

REPORT OF THE TECHNICAL COMMITTEE ON OBJECTIONS TO LICENCE CONDITIONS

TO:	Directors
FROM:	Dr Jonathan Derham - LICENSING UNIT
DATE:	31-3-04
RE:	Objection to Proposed Decision for Rampere Landfill, Waste Reg: 66-2

Application Details	
Class(s) of activity:	3 rd Schedule – Classes 2,4,5 4 th Schedule Classes 4, 13
Location of activity:	Rampere, Co Wicklow
Licence application received:	22 Nov 2002
PD issued:	21 Oct 2003
First party objection received:	Yes
Third Party Objection received	Two
Submissions on Objections received:	
Additional Information received:	None

Company

The application relates to a review of the existing waste licence (66-1). The review is for the extension of the existing facility, infrastructural amendments and variation in waste intake.

Consideration of the Objection

The Technical Committee, comprising of Dr Jonathan Derham (Chair), Ms Emer Cooney and Ms Bernadette Murray has considered all of the issues raised in the Objections and this report details the Committee's comments and recommendations following the examination of the objections together with discussions with the inspector, Olivia Cunningham, who also provided comments on the points raised.

This report considers the two valid third party objections and the first party objection.

First Party Objection

The applicant makes 10 points of objection.

A.1. Condition 1.6.1.1

The applicant objects to the wintertime hours of waste acceptance specified in the Proposed Decision (PD). They request an additional 30 min and argue the increased time will permit greater operational efficiency and improve the amenity value of the Civic Amenity facility.

Technical Committee's Evaluation: The argument put forward is reasonable and the committee agree that time limit is changed.

Recommendation: Amend the wintertime waste acceptance time limits specified in Condition 1.6.1.1 to read: 08:30 to **16:00**.

A.2. Condition 1.6.1.2

The applicant related this objection to Objection A.1 above. They ask that Operational Hours in winter be extended by 30 min to accommodate the changes sought under Objection A.1.

Technical Committee's Evaluation: The argument put forward is reasonable and the committee agree that time limit is changed.

Recommendation: Amend the wintertime facility operation time limits specified in Condition 1.6.1.2 to read: 08:30 to **16:30**.

A.3. Condition 3.10.1

The applicant welcomes the Condition specifying the installation of a sanitary waste treatment unit on site but wishes the specified one month timeframe for implementation be extended to allow for sourcing, delivery and commissioning.

Technical Committee's Evaluation: The one month period set in the condition is very onerous and having regard to the fact that they will have to source, obtain delivery and commission a three month period would appear more reasonable.

Recommendation: Amend the specified timeframe in Condition 3.10.1 to read: **three months**.

A.4. Condition 3.20.1(c)

The applicant objects to this condition that requires permanent gas monitoring equipment to be fitted to the site office and other enclosed structures. They state that the weighbridge hut and portacabin are some remove from the landfilled areas

and are not considered to be at risk. They further add that the new administrative building to be constructed will include monitoring.

[This Objection is linked to Objection A.5 below.]

Technical Committee's Evaluation: Refer evaluation for Objection A.5 below. Condition 3.20.1(c) duplicates the provisions of 3.21.1(a). It is unnecessary.

Recommendation: Delete Condition 3.20.1(c)

A.5. Condition 3.21.1(a)

The applicant notes this is a similar point of objection to that made in Objection A.4 above. [Both conditions requiring the installation of a permanent gas monitoring system.]

Technical Committee's Evaluation: The risk that the conditions seek to address is a health and safety one for the operators of the landfill, the receptors being the employees. Accordingly it is appropriate to place the burden on the licensee to identify site operational structures at risk from landfill gas migration/accumulation and monitor as appropriate. The licensee should as part of regular health & safety audits update the schedule of 'structure at risk' and include in their monitoring plan. The list specified in the current condition may not be exhaustive, and may include locations that become redundant. It is best to have this list reviewed from time-to-time to reflect operations.

