



## **APPLICATION**

**By**

**Donegal County Council**

**to**

**Environmental Protection Agency**

**for**

**Waste Licence**

**Meenaboll Landfill Site, County Donegal**

**ATTACHMENTS TO SECTION B**

**General**

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**ATTACHMENTS TO SECTION B      GENERAL**

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## **ATTACHMENTS TO SECTION B**

### **Attachment B.1      Applicant Details**

Refer to Section 1, Volume 1 of the EIS and the following Drawings, which are included in Part III of the Waste Licence Application.

Drawing No 5234.50/01 Ownership Plan.

### **Attachment B.2      Location of Activity**

Refer to Section 5, Volume 1 of the EIS and the following Drawings, which are included in Part III of the Waste Licence Application.

Drawing No 5234.50/02 Grid Reference Location Point.

Drawing No 5234.50/03 Site Plan.

Drawing No 5234.50/04 Location Map.

There are no services currently at the site and details of all proposed underground services will be provided at the detailed design stage.

### **Attachment B.3      Planning Authority**

The Environmental Impact Statement is included with the application.

Planning permission is subject to a decision by An Bord Pleanála.

### **Attachment B.4      Sanitary Authority**

Leachate will be transported to Letterkenny Waste Water Treatment Works when constructed, or to an alternative facility agreed with the EPA prior to these works being completed.

### **Attachment B.6      Notices and Advertisement**

Refer to the following Drawings, which are included in Part III of the Waste Licence Application.

Drawing No 5234.50/05 Site Notice Location

Copies of the site notice and newspaper advert are given overleaf. The newspaper advertisements were placed in the following newspapers.

- Tirconail Tribune, Day, Friday December 10<sup>th</sup>.
- Donegal Democrat, Day, Thursday December 9<sup>th</sup>.
- Derry People Donegal News, Friday December 10<sup>th</sup>.

#### **Attachment B.7.1 Type of Activity, Tonnages & Fees**

The classes of Waste Disposal Activities under the Third and Fourth Schedule to the Waste Management Act 1996 as outlined in Table B.7.1 of the waste licence application are listed below with the principal activity and a description of each of the other activities specified.

#### **Principal Activity**

##### ***Third Schedule***

**Class 5:** This activity is limited to non-hazardous waste disposal in lined cells.

#### **Other Activities**

##### ***Third Schedule***

**Class 1:** This activity is limited to the disposal of waste types specified in the licence.

**Class 4:** This activity is limited to the collection of surface water and the discharge from surface water settlement lagoons.

**Class 6:** This activity is limited to leachate treatment.

**Class 13:** This activity is limited to storage of waste prior to disposal.

##### ***Fourth Schedule***

**Class 2:** This activity is limited to composting and /or recycling of materials.

**Class 3:** This activity is limited to recycling of materials.

**Class 4:** This activity is limited to recycling of materials or use of inorganic materials in restoration & aftercare and other on-site works.

**Class 13:** This activity is limited to activities at the Civic Waste Facility and the temporary storage of recyclables, reusable, and green waste, fridges and white goods pending their collection and storage of waste prior to disposal.

This activity is limited to the storage of soil, subsoil and construction and demolitions wastes at the facility prior to recovery /reuse at the facility.

#### **Attachment B.7.2 Maximum Annual Tonnage**

No further information required.

**Attachment B.7.3      Fees**

Fees payable to the Agency for a waste licence application for the disposal of waste at a landfill facility where the annual intake is likely to exceed 20,000 tonnes but be less than 40,000 tonnes is €25,000 as per Second Schedule of S1 No 365 of 2004.

Fees payable to the Agency for a waste licence application for the recovery of waste is €10,000 as per Second Schedule of S1 No 365 of 2004.

**Attachment B.7.4      Type of Landfill**

No further information required.

**Attachment B.8      Seveso II Directive**

Not Applicable.

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**NEWSPAPER ADVERTISEMENT AND SITE NOTICE**

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## DONEGAL COUNTY COUNCIL Comhairle Chontae Dhún Na nGall

### APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE LICENCE

NOTICE IS HEREBY GIVEN in accordance with the provisions of the Waste Management Act, 1996 and Articles 5 and 6 of the Waste Management (Licensing) Regulations, 2004 (S.I. No. 395 of 2004) that Donegal County Council, County House, Lifford, Co. Donegal will apply to the Environment Protection Agency (EPA), Johnstown Castle Estate, County Wexford, for a waste licence for a non hazardous waste landfill at Meenaboll, Co. Donegal. The site will accept up to 24,000 tonnes per annum. The National Grid Reference for the facility is E4094 N1995.

The classes of activity concerned are specified in the third and fourth Schedules of the Waste Management Act, 1996, as follows:-

#### THE PRINCIPLE ACTIVITY TO BE CARRIED OUT ON THE SITE IS:

Class 5 of the Third Schedule of the Waste Management Act (1996):

Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.

The activity is also covered under the following Classes:

#### Third Schedule:

Class 1: Deposit on, in or under land.

Class 4: Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.

Class 6: 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.

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 such waste is produced.

#### Fourth Schedule:

Class 2: Recycling or reclamation of organic substances, which are not used as solvents (including composting and other biological transformation processes).

Class 3: Recycling or reclamation of metals and metal compounds.

Class 4: Recycling or reclamation of other inorganic materials.

Class 13: Storage of waste intended for submission to any other activity referred to in a preceding paragraph of this schedule, other than temporary storage, pending collection on the premises where such waste is produced.

An Environmental Impact Statement (EIS) has been submitted with this application to the EPA.

The Waste Licence Application, accompanying Environmental Impact Statement and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application, will be as is practicable after receipt by the Agency, be available for inspection or purchase at the EPA Headquarters, Johnstown Castle Estate, County Wexford and at the Principal Offices of Donegal County Council, County House Lifford, Co. Donegal and Donegal County Council Offices in Milford, Letterkenny and Dungloe during normal working hours.

Jim Holohan,

Director of Services, Water, Environment and Emergency Services, Donegal County Council.

[www.donegal.ie](http://www.donegal.ie)

On 80 minutes a Ronan Diver through Shaun Diver, who whipped the ball past the Arran the winning goal Gweedore.  
Referee; Denis O' Donnell

#### Kerrykeel go down

Raphoe Town 2 Kerrykeel 1

Two goals in the second half secured all three points in this hard fought game which was reverse. The home side took the lead in the 5th minute when from midfield saw the ball firmly dispatched to it. Despite exerting loads of pressure Raphoe couldn't break down Kerrykeel defence until into the second half. Murphy scored with a header from a corner. Raphoe all three points in the 61st minute when Chris Deane scored a loose ball after a long throw by Darren Keane. Performances from both sides. Referee: Mick Lagan

#### Share of the spoils

Ballybofey United 2 Lagan Harps 2

Ballybofey started strongly with two goals from a volley within the opening ten minutes, the first a volley kick, the second a solo effort. Lagan Harps battled it out with Ballybofey before Jason Gibson converted a penalty five minutes before the interval. Jason Gibson equalised on 65 minutes and the game ended in a share of the spoils. Referee: Sean Patterson.

#### Drumbar riddle Orcha

Orchard United 3 Drumbar United 5

The scoring was opened in the 16th minute by Paul the same player was on the mark ten minutes later. before the interval Fergal Brown made it 3-0 for Orchard. 55 minutes Garth Brogan extended the lead further.



