

REPORT OF THE TECHNICAL COMMITTEE ON
OBJECTIONS TO LICENCE CONDITIONS

TO:	Directors	
FROM:	Technical Committee	- LICENSING UNIT
DATE:	26 May 2005	
RE:	Objection to Proposed Decision for Greenstar Holdings Limited, Register No. 153-1	

1. INTRODUCTION

This report relates to an application by Greenstar Holdings Ltd. for a Waste Licence (landfill) at Annaskinnan, Co. Westmeath. Class 5 of the Third Schedule is the principal activity. The proposed landfill is located approximately 3.5 km north of Kinnegad and 3 km southeast of Kilucan, has a projected capacity of 1.9 million cubic metres (m³), and a life span of approximately ten years, handling treated commercial, municipal and industrial waste. The applicant in an Article 16 reply to the Agency on 14 May 2004 proposes to prohibit the acceptance of any organic waste to landfill.

The site (36 hectares) is situated in a rural setting and is bound to the west/south-west by residential properties along the Kinnegad-Killucan Road, to the north and south by agricultural land, and to the east by the Cloncrave-Ballyhaw Road with some residential properties on the far-side of that road. The Dublin-Mullingar railway line passes through the southern portion of the site. The landfill footprint will consist of a smaller parcel of 12.75 hectares. Currently, a busy active sand and gravel quarry (operated by Fergus Carey and Son Ltd.) is in operation across the whole site.

There were 98 submissions made in relation to this application and the Board considered these at proposed decision stage. The EPA approved the Inspector's recommendation to grant a Waste Licence and a **Proposed Decision** to grant a licence was issued on 11 January 2005.

Subsequent to the Proposed Decision, the EPA received 33 objections, and of these, 21 requested an oral hearing of the objections. The EPA on 22 March 2005 decided that an Oral Hearing of the objections was not required and took the view that the objections could be fully and adequately considered and assessed by **technical committee.**

A summary of the application details appears next page, as Table 1:

TABLE 1

APPLICATION DETAILS

Class(es) of activity:	3 rd Schedule: 4, 5(P); 4 th Schedule: 4.
Location of activity:	Annaskinnan, Killucan, Co Westmeath
Licence application received:	17/05/2001
PD issued:	11/01/2005
First party objection received:	04/02/2005 (#32) M. Dowling, Greenstar Ltd

Third Party Objections received:

No	Objector Name & Address	Oral Hearing Requested
1	Thomas Quinn, Annascannon, Killucan, Co Westmeath,	
2	Carmel Oxley, Derryboy House, Killucan, Co Westmeath,	✓
3	Vincent Nea, Annascannon, Killucan, Co Westmeath,	✓
4	Trevor Glynn, Annascannon, Killucan, Co Westmeath,	
5	Kevin Doyle, Annaskinnan, Killucan, Co Westmeath,	
6	Kathleen Leech, Annaskinnan, Killucan, Co Westmeath,	
7	Brian Oloughlin, Derrymore, Killucan, Westmeath,	✓
8	John Fagan, Annaskinnan, Killucan, Co Westmeath,	✓
9	Mary Keena, Annaskinnan, Killucan, Co Westmeath,	✓
10	John A Kehoe, Cushinstown, Killucan, Co Westmeath,	✓
11	Joseph Coleman, Annascannon, Killucan, Co Westmeath,	✓
12	Camillus Cole, Annaskinnan, Killucan, Co Westmeath,	
13	Patrick Crowley, Derryboy, Killucan, Co Westmeath,	✓
14	John Glennon, Annaskinnan, Killucan, Co Westmeath,	✓
15	William Kellaghan, Thomastown, Killucan, Co Westmeath,	✓
16	Martin Toner, Derryboy, Killucan, Co Westmeath,	
17	James Leech, Annaskinnan, Killucan, Co Westmeath,	
18	Sean Keegan, Annaskinnan, Killucan, Co Westmeath,	
19	Dermot Ennis, Annacannon, Killucan, Co Westmeath	✓
20	Karl Longe, Derrymore, Killucan, Co Westmeath,	✓
21	Colin Fox, Annaskinnan, Killucan, Co Westmeath,	✓
22	Paul Murphy, Hyde Park, Killucan, Co Westmeath,	✓
23	Denis Leonard, Trim Road, Kinnegad, Co Westmeath,	✓
24	Seamus Maher, Hyde Park, Killucan, Co Westmeath,	✓
25	Matthew Gaffney, Ballyhaw, Killucan, Co Westmeath,	✓
26	Adrian Ennis, Quinns Pub, Annaskinnan, Co Westmeath	✓
27	Pat Whelehan, Derrymore, Killucan, Co Westmeath,	✓
28	Declan Keena, Annaskinnan, Killucan, Co Westmeath,	
29	John Bourke, Hyde Park Stud, Killucan, Co Westmeath,	✓
30	Gerard Leech, Annaskinnan, Killucan, Co Westmeath,	
31	G.R. Walmsley, Cushinstown, Killucan, Co Westmeath,	✓
33	Enda Darby, Derryboy, Killucan, Co Westmeath.	