Recommendation: Replace Condition 3.21.1(a) with the following:

Within three months from the date of grant of this licence, the licensee shall undertake a risk assessment to identify all on-site structures at risk from landfill gas migration/accumulation and implement appropriate monitoring and control measures. The results of this assessment (to include a schedule of 'at-risk structures' and details of monitoring/control results/measures) are to be documented and maintained on site for inspection by Agency officers. This assessment shall be reviewed at least annually, any revisions to be documented in the site safety plan.

A.6. Condition 3.21.1(b)

The applicant objects to the requirement for gas monitoring boreholes at 45m intervals around the landfill, noting that the landfill adjoined previously filled areas. The applicant also objects to the 45m interval for monitoring on northern boundary noting that any receptors are some distance away.

Technical Committee's Evaluation: Gas monitoring should be undertaken around the perimeter of filled areas: in natural ground between the fill and the local environment. The applicant perhaps misunderstood the condition as referring to only the cells which are the subject of the extension. The condition refers to all areas of fill included in the entire landfill footprint – active and historical.

The monitoring of gas along the perimeter is not just to act as an early warning of migration towards residences. Landfill gas migration can also cause crop damage, or interfere with habitats. The monitoring wells also act to inform that the primary gas control system is malfunctioning. The local geology is difficult as there is no primary permeability in the bedrock, thus gas migration is mainly by fracture flow. The greater the horizontal spacing between monitoring wells the less likely one is to capture evidence of gas migration and thereby the evidence of malfunction in pollution control infrastructure or the potential for crop/habitat damage. For these reasons it is not recommended that the monitoring well spacing along the northern boundary be extended.

Recommendation: No change.

A.7. Condition 3.21.3

The applicant notes that some cells will not be constructed for some time and as such the installation of leachate monitoring points is premature.

Technical Committee's Evaluation: Logic would dictate that if a cell is not constructed that the associated monitoring infrastructure cannot be installed. However for clarity the condition can be amended slightly.

Recommendation: Insert the word '**operational**' after the word 'each' in Condition 3.21.3.

A.8. Condition 5.12.5

The applicant objects to the requirement to dispose to the working face at the end of each day any domestic waste deposited in the Civic Amenity facility. The applicant notes that any such waste is deposited in enclosed skips and would prefer to allow these skips fill up before moving them to the landfill for deposit.

Technical Committee's Evaluation: From a methanogenesis and leachate risk perspective the holding of waste in the skips for a few days represents a low risk. Furthermore the haulage of half full containers is in this case an unnecessary drain on staff and fuel resources.

Recommendation: Amend Condition 5.12.5 to read as follows:

Domestic waste delivered to the Civic Waste Facility for disposal shall be deposited at the working face **at least weekly** or removed off-site to an alternative facility agreed with the Agency.

A.9. Condition 7.7.1

The applicant objects to the requirements for 'bird scaring' techniques to be continuously employed (every day), in particular the use of birds of prey. The

applicant notes that there are birds native to the area that also need to be considered. The applicant requests that a bird control program appropriate for the site be devised and agreed with the Agency, and that any agreed program can be revised as necessary.

Technical Committee's Evaluation: The condition does allow techniques other than the use of birds of prey. However, the use of the term 'bird scaring' in the condition is recognised as presenting a difficulty. The condition can be amended to capture the applicant's concern, whilst at the same time maintaining its objective.

Recommendation: Replace Condition 7.7.1 with the following:

A scavenging-bird control program shall be devised in agreement with the Agency that will deter birds from gathering on and feeding at the facility by the use of birds of prey and/or other **agreed bird-control** techniques. This bird control program shall be in place on the facility within three months of the date of grant of the licence. The program shall be revised as necessary, and in any case maintained until the waste activities cease and all the waste is capped to the written satisfaction of the Agency. The use of gas-operated bird scaring devices is prohibited at the facility.

A.10. Condition 8.9.1 & Schedule D.6

The applicant notes that the Meteorological station referenced in Schedule D.6 of the licence is Birr: and further advises that they have already established data exchange links with Met Eireann for the Casement & Kinsealy stations.

Technical Committee's Evaluation: The Casement & Kinsealy stations are likely to produce meteorological data of equivalent value for the Rampere site, as would the Birr Station.