## COMHAIRLE

## DONEGAL

## Appointments

## County Donegal Vocational Education Committees

The Vocational Education Act 1930, a provision for the appointment by the County Council of Vocational Education Committees among persons nominated by bodies as follows:-

- (i) Students
- (ii) Any class of trustee of a committee concerned.
- (iii) Members of staff of the vocational education committee belonging to the same class of members as on 9th October 2004)
- (iv) Voluntary organisations, committees or societies
- (v) Persons carrying on, in places of business, professions or commercial or industrial occupations

Nominations were previously invited to be received by the Council on or before 29th October 2004. The Council has decided to readvertise and extend the closing date for nominations to 15th November 2004, as their applications were not received in time.

Nominations are now invited, in writing, from any person or interest group it represents, the name of which is to be included in the list of nominees.

Nominations should be sent to the Council Secretary, County House, Lifford, Co. Donegal, received no later than 4.00 p.m. on 15th November 2004.

Donegal News  
Friday, December 10, 2004

ENVIRONMENTAL PROTECTION  
AGENCY WASTE LICENSING  
RECEIVED  
22 DEC 2004  
INITIALS.....

# Public



## DONEGAL COUNTY COUNCIL Comhairle Chontae Dhún Na nGall

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An Environmental Impact Statement (EIS) has been submitted with this application to the EPA.

The Waste Licence Application, accompanying Environmental Impact Statement and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application, will be as is practicable after receipt by the Agency, be available for inspection or purchase at the EPA Headquarters, Johnstown Castle Estate, County Wexford and at the Principal Offices of Donegal County Council, County House Lifford Co Donegal and Donegal County Council Offices in Milford, Letterkenny and Dungloe during normal working hours.

## SITE WANTED

Must have good sea view and have full planning outline planned

Carrigart, Dower  
Creeslough, Mc  
Hill, Dunfanaghy

**TOP  
MONEY  
PAID**

Telephone  
**074 91 55!**  
or **087 2976**



### NOTICE BU

Notice is hereby given that the minutes of the meeting of the Council of Letterkenny Town Council, held on the 31st December, 2004, and will be considered by the Council at Public Authority Budget Meeting, December, 2004, deposited in the Council at Public Authority Budget Meeting, Letterkenny and Town Council Offices are open to the public by any member of the public from 9am to 5pm Monday to Friday. The minutes will be supplied to the public therefore at the public authority budget meeting.

SIGNED: PADDY  
TOWN

10th December, 2004

DERRY PEOPLE

# DONEGAL NEWS

## For all your Advertising Needs



Donegal Democrat 9/12/04

www.itsligo.ie

INSTITIÚID TEICNEOLAÍOCHTA, SLIGEACH  
INSTITUTE OF TECHNOLOGY, SLIGO

SLIGEAC

INITIALS.....

22 DEC 2004

ENVIRONMENTAL PROTECTION AGENCY WASTE LICENSING RECEIVED



COMHAIRLE CHONTAE  
**DhurnanGall**  
DONEGAL COUNTY COUNCIL

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Jim Holohan, Director of Services, Water, Environment and Emergency Services, Donegal County Council.  
www.donegal.ie

**CLASSIFIED ADVERTISING**

TEL. LETTERKENNY (07491) 28000 / FAX (07491) 28001  
BALLYSHANNON (07498) 51201  
DONEGAL TOWN (07497) 40160 / FAX (07497) 40161

**Leaving and Junior Certificate 2005 Christmas Revision Course**

Dates: Mon. January 3<sup>rd</sup> - Fri. January 7<sup>th</sup> (incl.)  
Venue: Sligo Institute of Technology

- Outstanding teachers with proven record of success.
  - Special attention to Exam technique and timing
  - Detailed notes including sample answers
  - Accommodation available
- For brochure and booking

Contact: North Western Academy  
3 Castle Street, Sligo

Tel: 071 9149524 / 087 2219485 / 086 8268807  
(Office Hours: 11:00am to 2:00pm, 3:00pm to 5:30pm)

DONEGAL COUNTY COUNCIL  
Local Government (Water Pollution) Acts 1977 - 1990  
Barnes, Termon, Co. Donegal

Application for the discharge of Trade Effluent to Waters in accordance with Local Government (Water Pollution) Acts 1977 - 1990. Barnes Limestone Quarry has applied to Donegal County Council for a licence to discharge "Trade Effluent" waters after prior treatment in settlement lagoons to remove quarry fines and sediments at Barnes Quarry, to a drainage channel, to Camhbhainn stream to Lurgy River to the River Lemanan.

LEITRIM COUNTY COUNCIL

Rosfríar, Kinlough, Co. Leitrim.

We, Tommy and Grainne Campbell are applying to Leitrim County Council for planning approval to construct dwelling house and provide percolation area together with associated site works at Rosfríar, Kinlough. Previous outline reference no: PO1/00472 refers.

**COUNCILLOR TERENCE SLOWEY,**

TULLYCLEAVE,  
ARDARA, CO. DONEGAL

TEL 074 9541830

MOBILE 087 224 2591

EMAIL: sloweyt@eircom.net



Councillor Slowey will be holding clinics this **Saturday, December 11th 2004** as follows or contact him in his office.

GLENTIES	Paddy's Bar	12:00noon
EDININFAGH	Glen Tavern	12:30noon
FINTOWN	Railway Bar	1:15pm
DOOCHARY	O'Donnell's Lounge	2:00pm
LETTERMACAWARD	McCready's Gweebarra Bar	2:45pm
DUNGLOE	Sweeney's Hotel	3:30pm
BURTONPORT	Lough Eirin Bar McDaid's	4:00pm
MEENBANAD	The Country Inn	4:30pm
MULAGHDUFF	Russes Bar	5:00pm
ANNAGRY	Teach Conal	5:30pm
NARIN/PORTNOO	Narin Inn	7:00pm
ARDARA	Doherty's Bar	7:30pm

Tel: 07198 2292

This proj



**Comhairle C**

**Scéim Scoláireach**

Tá Coiste Gaeilge Chomha na Coláistí Gaeilge, ag tabairt Cholaistí Gaeilge Samhna

Tá na scoláireachtaí ar fáil ocht mbliana déag d'aois. Táobh amuigh den Ghaeilte nach bhfuair aon deontas fé

Tá 34 scoláireacht ar fáil sa 17 ó na Coláistí Samhraidh, a ghabháil leis na Coláistí a scéim seo.

Beidh An Chomhairle freagra

Déanfar na hiarratasóirí a rogh

Cuirfear iad siúd nach bhfuil chranncur. Cuirfear iad siúd seo ar Liosta Tánaiteach.

Caithefear sinú tuismitheora na iarratas.

Ba chóir do dhallait a bhfuil spé seoladh thíos chun foirm iarrata **Aoine 21 Eanáir, 2005**, an dáta ghlactar le na iarratas mall.

**Donegal Co**

**Irish Summer Colleges**

Donegal County Council, through association with the Irish Scholarships to attend Irish Coll

The Scholarships are being offered to 10 and 18 years of age living in Donegal, or who reside in the Gaeltacht grant under Scéim Labhairt na Gae

There are 34 scholarships available by Donegal County Council and 11 Donegal County Council acknowledge support of the Colleges for the sch

The Council will be responsible candidates.

Successful candidates will be selecte

Those who have not received a Sch into the initial draw. Those who have past will be entered onto a Reserve L

Applications must be signed by a par

Those interested in this scheme sh address below for an application form date for applications is Friday January cannot be accepted.

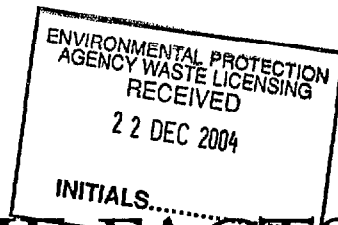
All correspondence to:

Seán Ó Dáimhín, Oifigeach Forbartha Comhairle Contae Dhún na nGall, Leit

Sdaimhin@donegal

Tel: 074 91724

www.donegal



# MEENABOLL — THE FACTS

## Proposed Landfill Facility at Meenaboll

Following the consultation events held on this project a number of areas of concern to local residents has been identified. The information given below is based around those areas of concern.