Submission on Objections received:	09/03/2005. M. Dowling, Greenstar Ltd
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2. CONSIDERATION OF THE OBJECTIONS BY TECHNICAL COMMITTEE

The *Technical Committee* (TC) included EurGeol Malcolm Doak (Chair), Dr Karen Creed, and Ms Pernille Hermansen. The TC examined and considered the thirty-two valid third party objections, the one valid first party objection, and one valid submission on objection. They visited the site for the purposes of considering the objections on 29 April 2005.

3. THIRD PARTY OBJECTIONS

As per Table 1, the EPA received thirty-two individual third party objections. An examination of the objections shows that each objection consists of the same two page letter but with differing attachments.

The TC reports on the objections in the following way:

- 3.1 Standard Objections;
- 3.2 Attachments to each objection

3.1 Standard Objections

The uniform letter contains seven points as assessed below:

- (i) *The proposed Waste Licence, if granted, would involve contraventions of and failure to meet the requirements of the Landfill Directive; the Waste Framework Directive; and the Groundwater Directive as well as failure to duly observe the procedures in the EPA Landfill Site Selection Manual.*

Technical Committee's Evaluation

The Agency satisfied itself, prior to the issue of the *Proposed Decision* (PD), that the carrying on of the activity would not cause environmental pollution. In addition it also carried out an assessment of the landfill application as per Articles 12 and 17 of the Waste Licensing Regulations¹ to determine compliance with the three EU Directives. Compliance with the regulations was coincident with the issue of an Article 14(2)(a) acknowledgement on 12 November 2002, confirming the application as valid.

The EPA *Landfill Site Selection Manual* document was drafted in 1995 and is incomplete. There is currently no statutory binding guidance for locating new landfills, although there is DoE guidance (1994) on the proximity of new housing and distances from existing/historical landfills (landfill gas). This matter was comprehensively

¹ SI No. 185 of 2000 & SI No. 336 of 2002 pertains to this application.

addressed by the inspector in Section 12.3 of his report.

Recommendation

No Change

- (ii) *There has been inadequate site selection for the proposed landfill. The report of January 2003 (Minerex Environmental Ltd) submitted to the EPA by Killucan-Kinnegad Environmental Group addresses the inadequacy of this. The EPA publication gives recommendations for site selection but those recommendations were not followed by the Applicant for a waste licence despite the fact that the same consultants acting for the applicant followed procedures of this in their County Cork operations. It is stated that the Annaskinnan site was acquired and that very little else was done to assess any other sites. The fact that the applicant failed to respond to the EPA request for 'summary details of alternative sites' in their letter of 23 April 2002 indicates that this was the case.*

Technical Committee's Evaluation

The same issue was raised in the submissions to the application and indeed the same documents were cited. These matters were discussed comprehensively in the *Inspector's Report*. The TC refers to Section 12.25 of the *Inspector's Report* 'Site Selection' which specifies that the applicant reviewed a total of three sites before adopting Annaskinnan.