Recommendation: Amend the heading to table D.6.1 to read:

Meteorological Monitoring:

Data to be obtained from **a representative national meteorological station.**

Third Party Objections

Three Third Party Objections are considered, for convenience they are labelled:

- B. Ms Maree Horan, Rampere, Baltinglass, Co Wicklow
- C. Ms Sharon Bermingham & Mr Edward Bermingham, Golden Fort, Baltinglass, Co Wicklow

B. Ms Maree Horan

Ms Horan writes on behalf of the Horan, Keogh & Bermingham Families. Ms Horan's letter encloses a letter of objection from the Bermingham Family which is dealt with separately below. Ms Horan also submitted a request for an Oral Hearing. The Board has already decided that an Oral Hearing is not required in this case.

In the closing section of Ms Horan's Objection, comments are made in respect of the enforcement history at the site and the lack of trust in relation to the commitment to future compliance with licence conditions. These concerns are an enforcement matter. It is worth noting that new powers, expected to be granted to the Agency under the Protection of the Environment Act 2003, allow the Agency to suspend or revoke licences. Such powers will be quite effective when it comes to dealing with persistent offenders. Ms Horan also comments that the extension to the landfill will impact on their visual amenity.

Ms Horan's objection is separated into six parts.

B.1 Buffer Zone

The objection questions the reduction of the buffer from 250m to the effective 105m adjacent to housing along the south-western boundary of the facility, and notes that the 'draft EPA site selection Manual (1996)' specifies 250m. The objection also requests that the buffer along the other boundaries of the facility be increased.

Technical Committee's Evaluation: There is currently no statutory guidance for 'buffer' zones around landfills. Buffers or 'cordon sanitaires' are intended to provide space or distance between an activity and a receptor for the purpose of mitigating an actual or potential risk to that receptor. And not all receptors are sensitive to the same impact. For example, in a landfill situation where potential impacts might include noise, dust, odour, visual, gas migration, leachate, etc.; a receptor such as a Coillte commercial tree plantation will not be as sensitive to noise as may a local house. An unlined landfill with no gas collection network may require a larger buffer to afford the necessary risk reduction for a local house than may be the case for a modern facility with full containment and collection. So the concept of a buffer will mean different things depending on the circumstance. The distance provided between an identified receptor and a landfill footprint will depend on, *inter alia*:

- The nature of the waste,
- The design of the landfill (containment, emissions control, etc),
- The landfilling sequence,
- The scale of operations,
- The environmental controls exercised during the operation of the landfill,
- Direction of prevailing wind, groundwater and surface water flow,
- The geology of the area,
- The topography of the area vis-a-vis the elevation of dwellings and the final profile of the landfill,
- The level of screening and landscaping provided,
- The type of receptor,
- Etc.,

The draft EPA document noted by the objectors in their objection is very dated and when eventually published will likely be amended significantly.

The oft quoted '250m' is derived from a very old piece of 1980's UK planning legislation (The General Development Order). This document flowed as a

government response to an explosion at a property as a result of landfill gas migration. The Order identified an area of 250m around a landfill where the risk of gas migration may present itself. In those days the use of gas extraction and landfill containment was exceptional, and so the risks of migration were high. The 250m is of course arbitrary (as gas can under certain circumstances migrate further), but was considered a reasonable planning control zone where certain potential risks had to be addressed. It did not result in the banning of development close to landfills in the UK, rather it required the assessment of any land for the presence of gases, or the adoption of Building Control precautions (gas membranes). The 250m planning control zone found its way into Irish development control documents (Building Regulations 1997 - Part C and the associated DoE Guidance 'Protection of New Buildings and Occupants from Landfill Gas', 1994). The Irish guidance notes that the 250m should be considered as a guideline; and in areas with particularly favourable gas migration paths, the gas may migrate further. Importantly the DoE guidance notes that in cases where there are gas control measures (e.g. containment & extraction) little or no gas migration may occur. The DoE documents, like their UK counterparts, considered the 250m as a zone around a *proposed development site* where the developer would check in particular for historical landfilling (i.e. no gas control measures likely), and where a risk needed to be assessed.