### WATER POLLUTION

- Fact 1 It is now accepted practice for a modern landfill to be developed and operated on an engineered "containment" basis, to isolate the wastes and to prevent any adverse impact on the surrounding environment. Leachate generated at the site will be moved to a Waste Water Treatment Works. It is also proposed to construct a reed bed system at the site to ensure that any suspended solids in the surface water are removed prior to discharging into the adjacent stream.
- Fact 2 The landfill site is not located in the Gartan catchment and hence there will be no impact on the water quality of the Gartan catchment either from surface water or groundwater.
- Fact 3 The design of the site takes all aspects of the location including elevation and rainfall into consideration and as such the site will be operated to control leachate production on the site.
- Fact 4 The development of the new waste water treatment works in Letterkenny is scheduled for 2007. If the Meenaboll Landfill is operational prior to this, then the leachate will be treated at the existing Waste Water Treatment works in Letterkenny, or an alternative facility on agreement with the EPA.

### GEOLOGY

- Fact 5 The site is underlain by the Upper Falcarragh Pelite Formation, and detailed site investigation confirms that no faults or fracture zones of significance pass through the site.
- Fact 6 The detailed site investigation and subsequent studies have demonstrated that the groundwater flows in the same direction as the surface and as such does not flow into the Gartan catchment.

### LOCATION

- Fact 7 Meenaboll is not located within either a Category 2 or 3 area (Category 2 and 3 Areas are highly scenic areas). The development of this proposed landfill site will have an imperceptible impact on the number of tourists travelling to the County, the site is not on any recognised tourism routes and therefore its presence will be unknown to visitors unless happened upon by chance. Hence the proposed development will not adversely impact on the established tourism centres of Glenveagh National Park, Letterkenny or Fintown. Indeed, the development of the facility is an important factor in ensuring the required waste management infrastructure is available in the Mid and West Donegal to allow the tourism industry to develop.
- Fact 8 Research indicates the property values reductions vary dependent upon distance from the landfill but not evidence of reduction has been reported at distances greater than 1/2 mile from the sites. The closest residential property to the site is over 2km from the site and hence a decrease in property value in the area is not anticipated.

### PRIVATISATION

- Fact 9 The Waste Licence application and Planning application were made by Donegal County Council and Donegal County Council will be responsible for the development, operation, closure and long term aftercare of the facility.

### LANDSLIDES

- Fact 10 The control of excavations by the construction of the perimeter berm around the area of excavation in addition to the installation of a groundwater and surface water drainage system will remove the potential for a landslide at the facility.

### TRAFFIC

- Fact 11 It is estimated that the number of vehicles using the site will be approximately 29 per day. Of these 29 vehicles, it is estimated based on existing methods of waste collection in Donegal, that approximately 70% of these will be smaller type vans, small lorries (with a load less than 10 tonnes). The remainder (approximately 10 per day) will be larger bin lorries and articulated vehicles. It is has been assumed that approximately half of those vehicles will approach the site from the west, while the remainder will approach from the central Donegal area. An assessment of the road infrastructure leading to the site demonstrated that the existing road network was capable of dealing with the small increase in traffic levels on the access roads with the county road off the R250 requiring some remedial work to be undertaken.

### AREAS SERVICED BY THE LANDFILL

- Fact 12 The Donegal Waste Management Plan identified the need for between 2 and 4 landfills within the County. Site selection criteria were developed for the identification of landfills in Donegal. These criteria were based on the EPA guideline for landfill site selection. An extension to the existing facility at Ballintra has gone through the Planning and Waste Licensing processes. The site will serve the landfilling requirements for South Donegal. The selection of a further site in the Inishowen area is currently being progressed. The Meenaboll

site was found to be the most suitable site for a landfill, based on the site selection criteria, to serve the needs of Western and central Donegal. The Meenaboll site will be available to waste collectors operating in the Letterkenny area.

### INFORMATION

- Fact 13 Donegal County Council held open days in Fintown and Gartan in May 2003. A model of the facility developed for public awareness was displayed at the Donegal County Council offices in Letterkenny and Milford in early 2004. During the statutory consultation period in the planning process open days were once again held locally during October and November 2004. In addition, site visits were held with An Taisce and local residents.
- Fact 14 Should the site receive all statutory permissions, a Local Community Liaison Group will be set up where representatives from the local community and elected representatives of Donegal County Council will be invited to meet regularly with the operations team to discuss progress with the development, operation and closure of the site. Formation of this group is in progress through the structures of the Donegal County Council Community and Enterprise Section. It is intended that this group would be in place prior to any development being undertaken at the facility.

### LIGHT POLLUTION

- Fact 15 The Proposed landfill site opening hours for waste reception will be 8.30am to 5.00pm Monday to Friday and 9.00am to 1.00pm on Saturday. Street lighting will be used at the site infrastructure during these hours over the winter period to ensure safe operations at the facility. The Landfill Gas Flare is an enclosed unit with no visible naked flame or light emissions at any time.

### ELECTRICAL POWER

- Fact 16 The facility will be powered by an on site generator, including standby, and will not be reliant on the connection to a mains power supply. This approach was developed after consultation, which identified concerns regarding the visual intrusion of overhead power lines.

### OTHER ISSUES

- Fact 17 Donegal County Council are committed to delivering high quality waste management infrastructure under licence from the EPA. The Environmental Protection Agency will regulate the site to ensure that the required standards are applied in relation to the development, operation, closure and aftercare at the facility.
- Fact 18 The facility will be licensed to accept a maximum annual tonnage of 24,000 tonnes per year.
- Fact 19 There will be no significant impact on the wildlife of the area including the bird and deer populations. The loss of habitats within the area of the landfill is not considered significant as the site area is small and the habitats and species founds therein are well represented in the surrounding area of the locality and more extensively in the region. In addition, environmental monitoring of the facility will allow for this to be assessed over the life of the site and after the site has been enclosed and restored.
- Fact 20 Modern landfill sites are stringently regulated by the Environmental Protection Agency (EPA) and strict operational controls are applied to site operations including effective compaction and the daily covering of waste with soils, rapid deposition of malodorous waste, effective landfill gas management, leachate management, litter netting and monitoring.
- Fact 21 The impact from gas emissions will be controlled by implementation of measures such as gas venting and flaring while odour will be controlled by rapid deposition and covering of waste, and installation of a capping system and a flaring system. Dust will be controlled by immediate disposal of dusty wastes, damping down materials during very dry weather and a careful choice of daily cover.
- Fact 22 The proposal at Meenaboll is for a landfill facility. There is no intention to build an incinerator at the proposed Meenaboll Site.
- Fact 23 The trees around the perimeter of the site have already been planted by Coillte and Donegal County Council propose to retain these existing trees at the perimeter of the landfill to limit visual intrusion in the area.
- Fact 24 The overall size of the facility is 14.5 ha (32 acres). However, only 4.5 ha (10 acres) of that will be for landfilling wastes with the remainder for site infrastructure (eg. office, roads, maintenance shed etc). The site will be developed in cells and only one cell will be operational at any one time. The cell sizes will typically be approximately 0.5 ha (1 acre). The area of uncovered waste, ie. working face will be limited to a maximum area of 40m x 40m and this will be covered at the end of each working day.



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Class 4 Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.

Class 6 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.

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.

#### Fourth Schedule:

Class 2 Recycling or reclamation of organic substances, which are not used as solvents (including composting and other biological transformation processes).

Class 3 Recycling or reclamation of metals and metal compounds.

