallipes</i>)</p> <p>1095 Sea Lamprey (<i>Petromyzon marinus</i>)</p> <p>1393 Slender Green Feather-moss (<i>Drepanocladus vernicosus</i>)</p> <p>1106 Salmon (<i>Salmo salar</i>)</p> <p>1303 Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</p> <p>1355 Otter (<i>Lutra lutra</i>)</p> <p>1029 Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>)</p> <p>1833 Slender Naiad (<i>Najas flexilis</i>)</p>	
2	Galway Complex (000268)	Bay SAC ~5km	<p>Habitats</p> <p>1140 Mudflats and sandflats not covered by seawater at low tide</p> <p>1150 Coastal lagoons*</p> <p>1160 Large shallow inlets and bays</p> <p>1170 Reefs</p> <p>1220 Perennial vegetation of stony banks</p> <p>1230 Vegetated sea cliffs of the Atlantic and Baltic coasts</p> <p>1310 Salicornia and other annuals colonising mud and sand</p> <p>1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)</p> <p>1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>3180 Turloughs*</p> <p>5130 <i>Juniperus communis</i> formations on heaths or calcareous grasslands</p> <p>6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)</p> <p>7210 Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>*</p>	<p>http://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO000268.pdf</p>

			<p>7230 Alkaline fens 8240 Limestone pavements*</p> <p>Species 1365 Harbour Seal (<i>Phoca vitulina</i>) 1355 Otter (<i>Lutra lutra</i>)</p>	
3	Ross Lake and Woods SAC (001312)	~12km	<p>Habitats 3140 Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.</p> <p>Species 1303 Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>)</p>	http://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001312.pdf
4	Gortnandarragh Limestone Pavement SAC (001271)		<p>Habitats 8240 Limestone pavements*</p>	http://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO001271.pdf
5	Connemara Bog Complex SAC (002034)	~15km	<p>Habitats 1150 Coastal lagoons* 1170 Reefs 3110 Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) 3130 Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> 3160 Natural dystrophic lakes and ponds 3260 Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation 4010 Northern Atlantic wet heaths with <i>Erica tetralix</i> 4030 European dry heaths 6410 <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)</p>	http://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002034.pdf

			<p>7130 Blanket bogs (* if active bog) 7140 Transition mires and quaking bogs 7150 Depressions on peat substrates of the Rhynchosporion 7230 Alkaline fens 91A0 Old sessile oak woods with Ilex and Blechnum in the British Isles</p> <p>Species 1833 Slender Naiad (<i>Najas flexilis</i>) 1106 Salmon (<i>Salmo salar</i>) 1065 Marsh Fritillary (<i>Euphydryas aurinia</i>) 1355 Otter (<i>Lutra lutra</i>)</p>	
6	Lough Corrib SPA (004042)	~1.5km	<p>Birds A395 Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) A194 Arctic Tern (<i>Sterna paradisaea</i>) A082 Hen Harrier (<i>Circus cyaneus</i>) A061 Tufted Duck (<i>Aythya fuligula</i>) A051 Gadwall (<i>Anas strepera</i>) A059 Pochard (<i>Aythya ferina</i>) A140 Golden Plover (<i>Pluvialis apricaria</i>) A179 Black-headed Gull (<i>Chroicocephalus ridibundus</i>) A182 Common Gull (<i>Larus canus</i>) A125 Coot (<i>Fulica atra</i>) A065 Common Scoter (<i>Melanitta nigra</i>) A193 Common Tern (<i>Sterna hirundo</i>) A056 Shoveler (<i>Anas clypeata</i>)</p> <p>Habitats Wetlands</p>	http://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004042.pdf
7	Inner Galway Bay SPA (004031)	~5.5km	<p>Birds A137 Ringed Plover (<i>Charadrius hiaticula</i>)</p>	http://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004031.pdf

			<p>A169 Turnstone (<i>Arenaria interpres</i>) A182 Common Gull (<i>Larus canus</i>) A140 Golden Plover (<i>Pluvialis apricaria</i>) A017 Cormorant (<i>Phalacrocorax carbo</i>) A052 Teal (<i>Anas crecca</i>) A162 Redshank (<i>Tringa totanus</i>) A003 Great Northern Diver (<i>Gavia immer</i>) A142 Lapwing (<i>Vanellus vanellus</i>) A191 Sandwich Tern (<i>Sterna sandvicensis</i>) A179 Black-headed Gull (<i>Chroicocephalus ridibundus</i>) A193 Common Tern (<i>Sterna hirundo</i>) A069 Red-breasted Merganser (<i>Mergus serrator</i>) A160 Curlew (<i>Numenius arquata</i>) A050 Wigeon (<i>Anas penelope</i>) A157 Bar-tailed Godwit (<i>Limosa lapponica</i>) A149 Dunlin (<i>Calidris alpina</i>) A028 Grey Heron (<i>Ardea cinerea</i>) A046 Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) A056 Shoveler (<i>Anas clypeata</i>)</p> <p>Habitats Wetlands</p>	
8	Cregganna Marsh SPA (004142)	~10km	<p>Birds A395 Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>)</p>	http://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004142.pdf