Extract from the 616th Licensing Meeting of the Agency held on 11 May 2010, in Headquarters, Johnstown Castle Estate, Co Wexford

12. **OCLR - Report on Re-opened Oral Hearing**

Licensee: ***Fingal County Council***
Nevitt
Lusk
County Dublin
Reg No: ***W0231-01***

The Directors resumed consideration of the Reports on the Objections to the Proposed Decision on the waste licence application by Fingal County Council, Register of Licence Number W0231-01, for the operation of a landfill at Nevitt, Lusk, County Dublin.

The following documentation was tabled:

- *Report on the Hydrogeological Risk Assessment, Submissions on the Assessment and Re-Opened Oral Hearing – October 2009*
- *Report on the Objections and Oral Hearing on the Proposed Decision of a Waste Licence Application – July 2008*
- *Proposed Decision issued by the Agency on 20 September 2007*
- *Objections from the Applicant and Third Parties*
- *Submissions on Objections*
- *Copy of the licence application.*

The Directors discussed the reports and recommendations in detail, including the objections received from the Applicant and Third Parties, and issues raised at the oral hearing and at the re-opened oral hearing and at subsequent meetings of the Board of the Agency on 17th November 2009, 2nd February 2010, 2nd March 2010, 13th April 2010 and 20th April 2010, at which time the Board had deferred a final decision pending further consideration of issues raised.

The Directors noted that in his report on the Oral Hearing (July 2008) the Chairman stated (at page 75 of the Report) that he, and his assistants *"...cannot conclude with confidence that the discharge to groundwater of List 1 and List II substances (as per the Groundwater Directive) would be in a quantity and concentration so small as to obviate any present or future danger of deterioration in the quality of the receiving groundwater...."*.On 7th July 2008, the Directors had decided to seek further information from the applicant in the form of a Hydrogeological Risk Assessment (HRA). The HRA was received in February 2009, and was considered at the re-opened Oral Hearing which took place from 27th to 29th April 2009. The Directors noted that it is now the view of the Chairman and his assistants (at page 28 of the Report on the Hydrogeological Risk Assessment Submissions on the Assessment and Re-Opened Oral Hearing – October 2009) *"...that the water in the clay subsoil should not be considered a receptor, and that the risk of pollution to the underlying aquifer or to local streams is low....."* On that basis and on the basis of the report into the re-opened Oral Hearing the Directors accepted the findings of the Chairman of the Oral Hearing in this regard.

It was noted by the Directors that the Chairman also considered that the effect of the proposed facility on the groundwater development potential of the area and the presence of the existing landfill at the site are other key issues that should be taken into account by the Directors in reaching a final decision on the application for a waste licence in this case. The Directors are satisfied that the operation of the facility, as proposed, in accordance with the licence would not cause environmental pollution of groundwater. The Directors considered that the required remediation of the existing landfill on site can be dealt with under the terms of the licence.

The Directors decided to grant a licence to Fingal County Council for the operation of a landfill at Nevitt, Lusk, Co Dublin, Register No W0231-01. The Board noted that the licence will be reviewed prior to the acceptance of waste at the facility, to further reduce the amount of biodegradable waste going to this landfill in accordance with the Landfill Directive. Following detailed discussion, recommendations regarding the licence conditions included in the Proposed Determination, as detailed in Section 4.2 of the Chairperson's Report on the Objections and Oral Hearing - July 2008, were accepted/not accepted by the Board, as detailed below, with some additional amendments and modifications to clarify and strengthen the licence:

Introduction:
Amend 2nd sentence in 3rd paragraph to read: Up to 500,000 tonnes of waste *may* be accepted per annum.