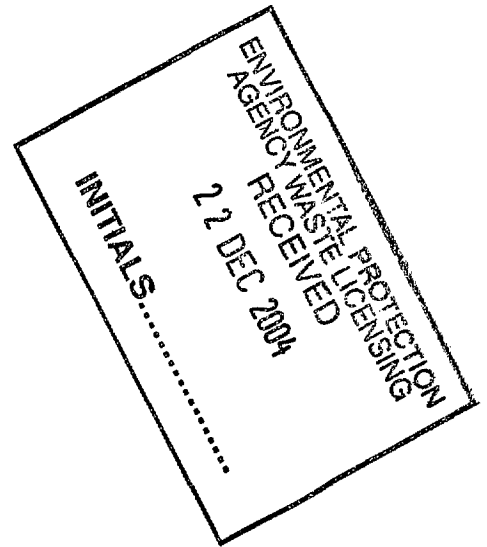
Class 4 Recycling or reclamation of other inorganic materials.

Class 13 Storage of waste intended for submission to any other activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

An Environmental Impact Statement (EIS) has been submitted with this application to the EPA.

The Waste Licence Application, accompanying Environmental Impact Statement and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application, will be as is practicable after receipt by the Agency, be available for inspection or purchase at the **EPA Headquarters, Johnstown Castle Estate, County Wexford and at the Principal Offices of Donegal County Council, County House Lifford Co Donegal and Donegal County Council Offices in Milford, Letterkenny and Dungloe during normal working hours.**

Jim Holohan,  
Director of Services, Water, Environment and Emergency Services, Donegal County Council



**APPLICATION**

**By**

**Donegal County Council**

**to**

**Environmental Protection Agency**

**for**

**Waste Licence**

**Meenaboll Landfill Site, County Donegal**

**ATTACHMENTS TO SECTION C**

**Management of the Facility**

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**ATTACHMENTS TO SECTION C      MANGEMENT OF THE FACILITY**

**CONTENTS**

<b>Sub Section</b>	<b>Title</b>	<b>Page No</b>
C.1	Technical Competence and Site Management	C-1
C.2	Environmental Management System	C-4
C.3	Hours of Operation	C-7
C.4	Conditioning Plan	C-7

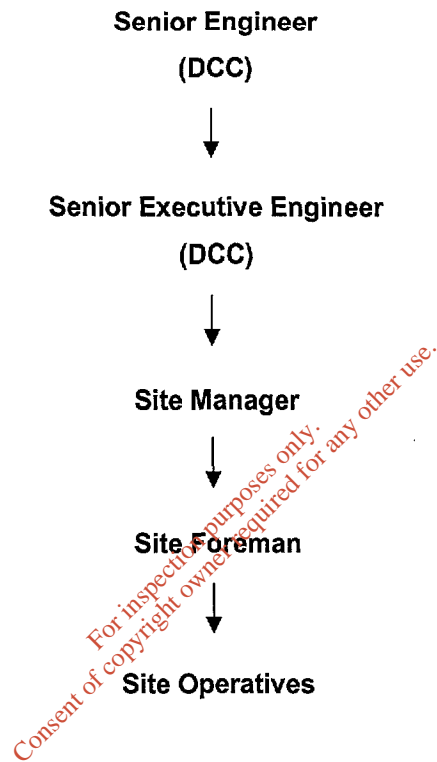
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**ATTACHMENTS TO SECTION C**

**Attachment C.1      Technical Competence and Site Management**

The proposed management structure of the site will be as follows:

**Figure C.1      Management Structure On Site**



Responsibility will be as follows:

***Senior Engineer***

Overall responsibility for the management of the site and maintenance of the waste licence.  
Delegation of authority and responsibility to ensure the effective management of the facility

***Senior Executive Engineer***

Responsible for the ongoing management of the facility as directed by the Senior Engineer

***Site Manager***

Responsible for the day to day running of the landfill as per licence requirements and as directed by Senior Executive Engineer or Senior Engineer.

**Site Foreman**

Carry out daily landfill operations as per operational and management procedures

**Site Operatives**

Site maintenance, litter picking road cleaning.

**Management Structure for Environmental Monitoring and Reporting**

**Scientific Officer (or Donegal County Council Laboratory Personnel)**

Responsible for on site monitoring and reporting as per the frequency of the waste licence.

**Site Manager**

Reporting of incidents on site, responsibility for the implementation of the environmental management procedures developed as part of the EMS.

**Senior Executive Engineer**

Responsible for ensuring monitoring reports, incidents are reported to the EPA as required and appropriate action taken.

**Management Structure for Control of Abatement and Treatment System on Site**

**Site Manager**

Will be responsible for the daily operation and control of all abatement systems on site as per operational and environmental management procedures.

**Senior Executive Engineer**

Will be responsible for the overall control of all abatement systems on site and for the supervisory control through the SCADA system for the enclosed flare.

**Table C.1 Qualification/Training Required**

Position	Qualification /Training
Site Manager	Safe Pass Programme FAS Waste Management Training Programme or equivalent.
Site Foreman	Safe Pass Programme FAS Waste Facility Operative training Programme or equivalent Waste Acceptance (Level 1)
Site Operatives	Safe Pass Programme FAS Waste Facility Operative training Programme or equivalent Waste Acceptance (Level 1)
Scientific Officer	Appropriate scientific qualification, i.e degree or Lab technician.

No changes to the management structure will be undertaken without agreement of the EPA. The EPA will also be informed of all changes in site personnel.

### **Attachment C.2 Environmental Management System**

An Environmental Management System (EMS) involves the implementation of a system, which forms the basis of continuous, structured and quantifiable improvement in environmental performance. The EMS for Meenaboll Landfill Site will become part of the overall management system for the site, and will deal with the environmental issues relating to the facility and control potential environmental impacts.

The EMS for the facility will include as a minimum the elements specified below

- Schedule of Environmental Objectives and Targets
- Environmental Management Programme (EMP)
- Corrective Action
- Awareness and Training
- Management Structure
- Communications.

The EMS is based around the following concept of continuous improvement.



**Plan**

- 1.0 Environmental Policy
- 1.1 Register of legislation
- 1.2 Environmental Objectives and Targets
- 1.3 Environmental Management Programme

**Act**

- 1.11 Management Review



**Do**

- 1.4 Operational and management procedures to include those specified in Waste Licence.
- 1.5 Structure and responsibility
- 1.6 Communication



**Check**

- 1.7 Monitoring and measurements
- 1.8 Non-conformances, Corrective and preventive action
- 1.9 Records
- 1.10 Audits

**1.0 ENVIRONMENTAL POLICY STATEMENT**

An environmental policy will be developed which is appropriate to the nature and scale of the environmental aspects of the landfill site. This document will be implemented and maintained. It will be communicated to all employees and made available to the public if requested. A signed policy will be displayed in the site office.

**1.1 REGISTER OF LEGISLATION**

The register of legislation includes all relevant legislation, both national and EU including planning, effluent discharge licences and air emissions.

**1.2 OBJECTIVES AND TARGETS (O&T)**

O&T are important in directing and assessing an EMS and help to maintain a high standard of environmental performance. The setting of the O&T will be based on environmental policy and environmental considerations, which are significant. Objectives will be divided into individual targets where appropriate, but which sum to achieve the overall environmental objective.

O&T will be demanding, qualitative, subject to timescale, achievable and fair. O&T will also be reviewed on an annual basis and are contained in the Annual Environmental Report and the Environmental Management Programme.

### 1.3 ENVIRONMENTAL MANAGEMENT PROGRAMME

This document will act as a site manual for the future operation of the landfill site. The EMP also sets out how the Schedule of O&T will be achieved through:

- A programme for achieving the targets set down in the schedule of O&T;
- Designation of responsibility; and
- Time frame

This programme is included.

