

**INSPECTORS REPORT ON A LICENCE APPLICATION**

<b>To:</b>	DIRECTORS	
<b>From:</b>	DR J DERHAM	- LICENSING UNIT
<b>Date:</b>	1 FEBRUARY 2005	
<b>RE:</b>	APPLICATION FOR A WASTE LICENCE FROM BOARD NA MÓNA PLC FOR A FACILITY AT DREHID (BETWEEN CLANE & EDENDERRY), CO KILDARE.	

**Application Details**

Type of facility:	Integrated waste facility comprising Non-Hazardous Landfill & Composting
Class(es) of Activity ( <b>P</b> = principal activity):	3 <sup>rd</sup> Schedule: 3.1, 3.4, 3.5 (P), 3.6, 3.13 4 <sup>th</sup> Schedule: 4.2, 4.11, 4.13
Quantity of waste managed per annum:	145,000 t
Classes of Waste:	Municipal, commercial and industrial derived bio-wastes for composting. And residual non-hazardous waste (i.e. pre-treated) from municipal, commercial and industrial sources, for landfilling.
Location of facility:	Parconstown, Loughnacush, Kilkeaskin, Drummond, Timahoe West, Coolcarrigan, Killinagh Lower and Killinagh Upper, Co Kildare. [between Clane and Edenderry]
Licence application received:	2 February 2004
Third Party submissions:	Seven
EIS Required:	Yes
Site Inspection:	25/6/04

**1. Facility**

This application is for a new waste facility on the site of previously worked Bord Na Mona boglands (Timahoe Bog). The Timahoe bog comprises c.2,544ha of substantially worked bogland. The activity itself comprises an

area of 139ha within the Timahoe bog. Refer Figure 1 attached. This bog has been subject to peat harvesting activities for nearly 50 years and is extensively drained. Commercial scale harvesting has now ceased and the area is slowly revegetating.

The proposal comprises a composting operation accepting 25,000tpa bio-wastes for processing, and a 120,000tpa residual waste landfill, incorporating all the associated infrastructure. Both operations will source material from non-hazardous municipal, commercial and industrial waste streams. The landfill will accept residual waste only, i.e. it has been subjected to pre-treatment in accordance with the requirements of the Landfill Directive. It is expected the facility will have an operational life of c.20 years. The landfill foot-print will be approximately 21ha and will have a capacity of c.2.3Mt waste (2.86Mm<sup>3</sup> available void).

The nearest residential dwelling is 1km from the landfill footprint.

