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Mr. Rory O' Mahony  
Wexford County Council  
County Buildings  
Spawell Road  
Wexford

8 September 2011

**Re: Certificate of Authorisation Application for Carcur Closed Landfill Application Register No. H0002-01.  
Request for further information in accordance with Regulation 7(4) of Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations, 2008.**

Dear Mr. O' Mahony,

I am to refer to the above referenced application for a Certificate of Authorisation with respect to Carcur Landfill. Having examined the foregoing, the Agency requests the following further information, in accordance with Regulation 7 (4) of the abovementioned regulations:

**1) Waste Perimeter & Foreshore Designation**

- i. On the Waste Management Act Section 22 Register it has been stated that the area of waste is approximately 5.5ha. If the waste body is >5ha the leachate and landfill gas source/hazard scoring matrix scores should be increased from 7 to 10 as outlined in the Code of Practice(COP). Clarify the area of waste and if necessary recalculate the relevant S-P-R linkage scores.
- ii. A large portion of the waste body is located in an area zoned as a transitional water body. As such it seems the waste is likely to have been deposited in an area designated as foreshore. If this is the case, confirm the amount of waste deposited in the foreshore and provide a map which highlights the area of land that is considered as foreshore and the perimeter of the waste body.
- iii. If it is confirmed that waste has been deposited in an area designated as foreshore, describe the relevance and implications of the Foreshore Acts 1933 – 2005.



## 2) Subsoils

- i. Groundwater vulnerability was deemed to be low and received a score of 0.5 in accordance with the COP as it was determined that the site was underlain by peat. From the borehole testing results provided, 4 of 16 boreholes identified the presence of peat; therefore, it cannot be demonstrated that the site is fully underlain by peat. This being the case, you should reassign an appropriate S-P-R- linkage score and also take into account the outcome of point 3(i) below.

## 3) Groundwater

- i. Water is present in the waste body to a relatively high level. Confirm if waste is sitting in the groundwater table. If this is confirmed consider the assignation of an extreme vulnerability score (3) for Leachate Migration Pathways in accordance with the COP and recalculate relevant S-P-R linkage scores.
- ii. Point 4(iii) below discusses high ammonia levels in the leachate impacting on groundwater and surface water bodies. Clarify the mitigation measures proposed to break the S-P-R linkages between leachate (not generated by rainwater but by groundwater/estuarine water within the waste body) and groundwater and local surface water bodies.
  - a. Also clarify the mitigation measures which will be put in place to prevent leachate migration to the reed beds and ponds in the south and east part of the park boundaries as outlined in the drawing number WX101-08-01-01 of the proposed eco-park.
- iii. Groundwater samples were tested for seven parameters: temperature, dissolved oxygen, pH, conductivity, ammonia, chloride and total organic carbon. Groundwater samples tested demonstrated a wide range in total organic carbon results, high conductivity, high levels of chloride and ammonia.
  - a. Demonstrate from the information presented in the application if the required provisions of the groundwater directives can be achieved, i.e. that discharges of hazardous substances and non-hazardous substances and substances in List I and II are likely to be in a quantity and concentration so small as to not represent any present or future danger of deterioration in the quality of the receiving groundwater or surface water.
  - b. If the above cannot be demonstrated provide additional groundwater sampling results for a greater number of relevant hazardous and non-hazardous parameters outlined in the *Classification of Hazardous and Non-Hazardous Substances in Groundwater* (EPA, December 2010) and describe how the required provisions of the groundwater directives and the European Communities Environmental Objectives (Groundwater) Regulations, 2010, can be achieved.

## 4) Surface Water

- i. An additional stream to Stream 1 seems to be visible from the boundary wall opposite Parkside Estate (just behind the 'Wexford' sign). This stream seems



to flow north and has a strong odour. Update the application where applicable with respect to this stream and the associated odour issue.

- ii. Provide a drawing to demonstrate to what extent the tide encroaches on the landfill. Confirm whether the proposed mitigation measures will prevent estuarine waters entering the landfill area (taking into consideration the trench associated with Stream 1's previous pathway in the north).
- iii. It seems that ammonia levels in groundwater within the waste body are having an impact on downstream surface water bodies as results in these locations show high ammoniacal nitrogen levels. Confirm whether ammonia in the groundwater located in the waste is causing an exceedence of the total ammonia standard in the European Communities Environmental Objectives (Surface Waters) Regulations 2009. Confirm whether mitigation measures will ensure that surrounding surface water bodies will not fail to meet the standards outlined in these Regulations due to the presence of the landfill.

#### 5) Landfill Gas

- i. Stony Park has not been identified as a potential receptor in the application. Provide updated information where applicable with regard to this receptor.
- ii. High levels of landfill gas (CO<sub>2</sub> and CH<sub>4</sub>) were found to exist in certain bore holes outside the waste boundary. Provide evidence that landfill gases are not at risk levels in the residential properties closest to these boreholes.
- iii. Justify how the proposed mitigation measure of passive venting of gas via the perimeter trench complies with the Landfill Directive 1999/31/EC Annex I Section 4.2 and 4.3.

#### 6) Designated Areas

- i. The *Natura Impact Statement for the Proposed Rehabilitation of Carcur Landfill Site (FTC, 2011)* provided with the application does not adequately demonstrate that there will be no significant impact(s) on the designated European sites associated with the landfill as a result of the planned rehabilitation of the site having regard to historic landfilling activities.
  - a. You are therefore advised to revise the NIS report to include all relevant summary data and information from the FTC 2009 report and all available data in relation to the parameters discussed in points 3(iii) and 4(iii) above to confirm recent and current water quality conditions in order to determine the impact of the landfill *currently* on the designated sites and to *predict* the likely impact(s) of the rehabilitation project on water quality and the consequent implications for the European sites.
  - b. Where significant impacts on the designated Natura 2000 sites are likely you are asked to submit an Appropriate Assessment (Stage 2).
- ii. State and discuss whether the landfill site is having an impact on Wexford Harbour Inner (PA2\_0059) and Wexford Harbour Outer (PA2\_0058) Shellfish Areas.



**7) Code of Practice Requirements**

- i. S-P-R linkage scores may have been changed as an outcome of the above points. Where score reassignment results in the overall classification of the landfill being increased from low to moderate risk complete a Quantitative Risk Assessment and any other actions required by the COP.
- ii. Provide a conceptual site model based on the findings from the site investigations.

**8) Wastewater Treatment Plant**

- i. Confirm if the disused wastewater treatment plant building is present to the north of the landfill or whether this has been removed.

**9) Eco-park**


- i. Confirm at what stage the eco-park is at in the planning permission process.

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 one original plus one copy within **nine weeks** of the date of this notice. In addition, please submit one copy 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 H0002-01. Please direct all correspondence in relation to this matter to *Administration, Environmental Licensing Programme, Office of Climate, Licensing & Resource Use, Environmental Protection Agency, Headquarters, PO Box 3000, Johnstown Castle Estate, County Wexford* quoting the register number.

Yours sincerely,

  
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Caroline Connell  
Inspector  
Environmental Licensing Programme  
Office of Climate, Licensing and Resource Use