### 1.4 PROCEDURES

A procedure should describe the manner of carrying out a relevant activity and should be clear, logical and understandable. Procedures are an essential part of the environmental management system and are divided into two sections:

- Management Procedures
- Operational Procedures

These procedures will be reviewed on an annual basis or as necessary and will be contained in the environmental procedures and programmes manual.

### 1.5 STRUCTURE AND RESPONSIBILITY

A clear management structure will be defined for the facility. Donegal County Council will ensure that experience staff comparable with the level of expertise required are assigned to each role.

### 1.6 COMMUNICATION

A communication programme is important, as it will encourage the licensee to be pro-active by making relevant information available to the public. This programme will be contained in the environmental procedures and programmes manual.

## 1.7 MONITORING AND MEASUREMENTS

Donegal County Council will undertake environmental monitoring at the facility in accordance with the requirements of the Waste Licence. Monitoring equipments will be calibrated when required and records maintained. Samples will be analysed at an accredited laboratory. Procedures will be developed to ensure monitoring is carried out. This procedure is contained in the environmental procedures and programmes manual.

## 1.8 NON-CONFORMANCES, CORRECTIVE AND PREVENTIVE ACTION

Donegal County Council will establish a corrective action procedure to define who is responsible to investigate non-conformances and to determine corrective action to be taken. This procedure (EMP/01 Corrective Action) will be contained in the environmental procedures and programmes manual.

## 1.9 RECORDS

Environmental records are required as:

- Verification of the on-going operation of the EMS.
- To provide information for reporting to the Environmental Protection Agency as per licence requirements
- To meet legal and regulatory requirements

The Environmental Management System will comprise of control documents managed under the following hierarchy approach. Record requirements will be included as part of the individual procedures.

## 1.10 AUDITS

Audits of the facility will be undertaken by the Environmental Protection Agency. Donegal County Council will also undertake internal audits to ensure that licence requirements are being met and Environmental Management System is being properly implemented and maintained. This procedure will be contained in the environmental procedures and programmes manual.

## 1.11 MANAGEMENT REVIEW

The purpose of a management review is to reconsider the effectiveness of the Environmental Management System and Objectives set out as a result of changing circumstances, commitment to continual improvement and to initiate any required change.

Donegal County Council will undertake management reviews on a minimum yearly basis and following any audits undertaken at the facility to consider recommendations made.

### **Attachment C.3 Hours of Operation**

#### ***Hours of Operation***

The landfill shall only be operational between 08.00 to 18.00 Monday to Friday inclusive and 09.00 to 14.00 on Saturdays with the exclusion of Bank Holidays unless otherwise agreed in advance with the Agency. Additional hours outside this may be required for operations, e.g. moving of enclosed litter netting.

#### ***Hours of Waste Handling and Acceptance***

Waste shall only be accepted at the landfill facility between 08.30 to 17.00 Monday to Friday inclusive and 09.00 to 13.00 on Saturdays with the exclusion of Bank Holidays unless otherwise agreed in advance with the Agency.

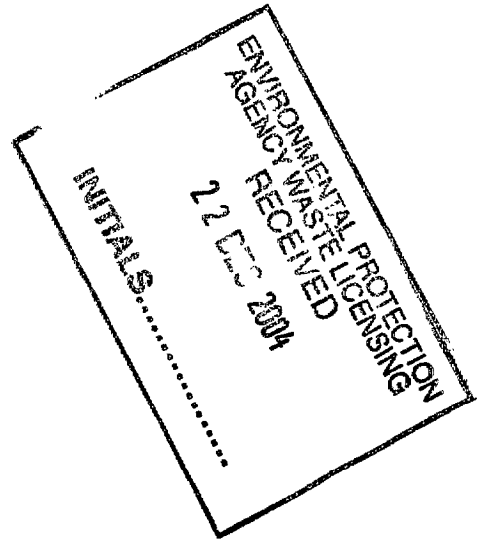
#### ***Hours of Construction and Development Works***

Construction and development works shall generally be undertaken 08.00 to 18.00 Monday to Friday inclusive and 09.00 to 14.00 on Saturdays with the exclusion of Bank Holidays unless otherwise agreed in advance with the Agency.

### **Attachment C.4 Conditioning Plan**

Not Applicable

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## **APPLICATION**

**By**

**Donegal County Council**

**to**

**Environmental Protection Agency**

**for**

**Waste Licence**

**Meenaboll Landfill Site, County Donegal**

**ATTACHMENTS TO SECTION D**

**Infrastructure and Operation**

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**ATTACHMENTS TO SECTION D      FACILITY DESIGN**

**CONTENTS**

<b>Sub Section</b>	<b>Title</b>	<b>Page No</b>
D.1	Infrastructure	D-1
D.2	Facility Operation	D-3
D.3	Liner System	D-3
D.4	Leachate Management	D-5
D.5	Landfill Gas Management	D-6
D.6	Capping System	D-7

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**ATTACHMENTS TO SECTION D**

**Attachment D.1      Infrastructure**

Refer to Drawing 5234.50/06 Site Infrastructure.

**D.1 (a)**

Refer to Section 6.46, Volume I of the EIS.

**D.1 (b)**

Refer to Section 6.44, Volume I of the EIS.

**D.1 (c)**

Refer to Section 6.48, Volume I of the EIS.

**D.1 (d)**

Refer to Section 6.42, Volume I of the EIS.

**D.1 (e)**

Refer to Section 6.43, Volume I of the EIS.

**D.1 (f)**

A small laboratory will be established within the administration building on-site. This will allow for routine day to day monitoring requirements at the site including landfill gas and leachate analyses. Groundwater and surface water analyses will also be carried out on a periodic basis. The parameters to be analysed include BOD, COD, Conductivity, Dissolved Oxygen, Ammonia etc. and the laboratory will be equipped accordingly. Donegal County Council have laboratory facilities at Letterkenny and will assist with some of the testing. Outside contractors will provide any testing associated with the ongoing monitoring not undertaken directly by the Donegal County Council.

**D.1 (g)**

Refer to Section 6.52, Volume I of the EIS.

**D.1 (h)**

Refer to Section 6.48, Volume I of the EIS.

**D.1 (i)**

Refer to Section 6.48, Volume I of the EIS.

**D.1 (j)**

Refer to Section 7.27, Volume I of the EIS.

**D.1 (k)**

Foul drainage will be generated in the administration building only and will be drained via 100mm diameter PVC pipework to a proprietary wastewater treatment system. The treated effluent will be discharged to the leachate holding tanks

Surface water from the site roads will be directed to gulleys, settlement tanks, oil interceptors and subsequently to the constructed wetlands. A minimum depth of 1m of water shall be retained within each settlement lagoon for fire fighting purposes.

**D.1 (l)**

Refer to Section 6.45, Volume I of the EIS. A metrological station has been installed on the site and will be maintained throughout the construction and operational phases.

**D.1 (m)**

A vehicle maintenance building to accommodate a landfill compactor will be provided at the site at the location shown on Drawing 5234.50/06. This building will be a clad steel portal framed building with a concrete floor.

**D.1 (n)**

Refer to Section 6.41, Volume I of the EIS.

**D.1 (o)**

The immediate compaction of loose waste as it is deposited on the landfill site, the maintenance of the active tipping area as small as is practicable and the daily covering of all the compacted waste will reduce the potential risk of fire at the site. A water bowser will be available on site to control any small fires on site while the access to the site will be maintained in a suitable condition to allow for access to the active area by fire engines. In addition staff will be trained in the emergency response procedures, fire extinguishers will be provided at the office and on plant and smoking and non smoking areas will be designated on the site.