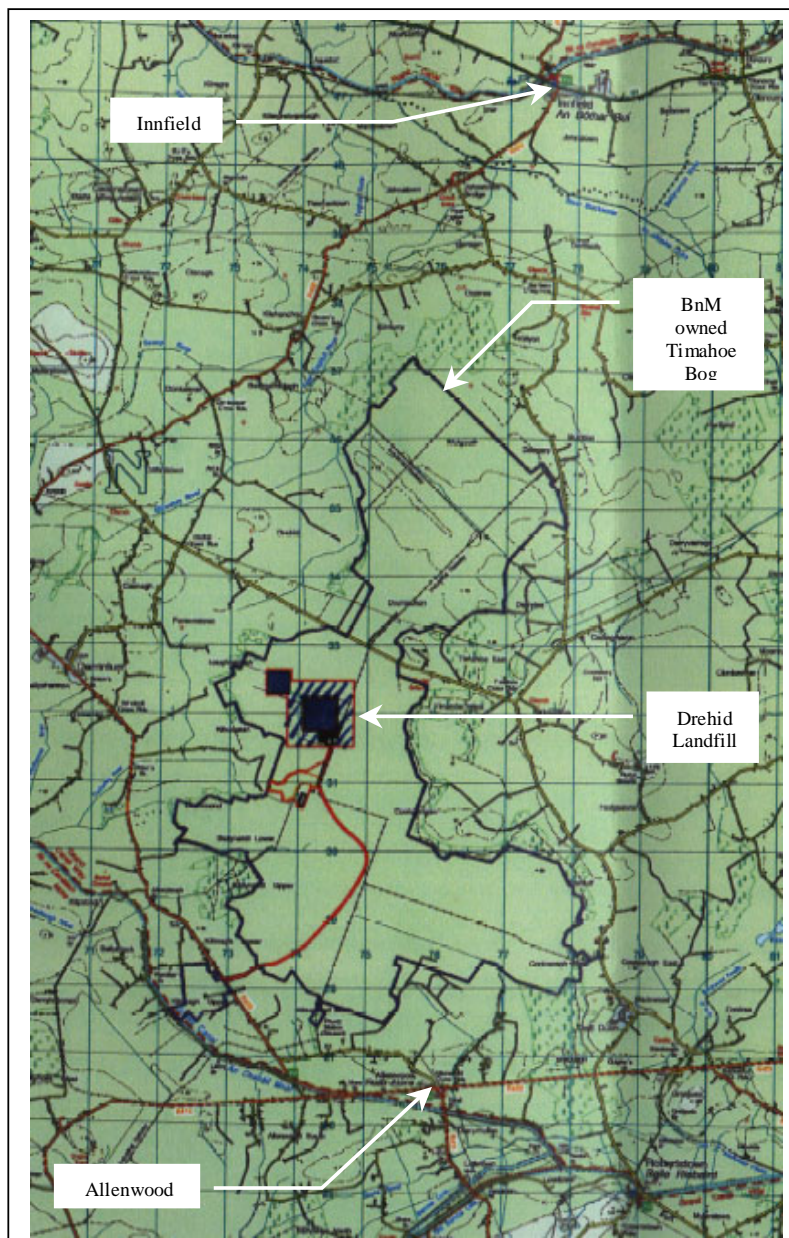


Figure 1

## 2. Operational Description

It is proposed that waste would be accepted principally from Kildare, and will be delivered by Heavy Goods Vehicles and general refuse vehicles. As proposed by the applicant, the facility will not be open to the general public and only waste contractors with pre-arranged contracts with the licensee would be allowed access to the facility. The proposed hours for operation of the facility are 8.00 a.m. to 6.30 p.m. Monday to Saturday. Waste acceptance hours are proposed to be 8.00 a.m. to 6.00p.m. Monday to Saturday.

The landfill will be worked in 8 distinct phases each lasting 2-3 years. Depth of fill varies 15 to 20m. The design proposed would be classed as land-raise, with finished levels c.20m above existing site levels.

Proposed infrastructure includes perimeter fencing, access road, office, maintenance building, composting building, in-vessel composting units, on-site proprietary sewage treatment system, surface water management/treatment infrastructure, leachate and landfill gas management infrastructure, electricity generation, weighbridges & wheel-wash facilities, waste quarantine/inspection area and bunded fuel storage. The proposal also includes the development of a borrow-areas adjacent to the landfill for the purpose of winning suitable engineering materials.

In relation to the composting of biowastes derived from separately collected municipal, commercial and industrial sources, the infrastructure proposed comprises a fully enclosed dedicated warehouse incorporating 5 composting tunnels with air and moisture handling. Biowaste reception and finished compost maturation will be undertaken in the warehouse. Ventilated air is to be treated by scrubbing and biofiltration. It is proposed to process up to 25,000tpa in this building. Compost produced will be used in landfill construction and restoration as well as other markets as they become available.

Lining System: Liner design proposed for the landfill is HDPE overlying low permeability BES, and incorporating leachate collection, which is BAT.

Leachate Management: Leachate collected will be stored in propose built tanks and tankered off-site to an approved waste-water treatment plant (WWTP). Infrastructure will be provided to allow recirculation of leachate to facilitate degradation of the encapsulated waste.

Landfill Gas Management: The active landfilling phase would initially passively vent to the atmosphere. Gas collection infrastructure comprising horizontal and vertical wells will be installed/commissioned during filling and on completion of the cells. When gas evolution rates are suitable, flaring of the collected gas would occur. Upon phased placement of the final cap (2 years after waste deposition stops to allow for settlement), permanent extraction wells will be operated.

Surface Water Management: It is proposed that surface water run-off will be collected from borrow pit, hardstanding and restored areas and directed via grit trap, oil separator and settlement lagoons prior to discharge.

Capping & Restoration: Once waste deposition in a phase was completed, an intermediate cap will be laid to allow for ongoing waste settlement. The final low permeability clay and LLDPE cap will be put in place within two years and will be to BAT standards.

### **3. Use of Resources**

The activity in question will be a modest user of water, fuel and energy. It will also contribute energy to the national grid once the landfill gas generators are commissioned.

### **4. Emissions**

#### 4.1 Air

Modelling of odour emissions from the landfill (Landfill gas, aerosols) and the Composting operation determined that though odour may be perceived at very low concentrations ( $<1.5 \text{ Ou}_E \text{ m}^3$ ) for short periods during adverse climate conditions, these levels would not be such that would result in nuisance impact on residences in the area (nearest residence 1km).

Mitigating factors in relation to landfill gas odour are;

- the pre-treatment of the waste (off-site) to remove compostable organics,
- full basal and capping containment,
- carbon filters on passive gas vents,
- landfill gas extraction and flaring/generation,
- bioscrubbing of compost emissions,
- distance to nearest dwelling,
- general waste management control (small working face, daily cover, etc.).

There is a large body of data now available in Ireland on the quality of Landfill Gas Emissions: they are well understood and in the context of this proposal are expected to be of negligible impact on local environmental air quality.

The applicant also carried out Screen modelling and an air impact assessment for other emissions from the landfill (NO<sub>x</sub>, CO, HCl, HF, F). The results indicate no impact on the local environment and no breach of national standards.

Bioaerosols associated with the composting unit will not result in an impact and in any case will be greatly reduced as a result of the proposed use of scrubbers and a biofilter.

The licence includes conditions controlling the provision, operation, control and monitoring of landfill gas and composting air emissions, as well as requiring the control of the working face.

#### 4.2 Leachate Emissions

The landfill facility will be fully lined to BAT standards. Leachate generated in the landfill will be collected and stored in purpose built landfill leachate tanks with a capacity for 8 days storage at maximum leachate production rates. Infrastructure provided will allow for the recirculation of leachate through the waste mass to accelerate biological degradation. Excess leachate will be tankered off-site to an agreed waste-water treatment plant. Given the large distances between odour receptors and the leachate tanks, it is not considered necessary at this time to insist on covering of the landfill leachate tanks. The applicant proposed the use of an automated SCADA system for the monitoring and controlled pumping of leachate within the collection and holding infrastructure.

Leachate generated in the composting area is to be collected in tanks and recycled into the composting process as a wetting agent, floor wash or scrubber liquid. Any excess is to be discharged to the landfill leachate tanks.