Amend 1st sentence in existing 4th paragraph to read: *Other activities at the site will include primary treatment of leachate, flaring of landfill gas and combustion of landfill gas to generate electricity.*

Insert new 4th paragraph to read: *The licence includes provision for the monitoring of groundwater in accordance with the requirements of the Groundwater Directive.*

Amend 6th paragraph to read: Part of the site has also been used historically for the disposal of waste, and is reported to consist mainly of construction and demolition waste, though other materials reported as part of the application also include ash/cinders, organic material, newspaper and crockery. The licence requires this area to be excavated with the waste to be transferred into the new lined cells. *Inert construction and demolition waste may be employed for remediation of the historical landfill or as construction material in the proposed facility.*

Glossary of Terms:
Amend 1st paragraph to read:- All terms in this licence should be interpreted in accordance with the definitions in the Environmental Protection Agency Acts 1992 *(as amended)*/Waste Management Acts 1996 *(as amended),* unless otherwise defined in this section.

Review and amend references to this legislation throughout the licence.

Residual Waste
Amend definition to read: - *The fraction of collected waste remaining after a treatment or diversion step, which generally requires further treatment or disposal.*

Decision & Reasons for the Decision

Amend to read:-

The Environmental Protection Agency is satisfied, on the basis of the information available, that subject to compliance with the conditions of this licence, any emissions from the activity will comply with and will not contravene any of the requirements of the Waste Management Acts 1996 (as amended).

Having regard to the location of the installation / facility at Nevitt, Lusk, Co. Dublin, and the proximity of the installation / facility to nearby occupied residences, the nature of the proposed activity, the type and quantity of the materials, the noise from the activity and the processes to be undertaken in the operation and management of the activity as described in the application/EIS, it is considered that the proposed activity, if managed, operated and controlled in accordance with the licence will not result in the contravention of any relevant environmental quality standards or cause environmental pollution.

Best Available Techniques as set out in sectoral guidance are required to be used in the operation of the installation / facility and the efficient use of energy will be required. Having regard to the national and regional waste management plans and the hazardous waste management plan, the requirements for the management of waste from / by the facility as set out in the licence are appropriate to the nature of the activity.

The licensee is considered a 'fit & proper person' to hold a licence. The licence requires that all necessary measures are taken to prevent accidents and to limit the consequences for the environment if an accident occurs. In addition, on cessation of the activity, the licence stipulates the measures to be taken to avoid any risk of environmental pollution and to return the site to a satisfactory state. In reaching this decision the Environmental Protection Agency has considered the application for a licence and the supporting documentation received from the applicant, all submissions received from other parties, *the report of its Inspector, all objections and submissions on objections, the two reports of the Oral Hearing Chairman and any other relevant material, including the report on a Hydrogeological Risk Assessment (February 2009) submitted by the Applicant, and the comments contained thereon in the Chairman's report on the re-opened Oral Hearing.*

Part III Conditions

Condition

2.2.2.7 Amend to read:-

Communications Programme

(i) The licensee shall, prior to the acceptance of waste at the facility *or commencement of landfill remediation*, establish and maintain a Public Awareness and Communications Programme to ensure that members of the public are informed, and can obtain information at the facility, at all reasonable times, concerning the environmental performance of the facility.

(ii) *As part of the Public Awareness and Communications Programme the licensee shall establish a protocol for dealing with complaints, which shall as a minimum include the following components:*
(a) a 24 hour phone number service operated by the licensee;
(b) a guaranteed response to all calls received within a specified period;
(c) an assessment of the cause of complaint at the point of impact;
(d) an investigation of the source of the complaint;
(e) an on-site assessment of any obvious causes;
(f) a full assessment and evaluation next day if the causes are not identified; and follow up with the complainant.

(iii) *The licensee shall, prior to the acceptance of waste at the facility or commencement of landfill remediation, establish and maintain a community liaison committee which will enable communication between representatives of the local residents, businesses and farmers and the licensee.*

2.2.2.8 Amend to read:-
Maintenance Programme
The licensee shall, *six months* prior to the acceptance of waste at the facility *or six months prior to the commencement of remediation of the existing landfill, whichever is the earlier, establish and maintain a programme* for maintenance of all plant and equipment based on the instructions issued by the manufacturer/supplier or installer of the equipment. Appropriate record keeping and diagnostic testing shall support this maintenance programme. The licensee shall clearly allocate responsibility for the planning, management and execution of all aspects of this programme to appropriate personnel (see Condition 2.1 above).

