



# WATERFORD COUNTY COUNCIL

Director of Planning & Environment

## COMHAIRLE CONTAE PHORT LÁIRGE

Stiúrthóir Pleanála & Comhshaoil

My Reference: GH/MS  
Mo Thag:

Your Reference: W0032-03  
Do Thag:

Date:  
Dáta:

Friday 20<sup>th</sup> December 2013

Administration,  
Licensing Unit,  
Office of Climate, Licensing  
And Resource Use,  
Environmental Protection Agency,  
Headquarters,  
PO Box 3000,  
Johnstown Castle Estate,  
Co. Wexford

ENVIRONMENTAL PROTECTION  
AGENCY

23 DEC 2013

Attention of Ms Ewa Babiarczyk

Dear Ms Babiarczyk,

**Re: Reg No. W0032-03 – Notice in Accordance with Article 14 (2) b (ii) of the Waste Management (Licensing) Regulations**

I refer to the above reference application for a waste licence relating to a facility at Dungarvan Waste Disposal Site, Ballinamuck Middle, Dungarvan, Co. Waterford.

I attach herewith a response to the queries raised by the Environmental Protection Agency in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations 2004 as amended from the Environmental Protection Agency (EPA) in your correspondence of the 29<sup>th</sup> November 2013.

Please note two hard copies of the information are attached, and two electronic versions are also included on two CD-ROM.

If you require any additional information, please contact the undersigned.

Yours faithfully,

  
Gabriel Hynes,  
Senior Engineer,  
Environment

Encls.



Civic Offices, Dungarvan, Co. Waterford.  
Oifigí Cathartha, Dún Garbhán, Co. Phort Láirge.

Tel.: 058-22000 Fax: 058-45606



GH/MS

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# Waste Licensing Waste Disposal Activities (Landfill Sites)

Application by Waterford County Council for Waste Licence Application  
W0032-03 for Dungarvan Landfill, County Waterford

EPA Ref N <sup>o</sup> :	W0032-03
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Replies to Request for further information in  
accordance with Article 14(2)(b)(ii) of the Waste  
Management Regulations

December 2013



# Dungarvan Landfill Waste Licence Application Article 14 Response

## DOCUMENT CONTROL SHEET

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# 1 INTRODUCTION

This report has been compiled to supply additional information in response to a Notice in accordance with Article 14(2) (b) (ii) of the Waste Management (Licensing) Regulations 2004 as amended from the Environmental Protection Agency (EPA) dated November 29<sup>th</sup> 2013.

The revised drawings and the revision numbers have been outlined below and are included in Appendix 4.

Current Drawing No.	Revision No.	Previous Drawing No.	Title
MDR0350DG0505	R03	DG0505 Revision R02	Monitoring Locations
MDR0350DG0714	R03	DG0714 Revision R02	Landfill Surface Water Drainage System
MDR0350DG0706	R02	DG0706 Revision R01	Leachate Abstraction and Treatment System

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## 2 ARTICLE 12 COMPLIANCE REQUIREMENTS

### 2.1 REQUEST FOR INFORMATION NUMBER 1

*On Drawing no. MDR0350/DG0714 R02, there are two ponds illustrated called the "Lagoon Marsh" and "Marsh Area". State whether these are lined ponds. State whether the discharge from the ICW passes through these ponds. If it does not, state the purpose of these ponds.*

#### 2.1.1 Response to Request for Information Number 1

The 'Marsh Area' and the 'Lagoon' Marsh' are not lined. The treated effluent from the final lined pond (Pond 5) in the Integrated Constructed Wetlands (ICW) system discharges to a recycle sump as shown on drawing MDR0350DG0706 R03. The treated leachate is monitored in the recycle sump before being either recycled within the ICW system or discharged.

The discharge point from the ICW system is SWE6, which discharges to the 'Lagoon Marsh' which is hydraulically connected to the Colligan River through the 'Marsh Area'. These are clearly indicated on MDR0350DG0706 R03.

### 2.2 REQUEST FOR INFORMATION NUMBER 2

*Illustrate on a new drawing (or on a drawing referred to below) the exact location of the discharge from the ICW/pond system to the Colligan River. State the maximum proposed rate of discharge (flow) to the Colligan River. State whether the discharge is constant or varies depending on the tide, level in the river or other reasons, and explain the manner by which the discharge rate is controlled.*

#### 2.2.1 Response to Request for Information Number 2

Full details of the characteristics and control of discharge from the ICW system to the Colligan River can be found in *Waste Licence Application W0032-03 Article 14 Response (August 2013)* as submitted to the Agency.

As outlined in the response to Point 1, the treated effluent discharges to the Colligan River through the lagoon marsh which is unlined and is hydraulically connected to the Colligan River. The discharge point from the ICW system to the lagoon marsh is SWE6 which is shown in a revised drawing MDR0350DG0706 R03.