The 1996 draft EPA site selection manual included the 250m from the DoE guidance but without the qualifying text. Furthermore the EPA draft states that development within 250m of a landfill is not permitted by the Building Control Regulations. This is not an accurate reflection of the Building Control guidance discussed above. Indeed, the DoE 1994 guidance stated that no (private) houses should be permitted within 50m of an actively gassing landfill and no private garden within 10m. The emphasis on the 'private' is that there are many international examples of successful managed development (offices, apartments, etc) on former landfills. It is recognised in planning terms that private dwellings and gardens are harder to regulate and so their proximity to gassing landfills should be restricted.

So, in summary the 250m buffer noted in the objector's comments is taken out of context. It is not a general buffer to be applied for all potential receptors regardless of emission or impact. The Inspector's report to the Board with the Proposed Decision deals with the issue of proximity of the new cells to local residences. The Decision in fact prevents the landfill footprint from coming within 100m of local residences (the applicant had asked to place waste within 55m of one residence). The reasons cited were odour, noise and visual impact mitigation. Having regard to the design of the new cells (full containment with gas extraction) the technical committee are of the view that adequate protection from the risks of landfill gas are provided to the adjacent residences by the facility as captured in the Proposed Decision. Furthermore, and having regard to the advice articulated in the first paragraph of this response to Objection B.1, the buffers adopted in the Proposed Decision for other boundaries as articulated by the Inspector in her report to the Board are also considered acceptable.

Recommendation: No change

B.2 Landscaping of Buffer Zone & Visual Barrier

The objectors request that any proposals for planting in buffer zone and development of a noise barrier (as required by Conditions 5.8.1 and 5.8.2) should allow for input of local residents.

Technical Committee's Evaluation: The Technical committee consider it is correct for the operators of the facility to consult with local residents in the development of the aesthetic barriers. The conditions can be amended accordingly.

Recommendation: Insert new condition 5.8.4:

The licensee shall consult with adjacent residents in advance, in relation to any landscape proposals/measures required under Condition 5.8.

B.3 Bird Control

The objection suggests that children in the vicinity of the facility will be vulnerable to attack from birds of prey and that additional conditions may be necessary.

Technical Committee's Evaluation: On the risk of bird-strike on children in the area, the Technical Committee are not aware of any instance where a bird of prey used for control of scavenging birds on a landfill, instead attacked a child. The likelihood is very small. Records would suggest that such human 'attacks', though very rare, are usually prompted by human interference with a nest.

Recommendation: No change.

B.4 Pollution by the Development of the Groundwater

The objection is in relation to Condition 9.4.3. The objectors wish the term 'significant adverse effect' (as used in the condition) be defined. They consider that the exceedance of an EU Drinking Water Directive standard as constituting a significant adverse effect.

On a separate matter the Objection notes that a number of residences in the area have not received results from tests taken in their water supply in Nov. 2002 (presumably by the applicants or agents of the applicants). They want this data to be disclosed. This is not a matter for the Technical Committee, save to note that where such sampling took place, then the well owners should be informed of results. A copy of the objection is being forwarded to the Sanitary Authority, highlighting this aspect of the objection, for their attention and such action as they consider appropriate.

Technical Committee's Evaluation: The Objectors make a valid point that needs to be addressed. The landfill operators in conjunction with the Agency will have to set what is considered within the context of this condition, a 'significant environmental effect'. Otherwise the condition has no ready meaning. This will defeat its value in relation to the implementation of an emergency response. The condition requires the licensee to replace local water supplies in the event of there being a significant adverse effect on the quality of local groundwater supplies. Clarity is needed also to protect the

licensee from well quality issues not connected with the landfill. The condition refers to the replacement of – presumably - potable water. It may not be appropriate to set the EU treated drinking water standards as the trigger levels for determination of adverse effect, as local groundwater quality may (naturally) not be at this quality standard. Baseline water quality for the area needs to be established and from this a 'standard' developed. This needs to be agreed with the Agency.

Recommendation: Replace condition 9.4.3 with the following:

Within six months of date of grant of this licence the licensee shall submit to the Agency for agreement a proposal that will establish criteria to establish and determine significant adverse effect on groundwater quality as a result of land filling activities at the facility. Following agreement, and in the event that monitoring of local wells indicates that the facility is having a significant adverse effect on the quantity and/or quality of the water supply, this shall be treated as an emergency and the licensee shall provide an alternative supply of water to those affected.