The applicants propose a proprietary treatment plant for sanitary effluent generated on site from staff toilet and canteen facilities. The liquid overflow from this unit is to be discharged to the landfill leachate holding tanks. Runoff from the waste quarantine and wheel wash areas will also be diverted to the landfill leachate collection system.

#### 4.3 Emissions to Surface Waters

No leachate or trade effluent will be discharged to surface waters. The only discharge is associated with storm water run-off from the borrow pit, stripped areas, prepared cells, hardstanding and landscaped areas and completed cells. The main potential impact is in relation to this run-off is from suspended solids. The applicant proposes a series of settlement lagoons as well as interceptors and grit traps to deal with these emissions. The permanent lagoons have been designed on a worst case basis.

The landfill is in the catchment of the Figile River. Discharge from the site is to Cushaling River, a tributary of the Figile. Due to the low permeability sub-soils in this part of the catchment, run-off (rather than infiltration) is the predominant flow mechanism. Existing water quality data for the site area shows the water quality to vary good to poor. The historical peat harvesting has impacted on the streams in this upper part of the catchment.

No trade effluent is to be discharged to surface waters. The RD sets ELV's for suspended solids and other marker quality standards such as ammonia. The site settlement lagoons will be operational during construction as well as landfill stages. The Recommended Decision includes for control and monitoring of the storm water emissions.

#### 4.5 Emissions to ground/groundwater:

There are no authorised emissions to groundwater associated with this activity.

Groundwater gradient beneath the site is very shallow west-south-west. The aquifer beneath the site is classed under the national Groundwater Protection Scheme (DoE-EPA-GSI) as Locally important. The subsoils beneath the site are very low permeability ( $8.2 \times 10^{-10}$  m/s), and vary in thickness from 9m to 128m. The vulnerability of the aquifer is rated as LOW (Groundwater Protection Scheme), with a Landfill response of R1 (landfill acceptable, subject to construction to BAT).

There are no public or group water supply boreholes proximal to the landfill. The nearest dwelling is 1km from the site. Risk to these supplies is negligible.

The containment systems proposed for the landfill, leachate tanks and sedimentation lagoons are intended to prevent environmental pollution of the groundwater and are BAT.

#### 4.6 Wastes Generated:

The site will generate office waste, oil and other similar light vehicle & plant maintenance wastes which will, as appropriate, be consigned off-site for disposal. Other wastes such as reject waste loads will be returned to supplier or consigned to an appropriate facility.

#### 4.7 Noise:

Noise emissions from the proposed development are likely to arise mainly from the operation of plant, truck movements and the flaring of landfill gas. Owing to the very remote location of the site noise nuisance arising from on-site operations are not expected to result in nuisance.

#### 4.8 Nuisance:

The applicant proposes conventional (BAT) management techniques (wheel wash, netting, daily cover, traps, etc.) for landfill associated nuisances such as dust, litter, vermin, etc. Given the remoteness of the location of the facility the potential for dust impact on local residences is considered to be negligible. The recommended decision includes various conditions for control litter, dust, vermin and pests.

### **5. Restoration**

The borrow areas will be reclaimed to surface water features. The landfill will be capped and seeded with grass to finished levels of c.104m OD. Monitoring and aftercare will continue for as long as is necessary and until the facility no longer represents a pollution/emissions risk.

### **6. Cultural Heritage, Habitats & Protected Species**

The EIS for the facility notes that there are no designated ecological conservation areas within 5km of the landfill footprint; and no designated protected plant or species are listed for the landfill area.

The EIS notes that the Timahoe bog area would be rated as possessing a high local ecological habitat value due principally to the presence of some intact raised bog, some rare plants, presence of fringe woodland, presence of

feeder streams to important rivers. The landfill footprint does not impact on any of these.

Former cutover bog (i.e. industrially harvested and drained) will be removed during the development stages of the landfill footprint. The landfill and related infrastructure footprint represents less than 2% of the total bog area. Some 2,500ha will be unaffected by the development. This area is cutover and would be considered to have emerging local habitat potential.

There are no recorded archaeological sites impacted by the development. However as with any large earthworks there is the potential for 'finds' to be made during development. Condition 11.8 of the RD requires liaison with Heritage officials on this point.

## **7. Waste Management, Air Quality and Water Quality Management Plans**

The proposal is compatible with the objectives of Kildare Waste Management Plan (2000) and will also serve a regional need. The proposal will not contravene national Air Quality standards, not national or local water quality standards.

## **8. Environmental Impact Statement**

I have examined and assessed the EIS and am satisfied that it complies with the EIA and Waste Licensing Regulations.

## **9. Compliance with Directives/Regulations**

The activity proposed comes under the scope of the IPPC Directive and Landfill Directive. The proposals would be considered BAT and compliant with the requirements and objectives of these Directives.

The composting operation will have to comply with Department of Agriculture requirements for such operations taking food/catering waste. The use of the finished compost in landfill engineering operations is permissible under the Animal By-Products Regulations.

## **10. Fit & Proper Person Assessment**

Bord Na Mona are one of the largest holders of EPA authorisations (IPC and Waste) and have demonstrated themselves to be technically competent and financially capable to operate a licence. They are also free of any relevant convictions. Financial security for the closure of the site is dealt with by condition.

## **11. Submissions**

There were seven submission made in relation to this application.