Appendix 4 of the August 2013 response details the characteristics of the discharge in Tables E.2(i) and E.2(ii), and Appendix 3 report *Leachate Abstraction and Treatment System – Description and Performance (2013)* also presents details on measured and predicted flowrates, including averages and maximums. The average discharge without recycle is estimated at 140 m<sup>3</sup>/d, but the treatment system has capability to recycle some or all of the maximum process flow, depending on circumstances, and as such average discharges are normally less than 140 m<sup>3</sup>/d (currently the average is 70 m<sup>3</sup>/d). A maximum volume per day of 186 m<sup>3</sup>/d is indicated in above table is calculated at maximum process flow. As the ICW system is open to rainfall, heavy rainfall will produce larger maximum discharge volumes per day. The maximum possible outflow from the recycle pump to the lagoon is 99 m<sup>3</sup>/hr, however this is not the proposed maximum proposed rate of discharge.

The ICW discharge is not constant and is not linked to the tide, nor level in the river. However a distinction must be made between discharge from the ICW to the lagoon marsh, which is controlled by the leachate treatment system SCADA, and the hydraulic connection between the lagoon marsh and river, which is through an earthen bank founded on gravels. The latter hydraulic connection is

understood to be influenced by the relative water levels in the lagoon marsh and river, and by flood and tide.

Flow from the last wetland pond (pond 5) discharges to a recycle sump. The treated effluent is monitored in the recycle sump, the control system can be programmed to recycle or discharge the effluent. The treated effluent can be:

- Recycled as dilution water (back to the dilution tank),
- Pumped back to pond 1B,
- Recycle a minimum and allow discharge, provided the effluent meets discharge limit values.

A SCADA system controls flows to the ICW, leachate dilution tank and sumps, and outlets, and regulates flows based on parameter monitoring to ensure compliance with outlet parameters and avoid overloading the wetlands or discharging effluent which doesn't meet the discharge limit values to the lagoon. The SCADA system is maintained and operated by trained landfill site staff.

The recycle sump normally pumps treated effluent (received from Pond 5) back to either the dilution tank (when called by the dilution logic) or else to pond 1B. In the event that effluent exceeds a setpoint standard that is unsuitable for dilution water, pumping is to pond 1B only (this is variable by operator). When inflow exceeds pumping capacity and the level in the sump rises, an actuated valve gradually opens and controls outlet flows until either the level/flow returns to normal parameters, or a high level is reached in the sump, in which case flow discharges through the overflow to the lagoon. In the event that effluent standards exceed allowable setpoints, the actuated valve automatically closes and pumping continues to attempt to retain effluent insofar as possible, with excess flows discharging through the overflow to the lagoon.

Heavy rainfall events will first result in a level rise and retention within the ponds, together with increased recycle flows to pond 1B if so set, and then finally discharge to the leachate lagoon. In the event of an emergency whereby the effluent is above standards, and the retention and balancing of the ponds and recycle pumping system is exceeded, there is provision to allow manual adjustment of the pond outlets to further retain effluent, thus bringing into effect significant additional storage volume using the available freeboard, and further recycle and dilution can occur to bring the effluent to standard, or in exceptional cases the effluent can be sent to a local wastewater treatment plant.

## 2.3 REQUEST FOR INFORMATION NUMBER 3

*Submit a new drawing, to replace all earlier drawings, some of which are contradictory, showing storm water discharges from the whole facility. Include their symbols and grid reference numbers.*

### 2.3.1 Response to Request for Information Number 3

A revised drawing MDR0350/DG0714 R03 showing the Landfill Surface Water Drainage System has been included in Appendix 4. This clearly indicates the storm water discharges from the facility (landfill, civic amenity, waste transfer station and green waste area).

## 2.4 REQUEST FOR INFORMATION NUMBER 4

*Submit a new drawing, to replace all earlier drawings, some of which are contradictory, showing monitoring locations within and outside the site boundary. Include their symbols and grid reference numbers.*

### 2.4.1 Response to Request for Information Number 4

A revised drawing MDR0350/DG0505R03 has been included in Appendix 4.



## 2.5 REQUEST FOR INFORMATION NUMBER 5

*Submit the most recent monitoring results for the final effluent and the location of this monitoring.*

### 2.5.1 Response to Request for Information Number 5

Appendix 3 of the August 2013 response *Leachate Abstraction and Treatment System – Description and Performance (2013)* presents full details of final effluent monitoring from June 2010 to March 2012 (partial system) and September 2012 to June 2013 (full system). The following summarises the findings in relation to effluent monitoring from September 2012 to June 2013 (full system). All discharge monitoring occurs at the discharge pipe to SWE6.