B.5 Monitoring – Schedule D

The objector questions the scientific/human health basis justification for the monitoring proposed in Schedule D.

The Objection goes on to suggest frequencies for certain parameters which are at higher frequency to those specified in the licence.

Technical Committee's Evaluation: When the Agency issued the Proposed Decision it indicated that it is satisfied that:

- (a) any emissions from the recovery or disposal activity in question ("the activity concerned") will not result in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value, prescribed under any other enactment,
- (b) the activity concerned, carried on in accordance with such conditions as may be attached to the licence, will not cause environmental pollution,
- (c) the best available technology not entailing excessive costs will be used to prevent or eliminate or, where that is not practicable, to limit, abate or reduce an emission from the activity concerned,

[c.f. § 40(4) of the Waste Management Act, 1996]

Monitoring requirements specified in a licence are measures or actions that are considered appropriate to periodically check that the facility or operation is performing to design and/or licence conditions. Monitoring also serves to provide early warning of issues or events. The impacts of landfills, and emissions therefrom, have been measured and researched for over 30 years. There is a very large amount of data on the performance of these facilities available internationally. This huge reservoir of data, scientific understanding and experience acts to inform regulators such as the EPA on the appropriate monitoring frequencies to establish for a particular site having regard to the

site specific characteristics such as; proximity to receptors, waste types, design of facility, age of facility, etc... In a great many cases the monitoring requirements specified for Irish landfills are conservative, and err on the side of caution (i.e. bias in favour of protection of receptors). Monitoring frequencies are also informed by national and international (e.g. EU) guidelines and requirements. A landfill is a very large bio-reactor, sudden events in emissions generation are rare. Depending on the emission type it is not uncommon for certain emission to remain remarkably consistent over a period of weeks or even months. The more instantaneous emissions (e.g. noise, dust) would not fall into this category.

In any event monitoring frequencies and scope can be adjusted up (or down) to reflect levels of complaint, or the identification of issues.

In relation to five parameters/emissions the objectors asked for increased monitoring. These are:

Parameter/Emission	EPA Specified monitoring in PD	Objectors requested monitoring
Landfill Gas - Methane	Monthly (weekly in site offices)	Continuous, and that monitors be placed in all residences close to the proposed landfill
Dust	Three times a year	Monthly, and during operating hours
Noise	Twice yearly	Continuous, and adding a monitoring location to southern/south-western boundaries.
Groundwater - Metals	Annually	Monthly
Groundwater – List 2 Organics	Annually	Monthly

On the issue of methane gas monitors fitted to local residences on a long term basis; it is not generally advisable except in emergency situations. The instruments are fickle and can be set off by cooking gas, deodorants and hair sprays, paint fumes, other domestic fumes, as well as natural soil gas from peaty soils. Unreasonable panic can be caused. A strategically place monitoring borehole between the landfill and a house is usually preferable. In addition periodic hand-held (not fixed) gas-sampling of basements or underfloor spaces, or service ducts, can be undertaken. The new cells in this landfill are to be full containment with internal gas collection. The risk of gas migration should thus be very low. Natural laws of physics dictate that gases of a given density will in any space seek to diffuse until equilibrium (or uniform concentration) is reached. It is for this reason that landfill gases migrating in the ground are generally readily detected by appropriately designed (and located) monitoring networks (viz, wide migration front). There should be a gas monitoring point located external to the fill, and between the landfill and

proximal residences. An amendment to the foot-note of Table D.2.1 of the Schedule will clarify this. In addition these key residential monitoring boreholes should be monitored at a similar frequency to the site office (risk is equivalent), i.e. weekly.

On the issue of Dust monitoring the Technical Committee consider that given the proximity of residences along the south-western boundary (c.100m) then it would be a matter of good practice to monitor dust at a representative point in this location on a monthly interval (normal standard).

On the issue of Noise, and again given the proximity of residences to the south-western corner, it is considered that monitoring frequency at these receptors should be greater.