11.1 Submission from Ms Ailing McNiffe, Celbridge, Co Kildare  
*Ms McNiffe objects to the siting of a 'superdump' within 4 miles of her proposed dwelling house. She is concerned regarding nuisance from vermin, birds and truck activity.*

Comment: The potential for vermin impact on a property 4 miles from the landfill would be considered as low. The operation will be employing BAT for the control of vermin and birds (e.g. small working face, vermin traps,

daily, intermediate and final cover, and deposit of residuals only – minimal food waste). These environmental controls are specified in the licence and will address the concerns of Ms McNiffe. The issue of traffic impact external to the site is a matter for the planning authority.

11.2 Submission from Mr Declan & Ms Cathy O’Loughlin, Celbridge, Co Kildare

*The O’Loughlins object to the proposal for this landfill and comment that it will cause major problems for the environment.*

Comment: I have assessed the details for the proposed site and am satisfied it represents BAT and if operated in accordance with the EIS statement and the provisions of the recommended licence should not cause environmental pollution.

11.3 Submission from the Southern Regional Fisheries Board

*The Board comments that it has no objection in principle to the granting of a licence in relation to this application. They note that local water courses are sensitive and if the landfill is not properly managed they could be impacted upon. In relation to leachate treatment off-site the Board would wish that the treatment capacity of the chosen WWTP be carefully selected to ensure it can accommodate the leachate. The Board also raise concerns in relation to silt impact on water courses and that appropriate controls should be in place to prevent surface water pollution.*

Comment: The RD includes a number of provisions for the control of operations on site and the abatement of emissions such that water courses are not compromised. In relation to the disposal of the landfill leachate the RD include for the Agency approval of the chosen WWTP. The applicant proposes a number of large siltation lagoons to deal with solids generated as a result of construction and operational activities.

11.4 Submission from Development Applications Unit, DoEHLG

The Department make a number of observations in relation to the application. The applicants in a letter received 30/6/04 supporting their application responded to the comments by D0EHLG. The applicants robustly defend the validity of their EIS surveys.

*(i) They are concerned that the floral surveys carried out in December 2002, August 2003 and January 2004 are likely to be incomplete.*

Comment: This concern is unlikely to be of major significance to the footprint of the landfill and the borrow pits as these are situated on recently cut-over bog and not virgin or mature habitats, i.e the site was previously the location of an industrial activity. There are no recorded protected plants in the area. The EIS contains extensive assessment of the ecological habits and although there are no designated protected habitats or species, the EIS does recognise areas considered of local ecological importance. The design and layout of the facility avoids any significant impact on these local areas.

The applicants comment that the habitat surveys were conducted at an appropriate level to determine the main habitat types for evaluation. They add that as the survey was based on habitat level, seasonality is not a



factor: The applicants state that there is no legal requirement to provide a full species list; but that “*the description of any aspect of the environment should provide sufficient data to facilitate the identification and evaluation of likely significant effects on that topic*” [EPA EIS guidance 200]. It is my view that the EIS as submitted achieves this objective.

(ii) *The Department note that during their inspections evidence of mammal activity was noted in the area. They point out that Badgers are a protected species.*

Comment: The vermin control operations for the site are to be sensitively applied such that small local mammal populations are protected (Conditions 5.6 and 6.23 refer). The EIS notes that preparation of the borrow areas and the landfill footprint will be carried out in a sensitive manner with respect to local fauna (e.g. slow clearance). Fencing will be used to restrict the movement of large mammals onto the landfill itself. On completion of the borrow pits they are to be flooded and this will create a compensatory habitat.

The applicants comment that the badger sett noted by the DoEHLG will not be impacted as part of the proposed development. They also add that the EIS states as follows “*badgers are unlikely to occur within the study area as they typically avoid areas where soil is wet and subject to flooding*” [boggy]. They further add that the mobility of the other mammals noted by the Department is such that any impact will be insignificant.

The RD provides for consultation between the applicant and the National Parks & Wildlife Service in relation to site clearance operations (Condition 11.8), such that these may be carried out in an ecologically sensitive manner.

(iii) *The Department comment that the bird survey appears incomplete as they have observed a number of protected species (Raptors) in the area which are not recorded by the applicants.*

Comment: Faunal surveys are always difficult as many factors will influence the level of faunal activity on any given inspection (time of year, dawn, midday, weather, temperature, etc.). Indeed many species are nocturnal and will not be recorded during daytime inspections. The main point here is that there are no designated ecological conservation area within 5km of the landfill footprint; and no designated protected plant or species are listed for the landfill area. This point is accepted by the Department. The site of the proposed landfill represents less than 2% of the total area of cut-away bog and related lands owned and controlled by the applicant in this area (Timahoe Bog). The operation of the landfill is therefore unlikely to deprive local bird populations of nesting or feeding grounds. There is no evidence to suggest the operation of the landfill will impact on raptor population, indeed raptors can do quite well around such operations.

The applicants note that all raptors range widely for food and their occurrence in this area is not unexpected. Nor will the scale of the development significantly impact on the available foraging grounds. The applicants go on to note that for two of the raptor species noted by the Department there is no known occurrence of them breeding in lowland

sites, and in relation to the owl, sparrowhawk, kestrel and buzzard, these are unlikely to nest in the habitats present on the development site.

*(iv) The Department note that this area may also accommodate lizards (though none were observed by the Department officers), and perhaps this should have been noted as a possibility in the EIS.*

Comment: I do not believe the absence of a note on the possible existence of a species to be significant enough to undermine the validity of the EIS.