Monitoring shows an average ammonium outlet concentration of 1.2 mg/l (as taken from the online sensor). There were 7 grab samples analysed in the period, all below 5 mg/l. There were 16 spectrometer tests during the period, again all of these were below 5 mg/l. Other parameters show the following:

- pH varies from 5.7 to 7.9, within the proposed range of 5 – 9
- Only one BOD result was available in the period; 3 mg/l, well within the proposed standard of 45 mg/l
- Suspended Solids results are all at 1 mg/l or less, except one result at 45 mg/l. It is assumed that this was a sampling/testing issue, as no other parameters were elevated, and no issues evident onsite at the time. The proposed standard is 50 mg/l.
- Orthophosphate (mg/l P) averages 0.02 mg/l with a maximum of 0.04 mg/l, well within the proposed standard of 2 mg/l

Four sampling and monitoring rounds were carried out from July 2013 to November 2013, with summary as follows:

- Ammonium average of 0.73 mg/l, maximum 1.73 mg/l
- pH ranges from 6.9 to 7.8
- No BOD results are available
- Suspended Solids average of 5 mg/l, maximum 8 mg/l
- Orthophosphate average of 0.03 mg/l, maximum 0.09 mg/l

In summary, the wetlands treatment system performed well during the period, with discharge concentrations well within the proposed emission limits. The most recent monitoring results for the final effluent from Pond 5 are shown in Appendix 2.

## 2.6 REQUEST FOR INFORMATION NUMBER 6

*Submit a new drawing showing the drainage system for wastewater generated in the waste transfer station, green waste area and the civic amenity area. State whether all this wastewater is treated in the ICW system.*

### 2.6.1 Response to Request for Information Number 6

All the wastewater generated from the waste transfer station, green waste area and the civic amenity area is treated in the ICW system. The wastewater drainage system, which feeds into the leachate treatment system, is shown in revised drawing MDR0350DG0706 R03.

Wastewater and washings from the waste transfer station drain, the septic tank and first flush storm system in the civic amenity area are collected in a new pump sump, which is directed to the ICW for treatment via the dilution tank. This includes the green waste reception area and former composting area.

Surface water drainage from the civic amenity area discharges via a 'first flush' valve to the ICW treatment system, with further rainfall/runoff discharging through the oil/petrol interceptor to the Colligan River at SWE3.

All wastewater is treated in the ICW system.

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**APPENDIX 1**  
**REVISED NON TECHNICAL SUMMARY**

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## Attachment A.1 – Non-Technical Summary

### A.1.1 Background & Nature of the Facility

Dungarvan Landfill is located in Ballynamuck Middle Co. Waterford approximately 2km north west of Dungarvan, off the N25 road on the Southern Bank of the Colligan River. The landfill site is located on a meander of the Colligan River, immediately to the west of Ballyneety Bridge. Adjacent to the site the Colligan River becomes tidal, with an extensive area of mudflats located further to the east of Ballyneety Bridge extending into Dungarvan Harbour. Dungarvan Harbour itself is designated as a Special Protection area (SPA) which extends from Helvic Head to Ballyneety Bridge. A National Heritage Area (NHA) covers most of the bay and touches the western boundary of the landfill site.

The topography of the area is a gentle south facing slope and is bounded by a low ridge running east-west to the north of the Waterford-Cappoquin Road. The general character of the landscape is one of good quality agriculture with a relatively high level of visual amenity. Land use in the vicinity of the site is primarily agricultural pastureland with some isolated patches of cropland. There is urbanisation in the form of ribbon development on the county roads around the site. There is also an “angler’s path” running along the boundary of the site adjacent to the river on which there is a public right of way.

The site contains the following:

- A closed landfill
- A green waste composting area
- A Waste Transfer Station
- A Civic Amenity Area

#### Landfill

The site itself consists of a landfill that has ceased accepting waste since 2003. The landfill covers an area of approximately 6.5 hectares. It is thought that filling on the site commenced in the late 1960’s. Ownership of the landfill was passed to Waterford County Council in 1985. The landfill is an unlined landfill i.e. it does not contain any engineered liner material underneath the waste. It does however contain a thick layer of low permeable clay which would prevent a significant amount of leachate ingress into the groundwater.

The landfill site has recently been capped completely and now progresses to non-clean closure status as defined in the Agency’s ELRA, Residuals Management and Financial Provision Guidance Document. In accordance with Waste Licence W32-02 and in accordance with the Closure, Restoration and Aftercare Management Plan (CRAMP) issued to the Agency, it is intended to develop a series of Integrated Constructed Wetlands (ICW) at the site to treat the leachate and provide a public local amenity area.

While the primary objective of the constructed wetlands is for leachate treatment, the development and conservation of wildlife habitats is compatible as an afteruse. The layout, structure and composition of the wetlands will be entirely compatible with the surrounding ecology and will greatly increase the restored landfill’s visual and wildlife amenity. Wetlands are important as habitats for invertebrates, marginal and aquatic vegetation, amphibians, fish and a range of breeding and wintering wildfowl as an area for nesting and feeding. The restored site will play an important role as a wildlife corridor in the area.

Capping works were completed in mid 2008. The final capping system generally comprises of a gas collection layer, LLDPE liner, drainage layer, subsoil layer and topsoil layer as follows:

- 150-300mm layer of topsoil; underlain by
- Subsoil such that thickness of topsoil and subsoil is at least 1m thick; underlain by
- A surface water geocomposite layer; underlain by
- 1mm LLDPE liner (a low permeability geomembrane material).