On the subject of Metals and Organics monitoring in the groundwater, and given the proposed design of the facility, the current frequency is about right for standard monitoring. In any event some of the most rapid indicators of leachate breakthrough are Conductivity, Chloride and Ammonia. In the current monitoring program these are on Quarterly frequencies. As noted earlier, a landfill is a large bioreactor where things evolve slowly; breakthrough of leachate to groundwater tends to fall from gradual failure of an engineering component at depth in the landfill. The implementation of Construction Quality Assurance on modern projects has reduced the likelihood of gross or rapid failures for in-ground facilities. In addition, the high quality leachate collection layers currently used - and which form the most important component of a lining system - prevent the perching of leachate on a liner and thereby reduce head (leachate head is the main driving force for leakage). So quarterly monitoring supported by monitoring of leachate head in the landfill itself, are good controls, and are adequate to monitor for breakthrough. Should breakthrough occur, then likely enforcement action would include immediate detailed analysis of the compromised groundwater (including metals & organics). Incident related monitoring frequencies and scope, are not necessarily the same as the regular monitoring established in the licence.

Recommendation:

1. Insert new footnote for Table D.2.1:

Note 3: The licensee shall ensure, to the Agency's satisfaction, that there are landfill gas monitoring boreholes located between the fill and identified proximal residential buildings. These locations to be monitored on a weekly basis.

2. Add footnote number to 'Site Office' text in frequency column of Table D.2.1:

Site Office^{NOTE 3}

3. Amend Note 2 of Table D.3.1 to read:

Note 2: Monthly interval for the monitoring stations(s) to be located in the south-western part of the site adjacent to residences. Otherwise, twice during the period May to September.

4. Amend heading to middle column of Table D.4.1 as follows:

Monitoring Frequency NOTE 2

5. Add new footnote 2 to Table D.4.1:

Note 2: Monitoring at noise sensitive receptors on the south-western boundary to be undertaken on a quarterly basis. One of these events to coincide with any construction works being undertaken at the time.

B.6 Economic Impact on Adjoining Properties

The objection notes that the proposed decision takes no account of economic impact of the proposed landfill extension on adjacent properties.

Technical Committee's Evaluation: A recent major study recently published (21/2/03) by the UK Department of Environment, Food & Rural Affairs concludes that:

... those properties sited within half a mile of a landfill site suffer statistically significant disadvantages. The value of houses situated less than a quarter of a mile away from a landfill site were an average of £5,500 lower than the value of a similar house not situated near a landfill site. For those houses over a quarter of mile from a site but under half a mile, this value was an average of £1,600.

This study - to identify and estimate the disamenity costs of landfill in Great Britain - was produced by Cambridge Econometrics in association with EFTEC and WRc. Disamenity costs are the local nuisance impacts caused by landfill activity and experienced by households living close to landfill. The local nuisance impacts include odour, dust, litter, noise, vermin and visual intrusion. The report also notes that there were considerable regional differences in property value 'disamenity'.

It is recognised that with modern control and operation of a landfill, the 'disamenity' factor can be mitigated. However, and as noted in the objection, there is very much a perceived impact on residential property value, particularly during the operational stages of a landfill.

Under the EIA Directive there is a means to assess the impact of development on land/property value via 'Impacts on Material Assets'. This has been done in Ireland for a number of motorway projects, particularly where impact on farm value is concerned.

The UK study did note that 'disamenity' was associated with nuisance which is controlled by the EPA under Condition 7 of the Proposed Decision. That said, the Technical Committee believe that the impact on material assets is primarily a land-use issue, and therefore is a matter for the planning authorities (or An Bord Pleanala as the case may be) in relation to their element of the EIA process.

Recommendation: No change.

C. Ms Sharon Bermingham & Mr Edward Bermingham

The Berminghams objection was attached to the Horan Objection. The Berminghams note that they are situated c.217m from the NE'rн boundary of the proposed extension [which is down-wind of the facility]. They state that they have been totally ignored in the decision. The Berminghams made three submissions on the application (one joint and two individual). They may not have seen the Inspector's Report to the Board with the Proposed Decision for the Rampere extension: and, although not specifically named in the report, their submissions on the application were considered along with those of others in the community in section 7 of that report. The Berminghams may not agree with the Inspector's findings, but it cannot be said the issues they raised were ignored.