*(v) The Department note that one of the borrow pits is close to a rare bush and that the operation of the pits may impact on local wildlife and water quality.*

Comment: The applicants recorded the presence of this bush in their ecological survey of the site. The area of occurrence is to be protected and not encroached by the pit development. Plans submitted by the applicant indicate that c.15m buffer is to be in place between the edge of the pit and the rare bush as well as between the pit and the local field drain. Condition 11.8 requires the applicant to consult the National Parks & Wildlife section of the D0EHLG in relation to the development of the borrow pits to ensure an appropriate stand-off distance is left. The pit will be a depression so loss of water to the drains is unlikely. The applicant proposes to pump any collected water from this pit to sedimentation trap facilities prior to discharge to local water-courses. The pits are located on former cut-away bog and therefore their extraction will not be destroying any virgin habitat. On exhaustion the pits will be reclaimed to surface water features, which will enhance the ecological diversity of the area.

The applicants note that as soon as they discovered the rare bush they notified the National Parks & Wildlife Service. Following on from this the Service and the applicants agreed additional work which resulted in amendments to the borrow pit design as now submitted in the EIS.

*(vi) The Department ask that any methods used to control vermin are sensitively employed such that native protected species are not harmed as a result.*

Comment: Conditions 5.6 and 6.23 of the RD refer.

*(vii) & (viii) The Department note that this area is part of the upper catchment of the Figile River which flows to the River Barrow (candidate cSAC) and observe that construction or operation related contamination of the surface waters could present problems.*

Comment: There is no proposed trade effluent or leachate discharge to surface waters. All storm waters collected within the site area will be put through sedimentation lagoons, and run-off from vehicle hardstanding will additionally be put through interceptors. The RD includes numerous conditions in relation to the protection of surface waters which are to be effected during construction as well as operational phases of the landfill.

*(ix) The Department comment that the applicants claim that no designated area will be impacted and that no protected flora or fauna will be significantly impacted, is poorly based (the Department express concerns regarding the validity of the ecological studies). The Department also request that any excavation proximal to the protected Alder bush should be carried out in consultation with the National Parks & Wildlife service.*

Comment: Indeed the studies undertaken by the applicant have significantly added to the knowledge of the ecological status of the area. In relation to the validity of the ecological studies I would refer to my comments on 11.4 (i), (ii),(iii) and (vi) above. Condition 11.8 deals with the issue of the protection of the Alder bush.

*(x) The Department conclude that though they do not object to the development or the granting of a [waste] licence for the activity, they believe the EIS to be incomplete on the basis of aspects the ecological survey. They also note that use of falconry to control scavenging birds at the landfill requires a licence under the Wildlife Acts.*

Comment: There is no designated protected area within 5km of the site, and no designated protected plant or species are listed for the landfill area. The site of the landfill is on former industrially worked land. The site footprint represents less than 2% of the total bog area at that location which is in the ownership of the applicant. A good deal of the fringe of the harvested bog remains intact (not harvested) and provides excellent habitats for local fauna and flora. The former harvested areas (>2000ha) outside the landfill also represent good potential for habitat development (as they gradually re-colonise) and will not be impacted by the development.

The applicants argue that the surveys carried out comply with best practice and with the EPA EIS Guidelines (2002). They also comment that they submitted a proposed scope of work for the ecological aspect of the EIS to the Developments Application Section of the DoEHLG in 2002. The Department never wrote to comment that the proposed survey was in any way deficient.

The submission by the Department has not put forward any evidence to suggest the proposed development represents an unacceptable environmental impact. I am not satisfied the deficiencies noted by the Department are substantial enough to undermine the validity of the EIS. I am further satisfied that the mitigation measures proposed by the applicants in relation to the construction and operation of the facility will afford the necessary protection to the ecology of the area. Additionally the RD provides for consultation between the applicant and the National Parks & Wildlife Service in relation to site clearance/development operations (Condition 11.8), such that these may be carried out in an ecologically sensitive manner. The RD also points out that the licence is for the purpose of Waste licensing and this does not negate their requirements under any other pieces of legislation including the Wildlife Acts.

11.5 Submission from Environmental Action Alliance – Ireland (EAAI),  
c/o David Malone, Portarlington, Co Offaly.

*EAAI open their submission by stating that the application is in contravention with the provisions of the POE Act 2003 (implementing IPPC in Ireland), the EU waste management hierarchy, the Kildare Waste Management Plan, the principles of BAT, the Waste Management Act Act 1996, the EU Waste Framework Directive, the EU EIA Directive and the EU Landfill Directive.*

Comment: The POE Act in relation to waste and IPPC licensing was not given effect until Summer 2004, which was after the making of the application for the Drehid facility. A number of the issues raised in this submission relate to matters of planning control and as such will not be addressed herein. In addition substantial parts of the text are statements in relation to national and EU provisions, and not specific submissions. I will address the submission under a number of general headings that flow from the text as submitted.

*(i) Adequacy of the EIS. In their submission EAAI raise a number of concerns regarding the adequacy of the EIS, viz;*

- *Site selection*
- *Description of physical characteristics of project*
- *Waste characterisation & reference to EU waste catalogue*
- *Bird migration & habitats*
- *Project splitting (borrow pits and Landfill)*
- *Alternatives*
- *Adequacy of Non Technical Summary*
- *Interaction of Factors*
- *Direct & indirect effects on various receptors*
- *Vulnerability of a 'significant' aquifer*
- *Use of BAT and control of emissions from the landfill*
- *Archaeology*

Comment: I have assessed the EIS and I am satisfied it complies with the requirements of the waste licensing and EIA Regulations. I am satisfied with the detail in the EIS in relation to site selection, the description of the project, ecology, discussion of alternatives, adequacy of non-technical summary, assessment of direct and indirect effects and discussion of interaction of factors.