- Geocomposite gas collection layer.

The capping layers will provide protection from the ingress of rain into the site and thus minimise leachate generation. In addition to the capping detail as required by the licence it is proposed that wetland ponds be constructed for the purpose of treating leachate. The drainage geocomposite layer is placed on the side slopes only as the constructed wetlands will effectively control surface water drainage; in addition the depth of subsoil/topsoil will be decreased from 1m to 0.3m in areas where the ponds are located. Approximately 5,500m<sup>2</sup> of the side slopes on the Southern side of Dungarvan landfill were capped in 2002 using a GCL as the low permeability layer. Geogrid was also placed on the side slopes as required for slope stability. The drainage geocomposite layer is placed on the side slopes only as the constructed wetlands effectively control surface water drainage on the flat areas. Leachate extraction wells are located strategically across the site in order to maximise collection efficiency. Furthermore, rainwater will assist in the dilution of leachate within the constructed wetlands. The surface water drainage from the side slopes will run-off towards the surface water carrier drain, which runs along the northern boundary.

The landfill gases generated within the landfill body itself will be collected by the landfill gas management system and flared off.

### **Green Waste Composting Area**

Waterford County Council ceased the acceptance of source segregated organic waste at the composting facility in 2007 due to odour concerns. In early 2008, the two enclosed in-vessel composting units were decommissioned and removed from site as they were no longer required.

Currently the composting area on site only accepts green waste in the form of bushes, trees, grass etc. A mobile shredder is brought onto site once a month at a minimum or whenever a sufficient amount of green waste is to be shredded. Following shredding, the material is placed in a curing bunker where it is allowed to decompose with the aid of aeration slots and a biofilter.

### **Waste Transfer Station**

The waste transfer station is licensed to accept 10,000 tonnes per annum. The building is 10m x 35m in size and is fully enclosed. An air handling unit of three overhead pipes is connected to three extractor fans to ventilate the building.

All waste accepted is unloaded within the transfer building itself. All waste remains in the building for a maximum of 48 hours prior to being loaded and transported to either Powerstown Landfill in County Carlow or the composting facilities at Veolia in Waterford City or Milltown Composting, Fethard, Co. Tipperary. The facility is washed down and cleaned after compostable material is transferred. This is collected on a three week cycle together with municipal waste and dry recyclables.

### **Civic Amenity Area**

The civic amenity area is open to the public and subject to a pricing structure depending on the amount of waste or type of vehicle or size of trailer. The facility accepts waste from 9.00am to 17.00pm Monday to Friday and 9.00am to 1.00pm on Saturday. All waste coming into the civic amenity area is inspected by staff prior to disposal. The civic amenity area accepts the following waste;

- Glass
- Paper & Cardboard
- Newspapers/magazines
- Plastics
- Garden Waste
- Construction & Demolition waste
- Wood
- Waste cooking oils
- Batteries
- Oil Filters
- Waste paint
- Mixed residual waste
- Bulky waste (furniture, mattresses etc.)
- WEEE

- Mixed dry recyclables including tetra-pak
- Textiles
- Scrap metal
- Aluminium & tin cans

### A.1.2 Classes of Activities

Dungarvan Landfill is currently licensed to carry out activities under Classes 4 and 13 in accordance with the Third Schedule of the Waste Management Acts 1996 to 2003 (equivalent to Classes 4 and 15 of the Third Schedule of the Waste Management as amended).

Under the waste license review (W0032-03) Waterford County Council are applying to carry out activities under the following classes in accordance with the Third Schedule of the Waste Management Acts 1996, as amended::

- Class D4. Surface impoundment, (e.g. placement of liquid or sludgy discards into pits, ponds or lagoons etc.)
- Class D13. Blending or mixture prior to any of the operations numbered D1 to D12 (if there is no other D code appropriate, this can include preliminary operations prior to disposal including pre-processing such as, amongst others, sorting, crushing, compacting, pelletising, drying, shredding, conditioning or separating prior to submission to any of the operations numbered D1 to D12).
- Class D15. Storage pending any of the operations numbered D1 to D14 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).

Class D4 activities relate to the storage of leachate within the six wetland ponds that are currently being constructed as part of the capping works.

Class D13 activities relate to the mixture of water with the abstracted leachate. This is necessary to dilute the leachate before it is pumped into the wetland system.

Class D15 relates to the storage of waste in the waste transfer station prior to this waste being transferred to either composting facilities for recovery or Powerstown Landfill for disposal.

Dungarvan Landfill is currently licensed to carry out activities under Classes R1, R3, R4, R5, R11 and R13 in accordance with the Fourth Schedule of the Waste Management Acts 1996, as amended.

Under this waste license review Waterford County Council are applying to continue carrying out activities under the above classes as per Waste License W0032-02.

The principal activity at the site is Class D15 of the Third Schedule as detailed above.