2.2.2.9 Amend to read:-
Efficient Process Control
The licensee shall, *six months* prior to the acceptance of waste at the facility *or six months prior to the commencement of landfill remediation, whichever is the earlier,* establish and maintain a programme to ensure there is adequate control of processes under all modes of operation. The programme shall identify the key indicator parameters for process control performance, as well as identifying methods for measuring and controlling these parameters. Abnormal process operating conditions shall be documented, and analysed to identify any necessary corrective action.

3.5 Surface Water Protection
Insert new sub-condition 3.5.4 to read:-
The licensee shall establish the surface water management system as part of the Initial Development Works referred to in Condition 3.4 above.

3.7.1 Amend to read:-
(ii) a geotextile protection layer placed over the HDPE layer (the choice of geotextile *shall be supported by the results of* cylinder testing *prior to use*);

(iii) a 500mm thick drainage layer placed over the geotextile layer with a minimum hydraulic conductivity of 1 x 10^{-3} $m^3/m^2/s$. *The drainage layer shall be a maximum of 5% fine material passing a 10mm British Standard Sieve, granular, rounded or sub-rounded stone (10-40mm grain size) incorporating leachate collection drains. The licensee shall undertake cylinder tests to demonstrate the*

suitability of the drainage layer stone and any changes to the above specification shall be agreed with the Agency based on site specific tests;

3.7.2 Amend to read:-
A drainage *system shall be installed* below the lining system *during the construction phase as required.* The drainage *system* shall comprise:

(i) a geotextile layer separating the engineered mineral liner from the drainage *system*;
(ii) *drainage medium of minimum 500mm depth with a minimum hydraulic conductivity of 1 x 10^{-3} m/sec; and*
(iii) *a pumped or gravity system from the drainage system to the surface water management system.*

3.13.2 Amend to read:-
All vehicles leaving the facility shall use the appropriate wheel cleaners (construction vehicle or waste vehicle wheel wash). All waste water from the construction vehicle wheel cleaning area shall be diverted to the surface water management system and waste water from the waste vehicle wheel cleaning area shall be directed to the leachate management system.

3.14.1 Insert new sub-condition to read:-
The licensee shall establish an on-site leachate treatment system prior to the acceptance of waste at the facility. A sewer connection to an off-site plant shall be provided as detailed in the Environmental Impact Statement.
Renumber subsequent sub-conditions accordingly.

3.15 Insert new sub-condition 3.15.2 to read:-
The licensee shall submit for agreement a detailed plan for the provision of sacrificial gas extraction systems, phased capping of the waste body and interim capping at the inter-cell boundaries.
Renumber subsequent sub-conditions accordingly.

3.15.3 Amend existing sub-condition to read:-
Landfill gas collected at the site shall, as soon as is practicable, be employed for the generation of energy/electricity. The feasibility of landfill gas utilisation shall be reported annually as part of the AER. *Alternatives to landfill gas utilisation for energy or electricity shall be agreed in advance with the Agency.*

3.18 Insert new condition after existing condition 3.17 to read: -
The licensee shall, as a minimum, install the following infrastructure prior to the excavation of overburden or waste: construction vehicle wheelwash, and surface water management system.
Renumber subsequent conditions accordingly.

3.24 Amend existing condition to read: -
Oil Separators
The licensee shall install and maintain *oil* separators at the facility to ensure *that all surface water run-off from waste acceptance and vehicle parking areas passes through an oil separator in advance of discharge to the surface water management system.* The

separator shall be a Class I *by-pass separator and the separator* shall be in accordance with I.S. EN 858-2:2003 (separator systems for light liquids).