**D.1 (p)**

A small civic amenity facility will be provided adjacent to the site office as illustrated on Drawing 5234.50/06. Usage of this facility is envisaged to be of a low level given the low population in the area of the site. The type of materials to be collected at the facility will include:

- Composting Material (garden waste and timber)
- Mixed dry recyclables (glass, paper, card, cardboard, cans and plastics)
- Domestic propriety waste e.g. domestic cleaning agents, paint



- Scrap iron
- Textiles
- Waste oils
- Some commercial wastes (From small businesses and shops)
- Electrical and Electronic Equipment
- Fluorescent tubes
- Batteries

**D.1 (q)**

Refer to Section 1.6, Volume I of the EIS.

**D.1 (r)**

See Attachment D.1.p.

**D.1 (s)**

None

**D.1 (t)**

None

**D.1 (u)**

None

**Attachment D.2 Facility Operations**

Refer to Section 7.0, Volume I of the EIS and the following Drawings.

Drawing 5234.50/06 Site Infrastructure.

Drawing 5234.50/07 Lining Details.

Drawing 5234.50/08 Leachate Management System

Drawing 5234.50/09 Landfill Gas Management System

Drawing 5234.50/10 Capping Details

Drawing 5234.50/11 Site Phasing

Drawing 5234.50/12 Formation levels and basal gradients.

Refer to 6.17, Section 6, Volume one of the EIS with regards to energy requirements to be generated on site through a diesel generator.

**Attachment D.3 Liner System**

Refer to Drawing 5234.50/07 Lining Details.

**D.3 (a)**

Refer to Section 6.16, Volume I of the EIS and Drawing 5234.50/07 Lining Details.

Table D3.1 below evaluates the leakage rates through the proposed composite lining system compared to that of 1m of clay (hydraulic conductivity of  $1 \times 10^{-9}$  m/s) overlain with a 2mm HDPE. The calculations are based on studies by Giroud et al (1989 and 1994) as detailed in appendix C.3.3 of the EPA Landfill Site Design Manual. The following assumptions have been made:

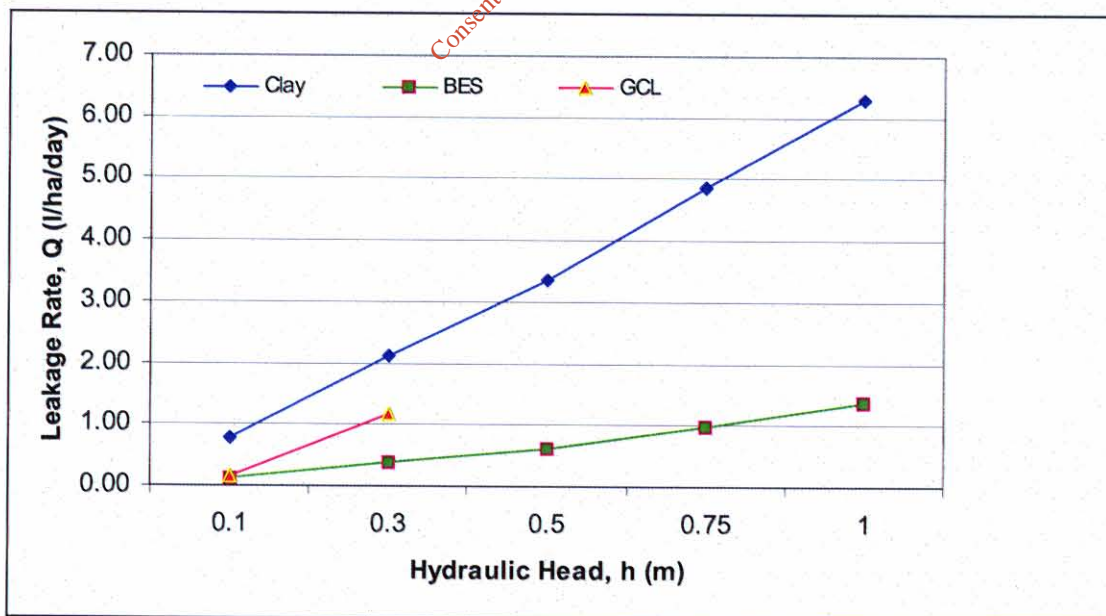
- Defect areas of  $0.1 \text{ cm}^2$  with two defects per  $4,000 \text{ m}^2$ .
- Varying hydraulic heads up to 1m.

**Table D3.1 Leakage Rates**

Defect Area a ( $\text{m}^2$ )	Material	Hydraulic Conductivity K (m/s)	Hydraulic Head, H (M)				
			0.10	0.30	0.50	0.75	1.00
			<b>Leakage rate, Q (litres per hectare per day)</b>				
$1 \times 10^{-5}$	Clay	$1 \times 10^{-9}$	0.79	2.12	3.36	4.84	6.28
$1 \times 10^{-5}$	BES	$1 \times 10^{-10}$	0.14	0.39	0.61	0.97	1.37
$1 \times 10^{-5}$	GCL	$5 \times 10^{-11}$	0.15	1.16			

Figure D3.1 below illustrates the comparable rate of leakage for the defect area of  $0.1 \text{ cm}^2$ .

**Figure D3.1 Leakage Rates**



From the above it is clearly demonstrated that the rate of leakage from 0.5m of BES and HDPE composite system is significantly lower than that from a clay and HDPE composite system.

Table D3.1 and Figure D3.1 illustrate the leakage rate through the GCL and HDPE composite system. As this is to be only used on the upper slopes the leakage rate was only evaluated for a hydraulic head up to 0.3m.

Again the figures illustrate that the GCL and HDPE composite system provides a significantly lower leakage rate than that for the clay and HDPE composite system.

**D.3 (b)**

Refer to Sections 6.13 – 6.16, Volume I of the EIS.

**D.3 (c)**

Refer to Sections 6.18 – 6.22, Volume I of the EIS.

**D.3 (d)**

Refer to Sections 6.18 – 6.22, Volume I of the EIS.

**D.3 (e)**

Refer to Sections 6.18 – 6.22, Volume I of the EIS.

**D.3 (f)**

Refer to Sections 6.10, Volume I of the EIS and Drawing 5234.50/12 Formation Levels and Basel Gradient.

A detailed design of the access ramp into the cells will be undertaken at the time of tendering for the development works.

**D.3 (g)**

Refer to Sections 6.21, Volume I of the EIS.

**Attachment D.4**

**Leachate Management**

Refer to Drawings 5234.50/07 Lining Details and 5234.50/08 Leachate Management System.

**D.4 (a)**

Refer to Sections 6.23 – 6.31 and 7.32 – 7.45, Volume I of the EIS.

**D.4 (b)**

Refer to Section 6.26, Volume I of the EIS and Graph 6.1.

**D.4 (c)**

Refer to Section 6.26, Volume I of the EIS and Graph 6.1.

**D.4 (d)**

Refer to Section 6.33, Volume I of the EIS.

**D.4 (e)**

Refer to Sections 6.23 – 6.31, Volume I of the EIS and Drawings 5234.50/07 and 5234.50/08.

**D.4 (f)**

Refer to Section 6.30, Volume I of the EIS.

**D.4 (g)**

The level of leachate in the waste will be continuously monitored using piezometers located in the leachate collection sumps. A SCADA system will interpret the leachate level and if levels exceed the maximum permitted an alarm will be activated and the appropriate action taken.

**D.4 (h)**

Refer to Section 6.32, Volume I of the EIS.

**D.4 (i)**

A leachate treatment system will be designed when procuring the services of a Contractor for the development works. The treatment system will be designed in accordance with the requirements of the receiving Waste Water Treatment Works.

**D.4 (j)**

Refer to Section 6.29, Volume I of the EIS.