The Berminghams also include photographs of drainage from the existing landfill, and vermin on their land.

The Berminghams make a number of objections to specific issues/impacts in relation to the proposed development.

C.1 Odour & Vermin

The objection alleges that assessments carried out for the EIS/EIA/licence determination did not consider them. The Bermingham family note that in condition 8.14.1 they are not considered to be a sensitive receptor [because they live 217m from the NE'rн boundary]. In their objection there were photographs of rats in their land.

Technical Committee's Evaluation: The objectors have a point. The landfill operators should be required to monitor for nuisance at sensitive receptors around all points of the facility. The identification of these sensitive receptors should have regard to, *inter alia*, proximity, complaint history, stage of operation of the facility, meteorological conditions, etc. There is no definition of sensitive receptor in the PD. The inclusion of same would act to safeguard the concerns of the Berminghams. In relation to the photograph of the rats, it is a recorded scientific fact that rats are ubiquitous in the Irish countryside. There is no indication as yet to show that the presence of the landfill has resulted in a large population growth in this common mammal. However, if future monitoring and/or complaints do indicate a larger than normal population being associated with the landfill and leading to the development of nuisance, then the landfill operators will be obliged to act (refer Condition 7.1).

Recommendation:

1. Replace the final seven words of Condition 8.14.1 with the following:

..... around the boundary of the site. Records of these assessments are to be maintained on site and available for inspection by Agency officers.

2. Include into the Interpretation section of the licence the following:

Sensitive Receptors	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of nuisance.
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C.2 Noise Barriers

The objection suggests that there will be noise nuisance along the north and east boundary and that noise barriers should be erected. The Berminghams question why this was not considered before the licence conditions were put in place.

Technical Committee's Evaluation: The amendments recommended for Condition 8.14.1 and the new addition to the Interpretation section of the licence should assist the Birmingham's concern on the noise issue, provided Noise was included in the understanding of Nuisance. Noise is clearly seen in the PD as being a Nuisance, though Condition 7.1 lacks this clarity. Some improvement to Conditions 7.1 and 8.14.1 would assist. Noise attenuation is something that can be readily put in place should an issue arise. Condition 7.4 (which require erection of noise barriers in the south-western part of the site) was deemed essential following assessment of impact on the receptors (c.100m from the fill area). The Birmingham's are located some 217m from the landfill. The fact that the north-eastern boundary is not specifically mentioned in Condition 7.4 should not diminish the protection for the Berminghams. They are located down-wind of the prevailing wind direction as established in the EIS; and noise can carry. The control of noise nuisance along all boundaries needs to be clearer in the licence, as does the protection of all sensitive receptors around the boundary of the facility.

Recommendation:

1. Add the text ', noise' after the word 'litter' in Condition 7.1.
2. Add the text ', noise' after the word 'dust' in Condition 8.14.1.

C.3 Buffer Zone

The Berminghams believe that the 5m buffer along the north and north-east boundaries provides insufficient protection to their family.

Technical Committee's Evaluation: You are referred to the Technical Committee response to Objection B.1 above, where there was detailed discussion on the concept of Buffer Zones. The Birmingham residence is c.217m from the edge of the landfill; the Technical committee consider that this distance, in association with the operational restrictions, control & monitoring provisions of the licence should provide adequate protection.

Recommendation: No change.

C.4 Landscaping – Clay Mound

The Berminghams note at the end of their objection that the 'mound of clay which is to be the end result will be an eye sore'.

Technical Committee's Evaluation: The licence conditions require the formal closing and restoration of the landfill. The EIS included details of restoration plans for the facility. EPA enforcement will ensure that the facility is restored as intended, thereby preventing the development of an eye-sore. In addition, and as detailed in the Technical Committee response to Objection B.2 above, the landfill operators are required to consult the local community in relation to landscaping proposals for the perimeter areas.

Recommendation: No change.

Overall Recommendation

It is recommended that the Board of the Agency grant a licence to the applicant

- (i) for the reasons outlined in the proposed determination and
 - (ii) subject to the conditions and reasons for same in the Proposed Determination,
- and
- (iii) subject to the amendments proposed in this report.

Signed

Dr J M Derham
for and on behalf of the Technical Committee