3.25.1 Amend existing sub-condition to read:-
The licensee shall carry out a risk assessment to determine if the activity should have a fire-water retention facility. The licensee shall submit the assessment and a report to the Agency on the findings and recommendations of the assessment *six months prior to the acceptance of waste at the facility or six months prior to the commencement of remediation of the existing landfill, whichever is the earlier.*

6.1.2 Amend existing condition to read:
This system shall include *provision* for:-

(i) recording of leachate levels in the lined cells and lagoon;
(ii) recording of levels in the surface water lagoon and flows to the perimeter stream(s);
(iii) quality of the surface water at the inlet to the surface water management system and being discharged to the perimeter streams; and
(iv) permanent gas monitoring system to be installed in the site office and any other enclosed structures at the facility;
(v) flare operation.

6.2.2 Amend existing condition to read:-
The level of leachate in the *leachate monitoring points in all filled or active cells shall be monitored as outlined in Schedule C.2.3 Leachate Monitoring,* of this licence.

6.2.4 Amend existing sub-condition to read:-
Unless discharged to sewer for further off-site treatment, primary treated leachate stored in the leachate holding tank shall be disposed of by tankering off-site in fully enclosed road tankers *subject to the licensee demonstrating capacity at the receiving waste water treatment plant to the satisfaction of the Agency.*

6.4.3 Amend existing sub-condition to read:-
Flares shall be operated to ensure a burn chamber residence time of minimum 0.3 sec and burn temperature of minimum 1000°C, *unless alternative appropriate techniques are approved by the Agency under Condition 6.4.4.*

6.4.7 Insert new sub-condition to read:-
The licensee shall establish a landfill management infrastructure monitoring programme. The programme shall include monitoring of the pipeline integrity and vacuum pressures along the extraction system.

6.4.8 Insert new sub-condition to read:-
The licensee shall have an independent assessment of the on-site landfill gas management system undertaken at least bi-annually following commencement of waste acceptance. The assessment shall include examination and testing of the landfill gas extraction and collection system and measurement of surface water VOC emissions across the facility.

6.6.4
The Directors did not accept the recommendation to insert a new sub-condition after existing Condition 6.6.3 regarding the establishment and maintenance of a programme to minimise the quantity of biodegradable sludges accepted at the facility.

6.6.5 Amend existing sub-condition to read: -
The licensee shall submit to the Agency, *six months prior to the acceptance of waste at the facility or six months prior to the commencement of remediation of the existing landfill, whichever is the earlier, a detailed odour management procedure for minimisation of odour generation at the site. The odour management procedure shall be reviewed at least annually and amended as necessary, and shall include procedures for:*

(i) acceptance and management of odorous waste deliveries;
(ii) acceptance and management of pretreated biological sludges;
(iii) minimisation of odour from the leachate collection and treatment system, including during maintenance work;
(iv) investigation of odour complaints;
(v) day-to-day operational practices to minimise odorous emissions;
(vi) operator training in relation to odour management;
(vii) minimisation of odour from the gas collection and flaring/utilisation system, including measures to be taken and potential impacts in the event of equipment failure;
(viii) minimisation of odour due to excavation of waste;
(ix) *provision and maintenance of vertical and horizontal landfill gas extraction systems at the facility. The horizontal systems shall be employed during placement of waste in the cell;*
(x) *monitoring of pipeline integrity and vacuum pressure along the extraction system as part of the landfill gas management infrastructure monitoring programme; and*
(xi) *installation of a sacrificial gas extraction system, including provision for phased capping of the waste body and interim capping at inter-cell boundaries as part of the detailed phasing plan.*

The Directors did not accept the recommendation to insert a new sub-condition 6.6.5 (xii).

6.7 Waste Monitoring
The Directors decided not to accept the recommendation to insert a new condition after existing sub Condition 6.6 regarding the monitoring of incoming residual waste.

6.7 Amend existing condition to read:-
In dry weather:
(i) site roads and any other areas used by vehicles; *and*
(ii) soil stockpiles,
shall be sprayed with water as and when required to minimise or prevent airborne dust nuisance.

6.9 Ash Storage
Delete this condition and renumber subsequent conditions accordingly.

6.13.2 Amend existing sub-condition to read:-
The working face of the landfill shall be no more than 2.5 metres in height after compaction, no more than 25 metres wide, *no more than 50 metres long* and have a slope no greater than 1 in 3, *or as agreed by the Agency*

6.13.4 Amend existing sub-condition to read:-
The working *face shall at the end of each day,* be covered with suitable material.

