

Mr Gilbert Power
Director of Services
Fingal County Council
P.O. Box 174
Fingal County Council
Main Street
Swords, County Dublin

Headquarters, PO Box 3000
Johnstown Castle Estate
County Wexford, Ireland
Ceanncheathrú, Bosca Poist 3000
Eastát Chaisleán Bhaile Sheáin
Contae Loch Garman, Éire
T: +353 53 916 0600
F: +353 53 916 0699
E: info@epa.ie
W: www.epa.ie
LoCall: 1890 33 55 99

October 11th 2006

W0231-01

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

Dear Mr Power,

I am to refer to the above referenced application for a waste licence relating to a facility at Fingal Landfill, Nevitt, Lusk, County Dublin. 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 and Article 13 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

Non-Technical Summary

As required under Article 12(1)(u) of the Waste Management (Licensing) Regulations, S.I. 395 of 2004 please ensure that all required information is included in the non-technical summary, e.g.:

- a) Name, address and contact details of applicant and correspondence details;
- b) Planning authority details;
- c) Sanitary authority in which receiving sewer is vested;
- d) Location details of proposed facility.



Section D.1.b

Provide outline details of the proposed construction of any unpaved site roads including proposed drainage infrastructure.

Section D.1.j

Provide an estimate of the number of waste transport vehicles which can be accommodated within the site without the requirement for queuing on public roadways. Compare this to the expected number of deliveries per hour at peak times.

Section D.1.k

Provide a schematic of the proposed surface water collection and management system including details of abatement such as oil interceptors and hydro-breaks.

Section D.1.p

Detail the measures which will be put in place to prevent accidental release of materials collected at the civic amenity facility (e.g. garden chemicals, paints, insecticides, oils, battery acid) to the surface water collection system.

Section D.1.s

Confirm that no processing of construction & demolition waste is proposed to be carried out at the site.

Section D.3.f

With regard to the basal gradients of the landfill footprint, demonstrate that the commitment to leave at least 10 metres of clay in-situ will still allow an appropriate basal slope of a minimum 1:50 to ensure effective collection of leachate.

Provide thickness contours (plan view) of the clay overburden for the current site conditions and following development to formation level.

Section D.4.c

Provide a numerical estimate of the total quantity of leachate generated.

Section D.4.f

Provide information on the general construction of the leachate storage tank and details of any proposed secondary containment.

Section D.4.i

Identify the method of leachate pre-treatment and outline potential environmental impacts (e.g. odour). Include flow diagrams where necessary.

Outline emergency procedures in the event of non-operation of any leachate control system, including measures to establish the cause and extent of any significant environmental pollution.

Section D.6

Provide information on methods which will be used to ensure low permeability layers do not develop within the landfill with particular regard to daily and intermediate cover management.

Section E.1.b

Provide an impact assessment in relation to potential dust emissions from the storage of ash from waste to energy facilities at the site, with particular attention to the risk (if any) posed by any dioxin levels expected in the ash. Dispersion modelling of dust generated from the storage area should be investigated.

Identify methods for minimisation of dust emissions during unloading and loading operations.

Section E.1.c

Emissions modelling of the flare does not take account of background concentrations. Provide tabular results with background concentrations taken into account.

Detail the source and applicability of the odour emission rates included in Table 3.4.16 of Volume 2 of the EIS.

With regard to odour emissions from the headspace vapour of the leachate storage tank, assess the potential for extraction of this vapour and combustion in the landfill gas flare.

Section E.2

Detail any measures proposed to protect the bed of the receiving water body from erosion in the area of the proposed surface water discharge point.

Section E.3

Investigate and comment on the following:

- Likely effect of the leachate emissions on sewer or sewage treatment maintenance operations;
- Likely effect of the leachate emissions on sewer integrity;
- Possible reaction of the leachate emissions with other effluent likely to be in the sewerage system.

Outline any proposed treatment for leachate from the existing waste landfilled at the site. Information in the licence application indicates that in the event of the existing waste body remaining in-situ there will be a leachate discharge point from this area. Clarify whether it is proposed to treat this leachate in the on-site treatment facility.

Characterise the leachate from the proposed ash storage area and assess the impact of the leachate on the on-site and off-site treatment facilities, with particular regard to metals and dioxin composition.

Section F.6

With regard to the proposed noise monitoring locations, provide a copy of Figure 3.6.1 which includes the proposed licence boundary as well as the landfill footprint.

Section H.1

Provide EWC codes for all waste types accepted, treated, recovered or disposed of at the site.

Section H.4

Evaluate the impact of excavation of the historical waste area, recovery of recyclable materials and disposal of residual waste to a new landfill cell.