### A.1.3 Quantity and Nature of Waste Handled

The main types of waste handled at the facility are household (mixed residual waste and mixed dry recyclables), green waste and construction & demolition waste and commercial waste. The quantities and nature of waste that the facility is currently licensed to accept are shown in the table below.

WASTE TYPE	TONNES PER ANNUM
Municipal Waste	10,000
Hazardous Municipal Waste (including WEEE)	400
Inert C & D	20,000 over the lifetime of the facility
Garden Waste	1,120
<b>Total</b>	<b>11,520</b>

### **A.1.3 Raw and Ancillary Materials**

The main raw material used on site is water for cleaning the hard standing areas namely the civic amenity area, the composting area and the waste transfer station. Diesel is used to run the shredder however this is not permanently on site. Electricity is used in the site lighting, weighbridge, and in the office and garage buildings.

### **A.1.4 Site Operating Procedures**

Waste is delivered to the site mainly by Waterford County Council (WCC) and Dungarvan Urban District Council refuse collection trucks. This waste is domestic household waste. All trucks must pass over the weighbridge prior to admission to the waste transfer station where it is unloaded within the building itself. This mitigates odour, noise and dust emissions to the atmosphere. The waste is then inspected and is transported off site to either composting facilities for recovery or Powerstown landfill in County Carlow for disposal within 48 hours.

All waste accepted by the compost area (green waste only) and civic amenity area is inspected prior to admission. In the past the facility accepted source segregated organic waste and to facilitate the composting of this material, two enclosed in-vessel units were commissioned to allow a 14 day maturation period. As the facility ceased accepting source segregated organic waste for composting, the two in-vessel units were decommissioned and removed from site in 2008. Every month or sooner as required, a mobile shredder is brought to site to shred the green waste into chips. This is then transferred to one of the concrete curing bunkers of that contain aeration slots and biofilters that facilitate decomposition and odour control. The civic amenity area is open to the public free of charge. Waste is inspected by staff prior to admission and if the material is accepted, the public are directed to the required container(s).

### **A.1.6 Nature & Impacts of Emissions at the facility**

#### **Emissions to Air**

The potential emissions to air that arise from the operation of the facility are noise, dust and odour. The majority of these emissions result from waste coming into and leaving the transfer station. These emissions are mitigated by ensuring that all incoming waste is unloaded within the building itself thus reducing the emissions to the atmosphere. In addition, all biodegradable waste coming into the facility is removed within 48 hours.

Dust levels at the facility established during monitoring undertaken indicate that dust generation at the facility are significantly below the EPA recommended level of 350mg/m<sup>2</sup>/day.

The main source of odour nuisance is potentially generated from the composting area. Because the compost area no longer accepts kitchen waste, odour nuisance is minimal.

#### **Emissions to Groundwater**

As mentioned previously, the landfill body itself is unlined resulting in the threat of leachate ingress into the groundwater. Although this is a potential issue, a thick layer of low permeability clay exists underneath the landfill which reduces the potential for leachate migration. In addition to this the fully engineered landfill cap that is being constructed in accordance with Waste Licence 032-2 will prevent the ingress of moisture into the waste body of the landfill, thus mitigating against future leachate generation. Because the landfill is now closed and recently capped, the amount of leachate generated on an annual basis will deplete over time.

#### **Emissions to Surface Water**

Surface water generated from the slopes of the landfill will be collected via a series of stone filled carrier drains that will discharge into the River Colligan.

Surface water from the civic amenity area is collected and passed through a petrol interceptor before being discharged to the Colligan River.

Wastewater from the composting area and the waste transfer station will be directed to the leachate treatment system.

### **Noise Emissions**

The primary source of noise emissions coming from the facility relate to activities concerning the waste transfer station. These emissions are minimised by carrying out all loading and unloading of vehicles within the main building. Another source of noise emissions would be the auger that shreds the green waste, however due to the fact that this runs approximately once a month, it is perceived that this is not an issue.

## **A.1.7 Provision of Information related to Section 40(4) of the Waste Management Act**

### **Compliance with Emission Standards**

Waterford County Council will operate the facility so as to comply with all emission standards and limits set out by the Environmental Protection Agency in the Waste Licence.

### **Avoidance of Environmental Pollution**

The facility is designed and operated to ensure that the operation of the facility will not cause environmental pollution; some of the design features and operational practices that ensure this are outlined below:

#### ***Avoidance of Emissions to Air***

- All waste related to the waste transfer station is transferred in enclosed or covered vehicles.
- All waste-handling is restricted to inside the waste transfer station.
- All waste disposed of at the waste transfer station is removed off site within 48 hours of delivery.
- Water-spraying of hardstanding areas is carried out in periods of dry weather.
- Only green waste is accepted at the compost area.

#### ***Avoidance of Emissions to Water***

- The civic amenity area, the waste transfer station and the compost area are paved allowing collection of all surface water generated.
- All surface water from the civic amenity area is passed through a petrol/oil interceptor before being discharged to the Colligan River.
- Wastewater from the composting area and waste transfer station will be directed to the leachate treatment system.