6.14 Insert new condition after existing condition 6.13 to read: -
The licensee shall install in each cell a horizontal gas management system at horizontal lifts no greater than 5 metres, unless otherwise agreed with the Agency.
Renumber subsequent conditions accordingly.

6.15.3 Amend existing sub-condition to read:-
A proposal for the locations of four additional boreholes for ongoing monitoring of groundwater, as detailed in *Schedule C.6 Ambient Monitoring* of this licence, *shall be submitted to the Agency for agreement six months prior to the acceptance of waste at the facility or six months prior to the commencement of remediation of the existing landfill, whichever is the earlier.*

6.31 Amend existing condition to read:-
The licensee shall, six months prior to the acceptance of waste at the facility or six months prior to the commencement of remediation of the existing landfill, whichever is the earlier, develop and establish a Data Management System for collation, archiving, assessing and graphically presenting the environmental monitoring data generated as a result of this licence.

6.34 Amend existing condition to read:-
The licensee shall maintain 10 metres vertical thickness of clay beneath the landfill footprint after excavation. *The licensee shall demonstrate 10 metres vertical thickness of clay beneath the landfill footprint after excavation to the satisfaction of the Agency prior to installation of cell lining.* In the event that any additional investigations indicate 10 metres of clay is not present the licensee shall propose alternative measures to provide at least an equivalent level of protection. Technical certification of this obligation shall be submitted to the Agency prior to waste acceptance to the landfill area.

6.35 Excavation of Historical Waste Area – Amend existing condition to read:-

6.35.1 The licensee shall, within 24 months of grant of licence, excavate, remediate and restore the historic landfill area at the site.

6.35.2 The licensee shall submit to the Agency for approval, within six months of the date of grant of the licence, a detailed programme, including timeframe, for the excavation, remediation and restoration of the historical landfill area at the site. The programme shall include a detailed plan of works to be undertaken, plant and machinery to be used, mitigation measures (in addition to those specified in the waste licence application) for all emissions, proposals for classification and characterisation of the waste excavated, proposals for recovery and treatment of the waste excavated, identification of appropriate

disposal/recovery facilities for receipt of the waste, and timeframe for completion of excavation, remediation and restoration.

6.35.3 Leachate arising from the remediation shall be directed to the on-site leachate treatment infrastructure, if available or temporarily stored on-site prior to tankering to an appropriate facility agreed with the Agency.

6.35.4 Surface water run-off shall be directed to the surface water attenuation infrastructure.

6.35.5 Waste within the historical landfill shall be excavated, screened and classified prior to recovery or disposal. Inert waste (soil, stone meeting the standards specified in EU Council Decision 2003/33/EC) may be used for landfill cover, to remediate the historical landfill, used for construction purposes on-site, used for landfill cover or sent off site for recovery. Recoverable waste shall be sent off site for recovery at appropriate facilities. Non-inert waste shall be disposed of within an engineered lined cell or sent off site for disposal/recovery at an appropriate facility. Hazardous waste shall be sent off site to an appropriate facility.

6.35.6 Operations and infrastructure associated with the remediation shall avoid the archaeological site to the west of the historical landfill. Excavation into undisturbed overburden in the historical landfill area should only be undertaken subject to Department of the Environment, Heritage and Local Government approval and shall be supervised.

6.36

The Directors did not accept the recommendation of to insert a new condition after Condition 6.35 regarding the installation of boreholes.

8.1.1 Renumber existing sub-condition 8.1.1 to become 8.1.2 and amend to read:-

Only residual wastes *that have been subjected to pre-treatment as demonstrated and agreed under Condition 8.1.1,* shall be accepted for disposal at the facility. This requirement may, subject to the agreement of the Agency, not apply to:

(i) inert wastes for which treatment is not technically feasible;
(ii) other waste for which such treatment does not contribute to the objectives of the Landfill Directive as set out in Article 1 of the Directive by reducing the quantity of the waste or the hazards to human health or the environment.