There was no project splitting as the EIS for the application considered both the landfill and borrow pit development.

I am satisfied that the EIS adequately described the waste types proposed for the facility. The application documentation clearly stated that the facility was a non-hazardous waste landfill accepting waste from commercial, municipal and industrial streams that had been subject to pre-treatment. The RD does include conditions regarding the establishment of waste acceptance protocols. And in any case Council Decision 2003/33/EC in relation to testing and acceptance of waste at such a landfill will ensure compatibility and safe operation of waste inputs.

The aquifer beneath the site is graded as being of local importance and the vulnerability classified as LOW.

The application documentation and EIS have presented more than adequate detail on the character, control and elimination of emissions from the landfill.

The EIS contains an archeological study of the proposed site. However it is accepted that large scale earthworks typical of landfill development may uncover other archaeological sites/artefacts. Such works have to be done in consultation with the Heritage section of the DEHLG. Condition 11.8 of the RD refers.

*(ii) Non-compliance with EU Landfill Directive. EAAI comment that the facility does not comply with the Kildare Waste Management Plan and that the capacity of the site is more than is required. EAAI also argue that the applicants have not stated how the costs of landfill will be met. EAAI comment that the recirculation of leachate is illegal under the Landfill Directive. EAAI comment that the selection criteria for the landfill were not in compliance with the requirements of the Landfill Directive. EAAI comment that the classification of the landfill is not given.*

Comment: In the EIS the applicants comment that they are using updated figures for Kildare based on recent National Waste Database figures. These are likely to give a better picture of county needs. I am satisfied that the landfill proposal complies with the principals of the Plan. It is not necessary for this landfill EIS to consider the rest of the county waste infrastructure for waste collection and pre-treatment, suffice to say that it will be accepting residual pre-treated waste as per Landfill Directive obligations.

On the issue of landfill management and closure costs, this is a matter that is normally dealt with by condition, given that the costs will be met by, inter alia, gate fees. Condition 12.3 requires the cost of landfill to be reported each year including statements on how these costs are to be met.

The recirculation of leachate under carefully designed, engineered and controlled conditions is in-fact hugely beneficial to landfill stabilisation. Landfills are large bio-reactors. The methanogenic stage of landfill requires moisture: and modern encapsulation type landfills do not let moisture in. If the wastes are unusually dry the degradation process will be retarded, and indeed the waste mass may never fully stabilise. The controlled wetting of the waste (by leachate recirculation) aids breakdown and consequently accelerates the stabilisation of the landfill (shortens aftercare). It would be BAT and is compliant with the principles of the landfill directive as it is not disposal of leachate, but rather a beneficial use of leachate which is essential to the controlled operation of the facility.

I am more than satisfied that the Application documentation as submitted fully addresses the site selection objectives established in Annex 1 of the Landfill Directive.

The application documentation and EIS clearly identify that the facility is a landfill for non-hazardous waste.

*(iii) Non-Compliance with EU Waste Management Hierarchy. EAAI comment that the Kildare Waste Management Plan contravenes EU policy in relation to the waste hierarchy.*

Comment: The application for Drehid landfill and the associated EIS is not intended to evaluate the compliance of the Kildare Waste Plan with EU policy, particularly in relation to the integrated waste strategy for the county. That is a matter for KCC. What is relevant is that landfill for residual waste is required, and the applicants proposal thus complies with KCC Plan and the EU waste hierarchy by only accepting pre-treated waste.

11.6 Submission # 1 from North Kildare Environmental Promotion Group (NKEPG), c/o James Brady, Donadea, Naas, Co Kildare.

*NKEPG open their submission by stating the BnM application contravenes many EU legal provisions and further stating that the site is unsuitable for landfill.*

Comment: A number of the issues raised in this submission relate to matters of planning control and as such will not be addressed herein. I will address the submission under a number of general headings that flow from the text as submitted.

*(i) Site Selection. NKEPG comment that the site selection process is flawed on the basis of it being included in a peatland reservation area, on a regionally important aquifer and in a heritage area.*

Comment: The peat is worked out, the aquifer is classified as locally important and is overlain by between 9 and 128m of overburden, giving it a LOW vulnerability rating. There are no designated ecological conservation areas within 5km of the site. I am satisfied the EIS as submitted includes adequate information to determine this site a suitable for the purpose proposed: particularly in relation to the effective avoidance, mitigation and management of emissions and environmental nuisance. The natural characteristics of the site are very advantageous with regard to impact avoidance and mitigation.

*(ii) Alternatives. NKEPG are not satisfied that the issue of alternatives to landfill are adequately addressed in the EIS. .*

Comment: Landfill is an essential component of any integrated waste strategy. The applicants have stated that they will be accepting residual waste, i.e. waste that has been subject to pre-treatment to remove recyclables. The effectiveness of the removal of recyclables and the minimisation of the residuals is a matter for Kildare Co Co under their integrated Waste Plan. In that regard alternatives are being continuously advanced, it is an ongoing obligation. The applicants are providing two necessary components to that plan: composting & residual landfill. The applicant did satisfactorily address the issue of alternative to landfill in the EIS.