#### ***Avoidance of Other Environmental Nuisances***

- The site is cleaned regularly to prevent wind blown litter.
- Municipal waste collected by WCC is stored within the main waste building and is not exposed.
- A vermin control plan was developed by a pest-control specialist and is being implemented and the site is regularly inspected.
- Regular monitoring of agreed parameters as set out in the existing Waste Licence will ensure that environmental controls are monitored for performance.

### **Best Available Technology (BAT)**

Waterford County Council adheres to BAT principles to avoid any environmental pollution and prevent and mitigate any nuisance emissions from the facility.

### **Fit and Proper Person**

Mr. David Regan has responsibility for the day to day operations at the site. Mr. Regan has completed the course and obtained the FAS Waste Management Certificate.



No employee of the applicant, Waterford County Council, has been convicted of an offence under the Waste Management Act 1996.

### **Technical Competence & Site Management**

Waterford County Council is required as a local Authority to follow instructions set out by the EPA and has extensive experience in waste management. Waterford County Council has also extensive experience and in operating licensed facilities and will operate the facility in strict accordance with the Waste Licence. The table and organisational chart in Attachment C.1 sets out the staff structure for the management of the facility.

### **Financial Provision**

Waterford County Council, as a Local Authority, are fully aware of their responsibilities to make financial provision in respect to the operation of a waste recovery facility as set out in Section 53 of the Act.

### **A.1.8 Monitoring and Sampling Arrangements**

It is proposed to continue the monitoring programme as set out by the EPA for the facility in the previous Waste Licence W32-02. In addition it is proposed to carry out monthly dust monitoring at monitoring locations B1-B4 and D2, D2A, D3 and D4. It is also proposed to conduct monthly odour monitoring at locations OM1 – OM2 and daily odour inspections at locations Oi1 – Oi4.

It is proposed that monitoring at such locations will allow emissions generated from the landfill, civic amenity area, composting area and waste transfer facility to be detected.

Monitoring locations are specified on drawing number MDR0350DG0505 R03.

### **A.1.9 Off-site Treatment of Waste**

All outgoing waste from the Waste Transfer Station is sent to either composting facilities or Powerstown Landfill in County Carlow (Waste Licence W0025-02). All waste from the civic amenity area is sent to appropriate waste recovery facilities. Mixed dry recyclables are sent to the Materials Recovery Facility at Shandon, Dungarvan which is nearby and is also owned by the Applicant. All vehicles involved in the transportation of these wastes are fully enclosed and are in possession of the appropriate collection permits.

It is not proposed to treat any liquid waste, i.e. leachate from the landfill off-site.

### **A.1.10 Emergency Procedures**

A set of emergency procedures have been developed for the facility to implement appropriate measures to prevent environmental pollution in the event of any emergency situation. Under these emergency procedures specific staff members have designated responsibilities. Events that would constitute an emergency would include:

- Spills
- General fire/Explosion
- Internal/External Flooding
- Malicious Damage
- Other Unforeseen Emergencies

### **A.1.11 Closure, Restoration & Aftercare of the Site**

It is envisaged that the site (with the exception of the landfill) will operate in the long-term. A Closure, Restoration and Aftercare Management Plan (CRAMP) has been submitted to the Agency and was drawn up in accordance with Waste Licence W0032-02. The facility will continue to be monitored in the aftercare period until it is fully decommissioned and until there is no potential for emissions to the environment

# APPENDIX 2

# MONITORING RESULTS

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New Code	Old Code	Sampling point (Inlet/Mid/Outlet)	Date sampled	pH	Ammonium mg/l N	Molybdate Reactive Phosphate mg/l P	Total Phosphate mg/l P	Nitrite mg/l N	Nitrate mg/l N	Total Oxidised Nitrogen	Suspended solids mg/l	COD mg/l	BOD mg/l	Chloride mg/l Cl	Conductivity	NPOC
DLF580	Dungarvan	OUTLET	10/01/2013		3.128	<0.01	0.083	0.046	0.061	0.107	<2	33		58.962	593	
DLF580	Dungarvan	OUTLET	23/01/2013		1.087	0.013	0.061	0.016	0.857	0.884	<2	29		51.933	559	
DLF580	Dungarvan	OUTLET	05/02/2013	7.35	2.163	0.013	0.045	0.054	1.895	1.949	<2	22	3	60.601	635	
DLF580	Dungarvan	OUTLET	18/02/2013	7.31	0.821	0.010		0.028	2.622	2.650	<2	35		64.295	589	
DLF580	Dungarvan	OUTLET	10/05/2013		<0.01	0.024		0.007	2.828	2.835	<2	31		90.401	685	
DLF500	Dungarvan	OUTLET	23/05/2013		0.24	0.040		0.010	<0.2		<2	61		84.000	716	
DLF500	Dungarvan	OUTLET	29/05/2013		0.24	0.028		0.004	<0.2	<0.2	<2			83.700	715	
DLF580	Dungarvan	OUTLET	18/06/2013	7.84	0.05	0.027		0.010	0.468	0.474	0.6	34		75.500	729	
DLF580	Dungarvan	OUTLET	08/07/2013		0.044	0.019		0.009	<0.2	<0.2	4.5	50		73.000	633	17.06
DLF580	Dungarvan	OUTLET	22/08/2013	7.86	0.14	0.016		0.015	0.583		8.0	70		151.000	1080	24.51
DLF580	Dungarvan	OUTLET	14/10/2013		1.73	0.088		0.003	0.053	0.057	<2	48		127.6	1025	
DLF580	Dungarvan	OUTLET	05/11/2013	6.94	1.006	0.01		0.006	0.033	0.039		32		77.646	717	13.64