**Attachment D.5 Landfill Gas Management**

Refer to Drawing 5234.50/09 Landfill Gas Management System

**D.5 (a)**

Refer to Sections 6.36 – 6.37 and 7.46 – 7.52, Volume I of the EIS.

The highest estimated annual landfill gas production at the facility will be 230m<sup>3</sup>/hr in 2026. This equates to 870,393 kg/year of methane. This would place the facility 25<sup>th</sup> on the EPER list for methane production.

**D.5 (b)**

Refer to Section 6.37, Volume I of the EIS.

**D.5 (c)**

Refer to Section 6.37, Volume I of the EIS.

**D.5 (d)**

Suitable gas monitoring equipment will be installed at the site buildings.

**D.5 (e)**

Refer to Section 6.37, Volume I of the EIS.

**D.5 (f)**

A landfill gas flare will be installed with the first phase of the restoration works.

**D.5 (g)**

Refer to Section 6.37, Volume I of the EIS.

**D.5 (h)**

Refer to Sections 6.36 – 6.37, Volume I of the EIS.

**D.5 (i)**

Refer to Section 6.36 – 6.37, Volume I of the EIS and Drawing 5234.50/09.

**D.5 (j)**

Refer to Section 9, Volume I of the EIS.

**D.5 (k)**

Maintenance will be undertaken in accordance with manufacturer's recommendations.

**D.5 (l)**

The gas system will include a condensate removal system the detailed design of which will be undertaken at the tender stage.

**Attachment D.6      Capping System**

Refer to Drawing 5234.50/10 Capping Details

**D.6 (a)**

The working face of the landfill will be covered on a daily basis with either natural soils won on site or imported materials.

**D.6 (b)**

Intermediate cover for the landfill will comprise suitable inert material e.g. overburden which will be installed to a depth no less than 150mm.

**D.6 (c)**

The temporary capping layer will be installed using the overburden excavated on site which will be installed to a depth of no less than 300mm.

**D.6 (d)**

Refer to Sections 8.4 – 8.7, Volume I of the EIS.

The proposed capping system complies with the requirements of the Landfill Directive.

**D.6 (e)**

Refer to Sections 8.4 – 8.7, Volume I of the EIS.

**D.6 (f)**

Refer to Sections 8.4 – 8.7, Volume I of the EIS.

**D.6 (g)**

A detailed method statement for the construction works will be prepared prior to the capping work commencing on site and will be in compliance with the industry best practice. The following is a summary of the method statement:

1. Prepare the surface to the finished levels.
2. Place the gas drainage layer over the prepared surface.
3. Place the barrier layer (GCL) over the gas collection layer.
4. Cover the GCL with a drainage layer to a depth of 500mm.
5. Low load bearing machinery will be utilised to deploy the drainage material and will only be permitted to travel on a minimum depth of 500mm of drainage material.
6. Place and connect the gas collection pipework on top of the surface water drainage layer.
7. Place the 1m deep layer of restoration layer sourced from the excavation of the overburden from the extension area.
8. Seed and undertake landscaping in accordance with the EIS (section 15)

**D.6 (h)**

Full construction quality assurance will apply to the installation of the capping system.

**D.6 (i)**

A Construction Quality Assurance Plan will be prepared at the tender stage of the capping works.

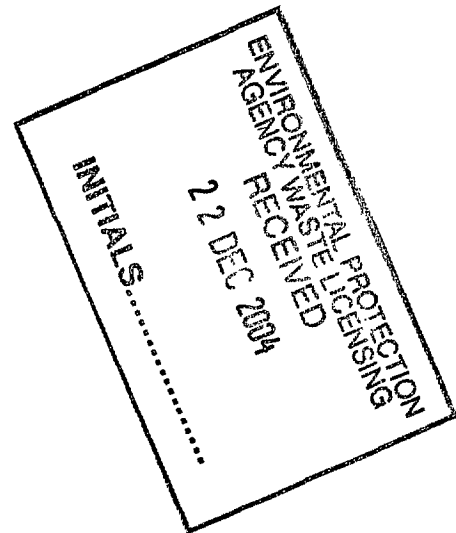
**D.6 (j)**

All waste slopes at Meenaboll Landfill Site will be no steeper than 1:3, which should not give rise to failure. However all slopes will be assessed annually by a qualified civil/geo-technical engineer.

**D.6 (k)**

After the installation of the temporary capping system on completion of the cells it is proposed to locate a number of reference points for monitoring landfill settlement which can easily be located on site drawings.

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**APPLICATION**

**By**

**Donegal County Council**

**to**

**Environmental Protection Agency**

**for**

**Waste Licence**

**Meenaboll Landfill Site, County Donegal**

**ATTACHMENTS TO SECTION E**

**Emissions**

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**ATTACHMENTS TO SECTION E      EMISSIONS**

**CONTENTS**

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E.5	Noise Emissions	E-3
E.6	Environmental Nuisances	E-3

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## **ATTACHMENTS TO SECTION E**

### **Attachment E.1 Emissions to Atmosphere**

Please refer to Section 9.0, Volume 1 of the EIS and Drawing 5234.50/13 Environmental Emission for emission points to atmosphere.

#### **E.1 (a) Composting Emissions**

Not Applicable

#### **E.1 (b) Particulate Emissions**

Particulate emissions will arise at the waste inspection area, working face and stockpile on the facility. These have been labelled as follows:

- A 2-1 Waste Inspection Area
- A 2-2 Stockpile

The working face will cover a wide and varying area depending on the development stage of the facility and therefore has not been allocated a label number.

Please refer to Table E.1 (iv) and Section 9.0, Volume 1 of the EIS.

#### **E.1 (c) Landfill Gas Emissions (Process Gas, Stack Emissions)**

Landfill gas emissions will arise from the enclosed flare at the facility. This has been labelled as follows:

- A 1-1 Landfill gas Flare Stack

Please refer to Table E.1 (i) and Section 9.0, Volume 1 of the EIS.

#### **E.1 (c) Landfill Gas Emissions (Fugitive Emissions)**

Fugitive landfill gas emissions to soil will arise in the areas, which are not permanently capped and where an active gas extraction system is yet to be installed. This will cover a wide and varying area depending on the development stage of the facility and therefore has not been allocated a label number.

Please refer to Table E.1 (iv) and Section 9.0, Volume 1 of the EIS.

#### **E.1 (d) Leachate Emissions (Fugitive Emissions)**

Fugitive emissions from leachate to atmosphere will arise at the leachate holding tanks.

These have been labelled as follows:

- A 2-3 Leachate Storage Tank 1.
- A 2-4 Leachate Storage Tank 2.

Please refer to Table E.1 (iv) and Section 9.0, Volume 1 of the EIS.

**E.1 (e), E.1 (f), E.1 (g)**

Not Applicable

**Attachment E.2 Emissions to Surface Water**

Refer to Drawing 5234.50/13 Environmental Emission for emission point to surface water.

Please refer to Table E.2 (i) and Section 12.0, Volume 1 of the EIS.

Foul drainage will be generated in the administration building only and will be drained via 100mm diameter PVC pipework to a proprietary wastewater treatment system. The treated effluent will be discharged to the leachate holding tanks

Surface water from the site roads will be directed to gulleys, settlement tanks, oil interceptors and subsequently to the constructed wetlands. A minimum depth of 1m of water shall be retained within each settlement lagoon for fire fighting purposes.

Information regarding invert levels and pipe sizes will be undertaken at the detailed design stage.

**Attachment E.3 Emissions to Sewer**

There will be no direct emissions to sewer.

Foul drainage will be generated in the administration building only and will be drained via 100mm diameter PVC pipework to a proprietary wastewater treatment system. The treated effluent will be discharged to the leachate holding tanks. Leachate will be tankered from leachate holding tank to Letterkenny Waste Water Treatment works.