*(ii) Non compliance with Kildare Waste Management Plan. NKEPG believe that the waste generated in Kildare will not supply the capacity of the landfill..*

Comment: This is substantially the same point as that raised in Submission 11.5(ii) above. See first paragraph in comment on same.

*(iii) Leachate treatment. NKEPG comment that there has been no discussion on whether or not any WWTP can take and effectively treat the leachate from the landfill.*

Comment: The operators will not be able to commence import of waste for disposal until an independent leachate treatment facility has been approved by the Agency. Such an approval will ensure the loadings and effectiveness of treatment prior to acceptance. Condition 5.5 of the RD refers.

*(iv) Waste bailing. NKEPG note that the proposed facility is to accept loose waste. They comment that this is not BAT.*

Comment: The option to bail, or handle waste loose is often tied up in infrastructural provisions in any county. It is an efficient way to move wastes very long distances. However it is not exclusively BAT. Loose waste facilities can also be BAT. Indeed many scientists would argue that loose waste facilities biodegrade more efficiently: as bailed facilities can result in waste remaining trapped in bags and not being broken by mechanical placement (landfill compactors), and therefore not open to the biological breakdown processes. There are positives and negatives to both types of operation, however both are acceptable BAT processes.

*(v) Compost Facility and source of organic material. NKEPG argue that the environmental impact of the compost unit was given very poor attention and needs a separate EIS. Furthermore NKEPG also ask where is the source of the organic material and who is to collect it.*

Comment: A separate EIS could be considered project splitting. In any case the EIS as submitted dealt with this aspect of the development in a comprehensive manner, including, *inter alia*, modelling of odour impact potential. The composting unit is modest in scale (25,000tpa). I am satisfied the EIS properly considered this activity.

The EIS states that the organic waste will be sourced from municipal, commercial and industrial activities. The integrated waste plan for Kildare recognises the need for composting. Organics can come for segregated collection, or from Materials Recovery Facilities that segregate mixed waste streams.

*(vi) Borrow Pits. NKEPG consider the borrow pits to be substantial developments in their own right and deserve separate EISs. .*

Comment: This would be project splitting and contrary to the spirit of the EIA Directive. The submitted EIS dealt with these elements of the development in a comprehensive and satisfactory manner.

*(vii) Housing. NKEPG state that the EIS does not consider some houses in the area.*

Comment: There is no residential dwelling within a 1km radius of the landfill footprint.

(viii) *Archaeology.* NKEPG consider the site to be of high archaeological significance.

Comment: This is substantially the same point as that raised in Submission 11.5(i) above. See the last paragraph in the comments to that submission.

(ix) *Risk to groundwater.* NKEPG state that the landfill presents a serious risk to groundwater, and that the site is on a very significant aquifer. Supporting technical reports are mentioned.

Comment: The aquifer beneath the site has been classified in accordance with the DOE-EPA-GSI scheme as locally important – and not as a Regionally Important aquifer. Furthermore the aquifer is overlain by between 9 and 128m of overburden. This overburden includes clays with natural permeability's averaging  $8.2 \times 10^{-10}$  m/s, which is very low. The aquifer would be classed as of LOW vulnerability. The landfill is to be fully contained with leachate collection to BAT standards. The risk to groundwater supplies is negligible. The EIS has dealt with this assessment satisfactorily. The proposed location is considered geologically stable and suitable for landfill in accordance with national guidelines (R1, DOE-EPA-GSI Groundwater protection response for landfills).

(x) *Ecology.* NKEPG state that the EIS is deficient in its treatment of the ecology of the site: particularly in relation to birds and butterfly's.

Comment: This issue has been considered at Submission 11.4 above. In relation to the butterfly habitat again it is worth noting that the landfill represents <2% of the Timahoe bog, a former industrially active harvesting area which is now worked out and being allowed to naturally revegetate. Active drainage has ceased, which is a point of concern to NKEPG in relation to protection of butterfly habitats. Also the reclamation plan for the borrow pits is to turn them into water features which will benefit the local habitat diversity.

(xi) *Vermin control.* NKEPG express concern about the potential for harming native species as a consequence of the site pest control program (poisoning, etc).

Comment: Conditions 5.6 and 6.23 of the RD deal with this concern.

(xii) *Fire Risk.* NKEPG state that burning off of landfill gas represents a fire hazard given the proximity to woodland and peat.

Comment: Fires at modern landfills are extremely rare. The landfill gas flares are 'shrouded' which negates the potential for loss of control of the flame. The large distance between the site and woodland is also significant. The risk is considered to be negligible.

(xiii) *Restoration and Aftercare.* NKEPG state that the EIS is deficient in its treatment of the aftercare and management plan.

Comment: The site will be operational for 20 years. The final detail of the aftercare plan dealing with such matters as monitoring, emissions



management, settlement, revegetation, repair, reporting, supervision, etc., is a matter that will be dealt with by condition (refer Condition 10 of RD) at the appropriate time. The applicants have stated that the site will be reclaimed to grassland and allowed to naturally vegetate: which given the nature of the finished landform is considered appropriate for this area (patchwork of bog lands and mineral grassy 'islands'). I am satisfied that the EIS has adequately dealt with the issue of closure and restoration in so far as is relevant at this time.