8.1.2 Renumber existing sub-condition to become sub-condition 8.1.1 and amend to read:-

Prior to the acceptance of residual waste at the facility the licensee shall *demonstrate, to the satisfaction of the Agency, that residual waste to be accepted at the facility shall be subjected to pre-treatment. The pre-treatment shall be either:*

(i) source segregation to include, in particular, segregation of recyclables and separate segregation of the biodegradable organic fractions (3 bin system or equivalent);
(ii) Mechanical Biological Treatment (MBT); *or*
(iii) energy recovery.

8.1.4 Amend existing sub-condition to read:-

Waste shall be accepted at the facility only from Local Authority waste collection or transport vehicles or *from* holders of waste permits, unless exempted or excluded, issued

under the Waste Management (Collection Permit) Regulations 2001, or as may be amended.

8.1.7 Amend existing sub-condition to read:-
In advance of commencement of waste acceptance at the facility, the licensee shall submit to the Agency for its agreement written procedures for the acceptance and handling of all wastes. These procedures shall include details of the pre-treatment of all waste to be carried out in advance (as per Condition 8.1.2), of acceptance at the facility and shall also include methods for the characterisation, *classification and coding* of waste. The procedures shall have regard to the EU *Council* Decision (2003/33/EC) on establishing the criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive (1999/31/EC) on the landfill of waste.

8.1.10
The Directors did not accept the recommendation to insert a new sub-condition into 8.1 regarding the monitoring of incoming residual waste.

8.2 Insert new condition to read:-
The licensee may accept bottom ash for disposal at the facility but shall not accept bottom ash for temporary storage.
Renumber subsequent conditions accordingly.

8.3 Insert new condition to read:-
The licensee may accept stabilised waste arising from the composting of the biodegradable fraction of municipal waste, to which fraction sewage sludge may have been added.
Renumber subsequent conditions accordingly.

8.9 Amend existing condition to read:-
No waste classified as green list waste in accordance with the EU Transfrontier Shipment of Waste Regulations (Council Regulation EC *No.1013/2006*) shall be consigned for recovery without the agreement of the Agency.

11.3 Insert new condition to read:-
The licensee shall record the pre-treatment received by all waste accepted at the facility. The record shall be maintained on-site at all times and the licensee shall summarise the record for submission as part of the AER.
Renumber subsequent conditions accordingly.

11.3 Amend existing condition to read:-
In advance of the development of any undisturbed area, *the licensee shall submit conservation and management plans for agreement of the Heritage Section of the Department of the Environment, Heritage and Local Government.*

11.5
The Directors decided not to accept the recommendation to insert a new condition after existing condition 11.4 regarding the records of the treatment received by each load.

Schedule

A.2 Waste Acceptance - Table A.1 Waste Categories and Quantities

The Directors did not accept the recommendation to amend this schedule.

C.3.2 Monitoring of Emissions to Sewer

Amend to read: **Emission Point Reference No.:** SE1

Parameter	Monitoring Frequency	Analysis Method/Technique
Flow	Continuous	On-line flow meter with recorder
Temperature	Monthly (grab sample) Note 1	Temperature probe
PH	Monthly (grab sample) Note 1	pH electrode/meter
Chemical Oxygen Demand	Monthly (*composite* sample) *Note 2*	Standard Method
Biochemical Oxygen Demand	Monthly (*composite* sample) *Note 2*	Standard Method
Suspended Solids	Monthly (*composite* sample) *Note 2*	Standard Method
Sulphates	Monthly (*composite* sample) *Note 2*	Standard Method
Oils, fats & greases	Monthly (*composite* sample) *Note 2*	Standard Method
Mineral Oils	Monthly (grab sample) Note 1	Standard Method
Detergents	Monthly (*composite* sample) *Note 2*	Standard Method
Phosphates	Monthly (*composite* sample) *Note 2*	Standard Method
Ammonium	Monthly (*composite* sample) *Note 2*	Standard Method
Metals (as per Schedule B.3)	Monthly (*composite* sample) *Note 2*	Standard Method
Chloride	Monthly (*composite* sample) *Note 2*	Standard Method
Cyanide	Monthly (*composite* sample) *Note 2*	Standard Method
Fluoride	Monthly (*composite* sample) *Note 2*	Standard Method
Methane Gas (as v/v)	Continuous	Standard Methods
Organic Compounds Note 3	Biannually (grab sample) Note 1	Standard Method

Note 1: Grab samples shall be collected from the post-treatment balance tank, prior to discharge.