**APPENDIX 3**  
**CORRESPONDENCE FROM EPA**

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Mr. Gabriel Hynes  
Senior Engineer  
Waterford County Council  
Environment Section  
Civic Offices  
Dungarvan  
Co. Waterford

Headquarters, PO Box 3000  
Johnstown Castle Estate  
County Wexford, Ireland

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LoCall: 1890 33 55 99



29 November 2013

Reg. No. W0032-03

**re: Notice in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations**

Dear Mr. Hynes,

I am to refer to the above referenced application for a waste licence relating to a facility at Dungarvan Waste Disposal Site, Ballynamuck Middle, Dungarvan, Co. Waterford.

Having examined the documentation submitted, I am to advise that the Agency is of the view that the documentation does not comply with Article 12 of the Waste Management (Licensing) Regulations. You are therefore requested, in accordance with Article 14(2)(b)(ii) of the regulations, to take the steps and supply the information detailed below:

**ARTICLE 12 COMPLIANCE REQUIREMENTS**

1. On drawing no. MDR0350/GD0714, R02, there are two ponds illustrated called the "Lagoon Marsh" and "Marsh Area". State whether these are lined ponds. State whether the discharge from the ICW passes through these ponds. If it does not, state the purpose of these ponds. ✓
2. Illustrate on a new drawing (or on a drawing referred to below) the exact location of the discharge from the ICW/pond system to the Colligan River. State the maximum proposed rate of discharge (flow) to the Colligan River. State whether the discharge is constant or varies depending on the tide, level in the river or other reasons, and explain the manner by which the discharge rate is controlled. ✓
3. Submit a new drawing, to replace all earlier drawings, some of which are contradictory, showing storm water discharges from the whole facility. Include their symbols and grid reference numbers. ✓
4. Submit a new drawing, to replace all earlier drawings, some of which are contradictory, showing monitoring locations within and outside the site boundary. Include their symbols and grid reference numbers. ✓
5. Submit the most recent monitoring results for the final effluent and the location of this monitoring. ✓



6. Submit a new drawing showing the drainage system for wastewater generated in the waste transfer station, green waste area and the civic amenity area. State whether all this wastewater is treated in the ICW system. ✓

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

In the case where any drawings already submitted are subject to revision consequent on this request, a revised drawing should be prepared in each case. It is not sufficient to annotate the original drawing with a textual correction. Where such revised drawings are submitted, provide a list of drawing titles, drawing numbers and revision status, which correlates the revised drawings with the superseded versions.

Please supply the information in the form of a one original plus one copy in hardcopy format within *two weeks* of the date of this notice. In addition please submit two copies of the requested information in electronic searchable PDF format on a CD-ROM to the Agency. Please note that all maps/drawings should not exceed A3 in size.

Please note that the application's register number is **W0032-03**. Please direct all correspondence in relation to this matter to Administration, *Licensing Unit, Office of Climate, Licensing & Resource Use, Environmental Protection Agency, Headquarters, PO Box 3000, Johnstown Castle Estate, County Wexford* quoting the register number.

Yours sincerely,



---

Ewa Babiarczyk  
Inspector  
Office of Climate, Licensing & Resource Use

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**APPENDIX 4**  
**DRAWINGS**