**Attachment E.4 Emissions to Groundwater**

There will be no direct discharges to groundwater. There are no percolation areas or soakaways at the site.

Please refer to Section 13.0, Volume 1 of the EIS.

---

## Attachment E.5      Noise Emissions

Refer to Drawing 5234.50/13 Environmental Emission for emission points to atmosphere for noise.

Noise emissions will arise at the landfill gas flare, power generator leachate treatment and at the working face. These have been labelled as follows:

- N-1 Landfill Gas Flare.
- N-2 Power Generator.
- N-3 Leachate Treatment Works.

The working face will vary in location depending on the development stage of the facility and therefore has not been allocated a label number.

Please refer to Table E.5 (i) and Section 17.0, Volume 1 of the EIS.

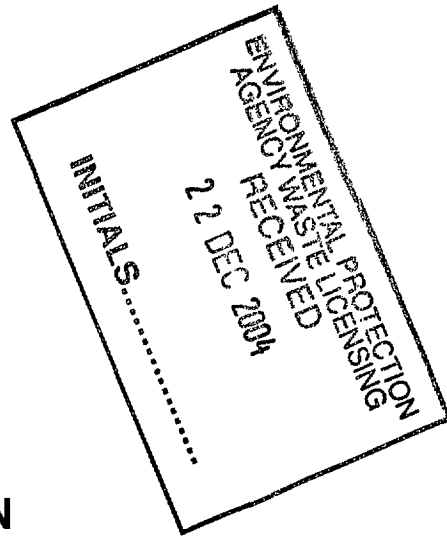
## Attachment E.6      Environmental Nuisances

Refer to Section 10.0, Volume 1 of the EIS with regards to bird numbers.

Refer to Section 7.0, Volume 1 of the EIS with regards to flies, litter condition of roads and other nuisance parameters.

Refer to Section 9.0, Volume 1 of the EIS with regards to odour.

Refer to Section 18.0, Volume 1 of the EIS with regards to traffic.



**APPLICATION**

**By**

**Donegal County Council**

**to**

**Environmental Protection Agency**

**for**

**Waste Licence**

**Meenaboll Landfill Site, County Donegal**

**ATTACHMENTS TO SECTION F**

**Control and Monitoring**

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**ATTACHMENTS TO SECTION F      PROPOSED ENVIRONMENTAL PROGRAMME**

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## **ATTACHMENTS TO SECTION F**

### **Attachment F.1 Treatment, Abatement and Control Systems**

#### ***To atmosphere***

Landfill gas emissions are dealt with via an enclosed landfill gas extraction system. Refer to Section 9, Volume 1 of the EIS with regards to landfill gas management on site. Monitoring and emissions limits will be as per waste licence requirements.

#### ***Leachate (Transported Waste Water Treatment Works)***

There will be some treatment of leachate on site prior to disposal to waste water treatment plant in Letterkenny. Refer to Section 7, Volume 1 of the EIS with regards to leachate treatment on site. Leachate composition will be typical to the composition provided for landfill site accepting mainly domestic waste in EPA Manual Landfill Operational Practices.

### **Attachment F.2 – F.9 Monitoring and Sampling Points**

#### **Attachment F.2 Air**

##### ***Dust***

Dust will be monitored three times a year, twice during the period May to September using Standard Method VD12119. Refer to Section 9.0, Volume 1 of the EIS and Drawing 5234.50/14 Environmental Monitoring point location for dust monitoring locations for the proposed development.

##### **Proposed Grid Reference Location (National Grid)**

<b>Dust Monitoring Point</b>	<b>Easting</b>	<b>Northern</b>
DG1	199538	408928
DG2	199671	409321
DG3	199820	409239

##### ***Odour***

There are no current proposals to actively monitor odour at the site due to its remote location. An active gas extraction system will be installed on site and operational procedures will include for the compaction and covering of wastes to reduce odours arising.

The following records will be maintained:

1. Daily odours will be recorded as part of site inspection.
2. Complaints received regarding odours.

**Attachment F.3 Surface Water**

The future monitoring programme will be in accordance with the conditions of the waste licence issued by the EPA and EPA monitoring Manual 2<sup>nd</sup> Edition. Refer to Drawing 5234.50/14 Environmental Monitoring point location for proposed surface water monitoring points.

**Proposed Grid Reference Location (National Grid)**

Surface Monitoring Point	Easting	Northern
SW1	199856	409094
SW2	199500	409327
SW3	199467	409355

**Attachment F.4 Sewer Discharge**

There will be no direct discharge to sewer. Leachate and foul water will be transferred to Waste Water Treatment Works.

**Attachment F.5 Groundwater**

The future monitoring programme will be in accordance with the conditions of the waste licence issued by the EPA. Refer to Drawing 5234.50/14 Environmental Monitoring point location for the proposed monitoring locations for groundwater in the proposed development.

**Grid Reference Location (National Grid)**

Groundwater Monitoring Point	Easting	Northern	Ground Level (mOD)
GW1 (BH1*)	199811.9	409050.3	249.65
GW2 (BH5*)	199738.8	408912.0	248.35
GW3 (BH10*)	199536.9	408983.5	237.15
GW4 (BH9*)	199476.4	409197.2	227.50
GW5 (BH6*)	199535.7	409363.8	221.55
GW6 (BH7*)	199663.5	409331.3	232.30
GW7 (BH8*)	199831.2	409239.9	246.95

\* Site investigation borehole name

Refer to Section 11.0, and 13.0, Volume 1 of the EIS regarding hydrogeology of the proposed development.



**Attachment F.6 Noise**

The future monitoring programme will be in accordance with the conditions of the waste licence issued by the EPA. Refer to Drawing 5234.50/14 Environmental Monitoring point location for proposed noise monitoring location which have been assigned to the boundary of the proposed site as there are no dwellings or other sensitive receptor adjacent to the facility.

**Proposed Grid Reference Location (National Grid)**

Noise Monitoring Point	Easting	Northern
N1	199493	409399
N2	199933	409271
N3	199591	408859

**Attachment F.7 Meteorological**

It is anticipated that this information will be supplied by an in situ weather station site. The future monitoring programme will be in accordance with the conditions of the waste licence issued by the EPA.

**Attachment F.8 Leachate**

The future monitoring programme will be in accordance with the conditions of the waste licence issued by the EPA. Refer to Drawing 5234.50/13 Environmental Monitoring point location for proposed location for leachate monitoring points. Grid reference locations have not been provided

**Attachment F.9 Landfill Gas**

The data provided in Table F.9 (a) is the anticipated data for the facility.

**Proposed Grid Reference Location (National Grid)**

Landfill Gas Piezometers Monitoring Point	Easting	Northern
LG1	199595	409280
LG2	199689	409230
LG3	199776	409180
LG4	199833	409098
LG5	199786	409009
LG6	199732	408925
LG7	199608	408925
LG8	199532	409005
LG9	199525	409104
LG10	199520	409204

**Landfill Gas**

The future monitoring programme for the landfill gas flare will be in accordance with the conditions of the waste licence issued by the EPA and Landfill Manual Landfill Monitoring, 2<sup>nd</sup> Edition. Landfill gas will be monitored at the peripheral landfill gas piezometers on a monthly basis. Refer to Section 9.0, Volume 1 of the EIS and Drawing 5234.50/14 Environmental Monitoring point location for landfill gas piezometers monitoring locations and landfill gas flare location for the proposed development. Monitoring will be carried out in the peripheral monitoring locations prior to waste emplacement.

**Proposed Grid Reference Location (National Grid)**

Landfill Gas Flare Monitoring Point	Easting	Northern
A1	199622	409249

Monitoring at the enclosed flare stack will be undertaken for those parameter and frequencies as per licence requirements.