Section I.2

Table 2.4 of the main EIS report indicates that a sediment assessment has been completed, however no information on sediment quality is presented in Section 3.8 of the main EIS report. Provide details of any further proposed pre-operational baseline monitoring of surface water quality in line with the requirements of the most recent EPA Landfill Monitoring Manual (Appendix C).

The proposed location of the surface water attenuation pond (see Figure B.2.1 of the licence application) is within the area indicated as being subject to flooding in Volume 3 of the EIS. Flooding of the attenuation system will prevent the system from operating effectively. Please provide an assessment detailing the most appropriate location for the attenuation pond.

Section I.4

In relation to the geological and hydrogeological information referenced in the application, please respond to the following:

- i. The groundwater contour maps presented in Appendix A5 do not appear to take into account recorded data from at least two monitoring wells, BGB1 and BGB3. Reassess the groundwater contour maps taking information from all monitoring wells into account.
- ii. Section 5.2.4 of Technical Appendices H & I reports that there are no groundwater users down gradient of the proposed landfill. With reference to the location of identified groundwater users to the south of the landfill (see P1, P8, P10 abstraction wells in Appendix A8 of Technical Appendices H & I) provide a more rigorous assessment of the groundwater flows in the area of these abstraction wells. Confirm the abstraction rate for well P1.
- iii. Section 6.18 of the EIS Non-Technical Summary reports that sand/gravel deposits 'lie outside of the landfill footprint'. Table 4.2 of Appendix I (and also review of borehole logs) indicates the occurrence of gravel deposits in 14 of the boreholes within the landfill footprint. Clarify the statement made in Section 6.18 of the EIS NTS and detail the potential impact of these gravel deposits on the potential environmental impacts associated with the proposed operation of the landfill. Provide, in plan view, contour plots of the extent and thickness of sub-clay gravels. Provide an assessment of the importance of the gravel as an aquifer.
- iv. Section 3.5.3.2 of EIS Technical Appendix H reports the following:
 - o An outlier in the analysis was identified during the PW1 pumping test at BGB2 monitoring well at 311m distance. A transmissivity of 180-232m²/day and a storativity of 0.005 were obtained. This monitoring well is installed in the Naul Formation whereas the other monitoring wells are installed in the Loughshinny Formation. The difference in transmissivity and storativity values obtained may reflect a higher degree of fracturing. No gravel was found in BGB2. This area is outside the landfill footprint.

Cross referencing of Figure 8 (borehole locations) and Figure 4 (Bedrock Geology) indicates that BGB2 is in the Loughshinny Formation and not the Naul Formation. Please clarify and resubmit this part of the assessment.

EIS volume 5 Factual Ground Investigation Report (No 9716) indicates the locations of BGB2 and BGB3 are switched when compared to Figure 8 referred to above. Given these inconsistencies please clarify the borehole locations and provide an assessment of the impact of any misinterpretations due to this

inconsistency (e.g. impact on groundwater contours, aquifer productivity assessment and other assessments in which the data were employed).

Provide an A3 size drawing of the site area, including the following:

- Landfill footprint
 - Licensed area boundary
 - Confirmed locations of all boreholes
- v. Provide information on any historical quarrying known to have been carried on at the site or in the vicinity of the site (based on existing knowledge or a historical map search). Identify any potential impact associated with these operations. In relation to the existing landfill identified at the site, provide information on the age of the landfill and the period over which landfilling took place.
- vi. Provide a bedrock contour map for the site area.

Section J

Provide information on possible contamination of ground, groundwater, or surface water from fire-water run-off in the event of a fire on-site and any provision for containment.

ARTICLE 13 COMPLIANCE REQUIREMENTS

EIS Non-Technical Summary

Provide a summary of the alternatives considered and the site selection process for the proposed development.

Please update the EIS documents as necessary, having regard to information requested in 'Article 12 Compliance Requirements'.

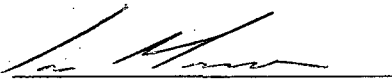
Your reply to this notice should include a revised non-technical summary (Application Form and EIS) which reflects the information you supply in compliance with the notice, insofar as that information impinges on the non-technical summary.

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 two copies within 6 weeks of the date of this notice. In addition submit sixteen copies of the requested information to the Agency in electronic searchable PDF format on CD-ROM. Please note that all maps/drawings should not exceed A3 in size.

Please note that the application's register number is **W0231-01**. Please direct all correspondence in relation to this matter to *Noleen Keavey, Licensing Unit, Office of Licensing & Guidance, Environmental Protection Agency, Headquarters, PO Box 3000, Johnstown Castle Estate, County Wexford* quoting the register number.

Yours sincerely,



Dr Ian Marnane
Inspector
Office of Licensing & Guidance