

HYDRO RISK ASS REPORT

SUB. No. 6
Jordanstown,
Lusk,
Co. Dublin
19 March 2009

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Initials: _____

Licensing Unit
Office of Climate, Licensing & Resource Use,
Environmental Protection Agency,
P.O. Box 3000,
Johnstown Castle,
Co Wexford.

Re: Application to the EPA by Fingal County Council for a waste license for a facility at
Fingal Landfill, Nevitt, Lusk, Co. Dublin

Waste License W0231-01

Dear Sirs.

I refer to your letter dated 20 February enclosing information received by the Agency on 17th February 2009, entitled 'Fingal Landfill Project - Hydrogeological Risk Assessment'. I wish to make a submission on the document and also on a relevant and important issue.

Firstly it is noted that the Lusk-Bog of the Ring groundwater body underlies the footprint of the proposed landfill site and that there is perched groundwater within the clay layer overlying the bedrock and gravel deposits. Consequently, the potential to prevent contamination of groundwater within the footprint of the landfill is not entirely determined by the depth of clay cover (as stated in the EIS) and the dilution calculations contained in the EIS are no longer relevant.

The ERBD categorised the Bog of the Ring groundwater area as of 'poor' status for the purposes of the Water Framework Directive (due to apparent over-abstraction). The ERBD also considers the Lusk-Bog of the Ring groundwater body to be at risk from 'diffuse rural pressures'. In addition, the Lusk-Bog of the Ring groundwater body is a body for which the ERBD has suggested that 'on-site waste water treatment system' measures be put in place. The applicant contends that the contribution zone for abstraction from the Bog of the Ring groundwater source is outside of the footprint of the proposed landfill site and assumes that, at current abstraction rates, the public water supply would not be impacted by the development. These conclusions are based on (i) no increase in the abstraction rate and (ii) on the hydrology of the system not being significantly altered. However, the ERBD has already raised concerns that, under current abstractions rates, the hydrogeological system could be significantly altered. Furthermore, it is not possible to accurately forecast abstraction rates resulting from private use. Taking all of the above into account, it makes no sense to add a further source of pressure to this groundwater body that could hamper efforts to restore it to 'good' status within the prescribed deadline for the purposes of the WFD.

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Signature	
Environmental Protection Agency, HQ P.O. Box 3000, Johnstown Castle Estate, Wexford	

In relation to the document provided in your letter, I wish to make the following points:

1. The modelling approach used in the risk assessment should be validated using local data to demonstrate its applicability to the particular circumstances of use. It should be noted that the EPA has chemical monitoring data for the Lusk-Bog of the Ring groundwater body that might be useful for a validation exercise.
2. Before accepting the conclusions of the report, which are based on a probabilistic modelling approach, further information is required on the following points:
 - i. What sources of variability were considered?
 - ii. What sources of uncertainty were considered?
 - iii. How was the variability and uncertainty characterised?
 - iv. How was the variability and uncertainty dealt with?
 - v. Have variability and uncertainty been separated out in the modelling process (e.g. 2-D Monte Carlo modelling)?
 - vi. Better presentation and explanation of results is required taking into account impacts of variability and uncertainty.
3. Directive 2006/118/EC requires that the chemical status of groundwater bodies be assessed with respect to pesticides. There is no information on pesticides in the report. Modelling on naphthalene and phenol is not relevant for pesticides. It is considered that pesticides (biocides and/or plant protection products) could be present in the landfill. Non-hazardous waste is expected to contain products and produce treated with biocides and/or plant protection products, e.g. remnants of crops treated with pesticides are not suitable for re-cycling or composting.

I hope that you will consider these comments and find them helpful, particularly since any potential contamination of groundwater poses an unacceptable risk to a protected and valuable resource which has been designated as a Natural Heritage Area. If you require any clarification on the above or require further information, please contact me.

Yours sincerely



Dermot Sheridan