*(xiv) Environmental Management Plans. NKEPG state that no EMP exists and should be a stand alone document.*

Comment: Such a plan only has relevance for an operation that is underway. Condition 2 of the RD requires such a plan to be in place prior to commencement of the development and operation of the site.

*(xv) Asbestos. NKEPG comment that the asbestos containing ash from the power station was used to build the rail tracks through the bog. Excavation of these tracks will thus present a serious health hazard.*

Comment: There is no reason for peat ash to contain asbestos. If there was uninformed disposal of asbestos waste in the bog in times past this should be evident during clearing. Condition 3.5 of the RD requires the prior sampling of former BnM rail tracks that may be disturbed as part of the construction so that any asbestos that may be present is identified and dealt with in accordance with national occupational health and environmental provisions.

*(xvi) Water Framework Directive. NKEPG state that proposal is in contravention with the objectives of the Water Framework Directive.*

Comment: The mere existence of any industrial operation, including landfill, cannot, *prima facie*, be taken as contrary to the requirements for water protection. The selected site is highly suitable from a groundwater protection point of view, the facility will be designed to international BAT standards, and there are no trade effluent discharges to surface waters.

*(xvii) Health Effects. NKEPG state that landfills are suspected as being associated with health effects.*

Comment: In a recently published major study for the UK Government<sup>1</sup> it was concluded that:

*“... we found no consistent evidence that people living close to landfill sites accepting MSW suffered worse health than people living further away from such sites. In particular, we found that the weight of evidence is against any increased incidence of cancers in people living near to landfill sites.”*

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<sup>1</sup> Review of Environmental and Health Effects of Waste Management: Municipal Solid Waste and Similar Wastes. Department for Environment, Food and Rural Affairs, London. 2004.

The nearest residences are located 1km from the proposed landfill, and any emissions related health risk to the local community are considered negligible.

The Proposed Decision as drafted includes numerous conditions to limit and manage the emissions and operations at the facility such that in accordance with the principles of BAT any risk to human health and the environment is mitigated. Correct management and vigilant enforcement will ensure the concerns of the NKEPG are addressed through the correct operation of the proposed landfill.

*(xviii) Effects on Farming. NKEPG state that the occurrence of vermin in and around the landfill may present health hazards to local livestock.*

Comment: I am satisfied that correct management of the proposed facility and compliance with the proposed licence conditions (netting, fencing, daily cover, small working face, residual waste only, etc.), in addition to the >300m buffer zone to the nearest private land (and even this is not farmland), will ensure that any landfill associated risks to farm produce are satisfactorily mitigated.

*(xix) Breaches of EU Directives. NKEPG comment that the EIS is in breach of numerous EU Directives and refer to an attachment to their submission for the detail.*

Comment: The attachment referred to in the NKEPG letter is substantially the same letter received by the Agency from Environmental Action Alliance Ireland and considered at Submission 11.5 above.

*(xx) Concluding Remarks. NKEPG summarise their objections to the landfill (considered above) and conclude that the site selection and EIS process is flawed and the proposal is in contravention with EU law.*

Comment: I am satisfied that the EIS is compliant with the requirements of the EIA and waste regulations and the relevant EU Directives. The applicants have, to my satisfaction, demonstrated the site selected to be suitable for the location of a landfill and composting unit in so far as avoidance, minimisation, monitoring and control of emissions are concerned. Responses to the issues raised by NKEPA are detailed in preceding sections.

11.7 Submission # 2 from North Kildare Environmental Promotion Group (NKEPG), c/o James Brady, Donadea, Naas, Co Kildare.

This submission is an addendum to their submission dealt with at section 11.6 of this report. This addendum contributes further information in relation to butterfly's in the area of the landfill and was considered under submission 11.6(x) above.

## **12. Charges**

Environmental monitoring, inspection and audit charges set for this facility are set at €19,041.00.

### **13. Proposed Decision**

I am satisfied that the conditions set out in the RD will adequately address all emissions from the facility. I am further satisfied that the carrying on of the activities in accordance with the conditions will not cause environmental pollution.

The applicant proposed the establishment of a Community Fund and have proposed contributing €1.27 per tonne of waste disposed to be contributed to this fund. The RD accepts and formalises this position (Condition 12). Planning has yet to be determined for the site and it is not clear whether or not this fund condition will appear in the planning authorisation. Should it appear then there would be no need to duplicate requirements and the EPA condition should not be enforced. The text of condition 12.4 provides for this.

The proposed facility lies within the licensed site area for the BnM Allen Group (IPPC Licence Register 503). This area is now worked out and is subject to the rehabilitation plan specified in that licence. Should the waste facility development proceed a minor amendment of the IPPC licence to exclude this area from the definition of 'site' for the purposes of IPPC Reg 503 will be necessary. No environmental vulnerability is associated with this amendment as the closure and after care plans for the Drehid facility site will apply to all the boglands within the site area and not just the landfill and borrow pits. Similar amendments have been made by the Agency in relation to two other BnM landfills operating within former IPPC regulated land areas (Mayo peat deposit area W199-01 & Clonbullogue ash deposit area W049-01).

### **14. Recommendation**

I have considered all the documentation submitted in relation to this application and recommend that the Agency grant a licence subject to the conditions set out in the attached PD and for the reasons as drafted.

Signed

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Dr. Jonathan Derham

### **Procedural Note**

In the event that no objections are received to the Proposed Decision on the application, a licence will be granted in accordance with Section 43(1) of the Waste Management Acts 1996-2003.