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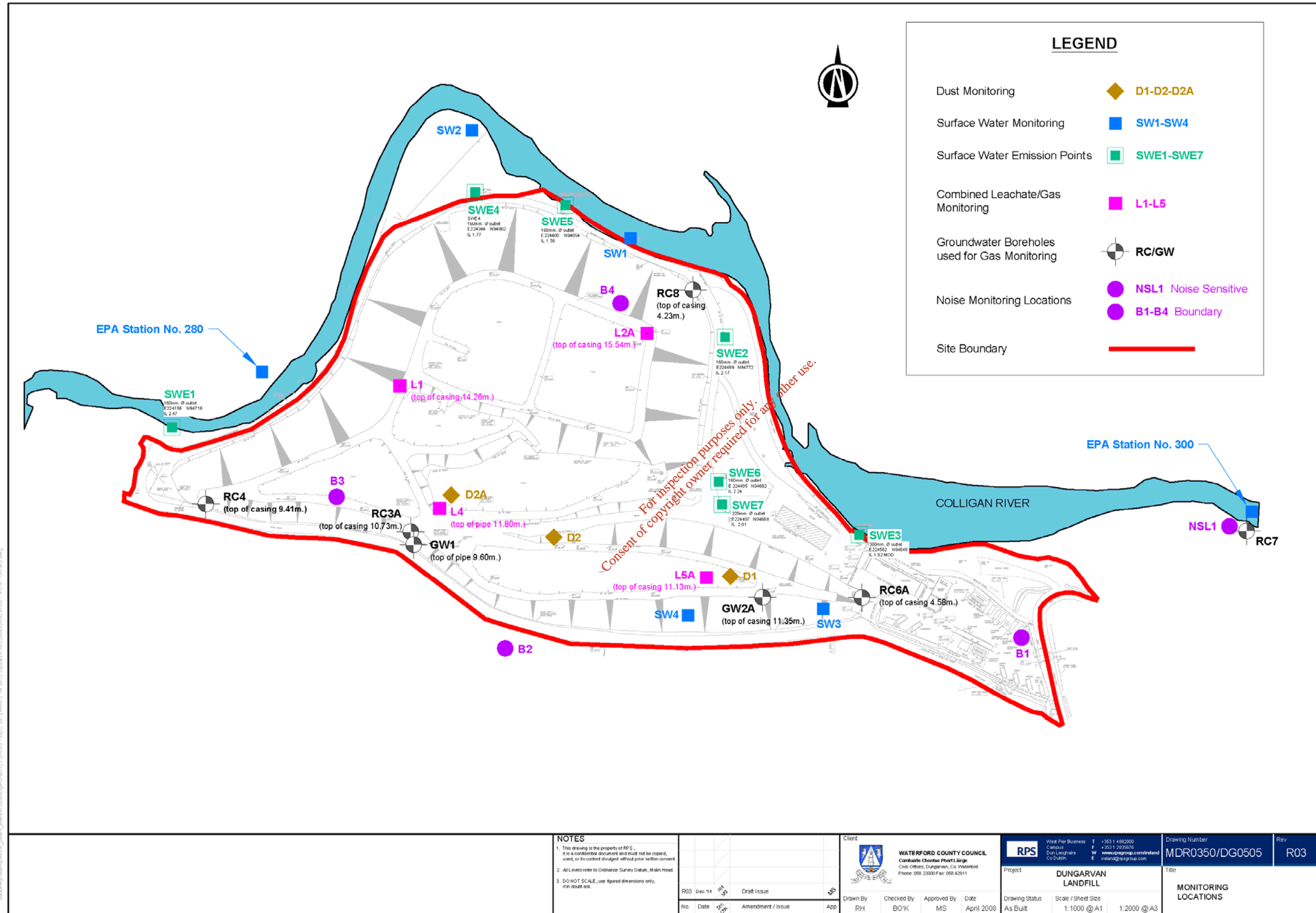
**List of Drawings Associated with this Reponse**

<b>Current Drawing No.</b>	<b>Revision No.</b>	<b>Previous Drawing No.</b>	<b>Title</b>
MDR0350DG0714	R03	DG0714 Revision R02	Landfill Surface Water Drainage System
MDR0350DG0505	R03	DG0505 Revision R02	Monitoring Locations
MDR0350DG0706	R02	DG0706 Revision R01	Leachate Abstraction and Treatment System

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**LEGEND**

- Dust Monitoring: D1-D2-D2A (Yellow diamond)
- Surface Water Monitoring: SW1-SW4 (Blue square)
- Surface Water Emission Points: SWE1-SWE7 (Green square)
- Combined Leachate/Gas Monitoring: L1-L5 (Pink square)
- Groundwater Boreholes used for Gas Monitoring: RC/GW (Black circle with crosshair)
- Noise Monitoring Locations: NSL1 Noise Sensitive (Purple circle), B1-B4 Boundary (Purple circle)
- Site Boundary: Red line

**NOTES**

- This drawing is the property of RPS. It is a confidential document and must not be copied, used, or its content divulged without prior written consent.
- All Levels refer to Ordnance Survey Datum, Mean Head.
- DO NOT SCALE, use figured dimensions only, if in doubt ask.

R03	Dec '14	RP	Draft Issue	App
No.	Date	By	Amendment / Issue	App

Client

**WATERFORD COUNTY COUNCIL**  
 Cathairle Chaithe Phort Láirge  
 Civic Offices, Dungarvan, Co. Waterford  
 Phone: 056 22000 Fax: 056 42911

Drawn By: RH  
 Checked By: BO'K  
 Approved By: MS  
 Date: April 2008

Project: **DUNGARVAN LANDFILL**

Drawing Status: As Built  
 Scale / Sheet Size: 1:1000 @ A1, 1:2000 @ A3

Drawing Number: **MDR0350/DG0505**

Rev: **R03**

Title: **MONITORING LOCATIONS**