Note 2: Composite sampling shall be provided prior to the discharge of effluent to sewer.

Note 3: Screening for priority pollutant list substances (such as US EPA volatile and/or semi-volatile compounds).

C.4 Waste Monitoring

Amend to read:-

Waste Class	Frequency	Parameter	Method
Other Note 1			

Note 1: Analytical requirements to be determined on a case by case basis (e.g. in the case of materials excavated from the historic landfill area and not suitable for landfill in a lined cell at the facility).

C.5 Noise Monitoring

Amend to include reference to condition 6.29

C.6 Ambient Monitoring

Groundwater Monitoring – Amend to read:-

Location:
(i) Groundwater Wells:- BRC1, BRC2, ER7, ER12, BRC3, HR12, HR1a, plus 4 additional locations as required in Condition 6.15, *HR12 and HR1a may be replaced with alternative groundwater wells subject to the prior written agreement of the Agency;*

PARAMETER[Note 1]	GROUNDWATER Monitoring Frequency
Visual Inspection/Odour [Note 2]	Monthly
Groundwater Level (wells) [Note 5]	Monthly
Dissolved Oxygen	Monthly
Electrical Conductivity	Daily (for discharge from the drainage layer beneath the main liner) Monthly otherwise
Ammoniacal Nitrogen	Monthly
Chloride	Monthly
pH	Monthly
Sulphate (SO_4)	Monthly
Metals / non metals [Note 3]	Annually
List I/II organic substances (Screen) [Note 4]	Annually
Mercury	Annually
Cyanide (total)	Annually
Faecal Coliforms	Annually
Total Coliforms	Annually

Note 1: Where appropriate all the analyses shall be carried out by a competent laboratory using standard and internationally accepted procedures.
Note 2: Where there is evident gross contamination, additional samples should be analysed and the full suite of parameters shown tested.
Note 3: Metals and elements to be analysed by AA/ICP should include as a minimum: boron, cadmium, calcium, chromium (total), copper, iron, lead, magnesium, manganese, nickel, potassium, sodium and zinc.
Note 4: Samples screened for the presence of organic compounds using Gas Chromatography / Mass Spectrometry (GC/MS) or other appropriate techniques and using the list I/II Substances from EU Directive 76/464/EEC and 80/68/EEC as a guideline. Recommended analytical techniques include: volatiles (US Environmental Protection Agency method 524 or equivalent), semi-volatiles (USEPA method 525 or equivalent, and pesticides (USEPA method 608 or equivalent).
Note 5: Quarterly monitoring of the groundwater levels in the bedrock monitoring wells developed as part of the initial site investigations (wells as per Figure 3.18.5 of Volume 2 of the EIS) shall be completed and assessed as per Condition 6.15.

Schedule D: Specified Engineering Works
Amend to read:-

Specified Engineering Works
Initial development of the site and first cell including preparatory works.
Installation of the lining system and associated engineering works including drainage, if necessary.
Each future cell development including lining, associated engineering works including drainage, if necessary.
Final *contours, elevations and capping.*
Installation of landfill gas management infrastructure.
Installation of leachate management infrastructure.
Installation of groundwater control infrastructure.
Installation of surface water management infrastructure.
Any other works notified in writing by the Agency.

A number of other minor amendments, such as in respect of punctuation, were made to improve and clarify the text of the licence.

13. **Any Other Business**

***Date of Next Meeting*:** 18 May 2010

This concluded the business of the meeting.