Recommendation

No Change

(iii) *In siting a Landfill it is better practice to locate on a site where no damage would result from a failure of any kind. This largely refers to geological conditions. It is better to locate on an impermeable base than on a saturated permeable base, as at Annaskinnan. The latter would be a lot harder, or impossible, to clean up in the event of a failure. This has been learned from experience. It is therefore wrong to take such an avoidable risk with very significant adverse consequences in the event of a failure.*

Technical Committee's Evaluation

Section 4.4 of the *Inspector's Report* sets out comprehensively over three pages the hydrogeology of the site and includes details of the proposed liner design with calculations. The proposed landfill is to be sited on restricted sand & gravel deposits which overlie a till/on bedrock sequence. The aquifer properties of the gravel interval are not extensive but data limitations cannot rule out larger deposits and hence a 'Locally Important' aquifer rating was specified by the Geological Survey of Ireland (GSI)².

A sand and gravel extraction facility is excavating aggregate to below/at the watertable across the middle of the site coincident with the proposed landfill footprint (See Table 2). Groundwater is actively pumping from the gravels and is used as a process water to wash/size gravels. Arising effluent flows naturally to a low point in the south-west portion of the quarry floor where it is left to discharge directly into groundwater³ without any treatment or attenuation (see **Plate 1**). Hence con-tamination of the groundwater is ongoing and may be having an impact on local wells as shown by recent groundwater monitoring results for GW1 submitted by the applicant in April 2004 (adjacent to quarry effluent discharge zone and nearest housing) with elevated levels of zinc 5mg/l; mercury 0.05mg/l; arsenic 2mg/l; and suspended solids 7580mg/l. Local authority records and EPA drinking water returns show ALL domestic dwellings in the area are attached to mains water loop of Kinnegad/Mullingar. This is in spite of the well audit of 2001 carried out by consultants for the objectors which identified 19 wells within the 500m boundary of the proposed landfill

² GSI letter to EPA. 21 March 2002.

³ SI No. 42 of 1999. Present activities on site require a discharge licence from the local authority; site is currently contravening the Groundwater Regulations.

(although their construction and pumping status was not reported), and *the applicant* which reports eight wells are in use (but only 2 of the 8 are boreholes to 20m, the others are dug to 4m), and the objectors via the individual objections suggest 10 wells are available (but don't report pumping).

The TC is satisfied that the underlying geology and limited aquifer extent, poor groundwater quality, few number of constructed abstraction boreholes, and the service of a drinking water mains, indicates the gravels are more likely to require a lesser response rating of R2².

Nonetheless, *the applicant* by having regard to the precautionary principle and the GSI letter of 21 March 2002, adopted the recommended DoE/EPA/GSI response matrix rating of R3² to the project, through:

1. the installation of an engineered 0.5m BES⁴ mineral layer with an impervious permeability⁵ of 1×10^{-11} ;
2. and the construction of a groundwater interception drain along the western edge of the landfill footprint **,

** *The TC notes item 2 is omitted from the conditions of the PD, other than a reference in the 'Introduction' to the PD, and arising monitoring requirements in Schedule C.3.*

The objections refer to experience of landfill failure. A comprehensive survey of landfills has been conducted in the UK⁶. A total of 85 failures were recorded, the large majority of these occurred during construction, or from failure of the mineral layer through basal heave where there are shallow groundwater conditions with unsuitable groundwater

⁴ Bentonite Enhanced Soils are mixed onsite at cement like batching works. The arising clay/cement mix is laid to highly engineered standards in 250mm lifts.

⁵ The computer risk assessment model 'LandSim' was used by the applicant to establish the LFD 'equivalent' environmental protection for the mineral liner, and calculated a rate of leakage from the mineral liner of 53 litres per day per hectare, compared to 635 L/day for the normal permeability 1m layer at 1×10^{-9} .

⁶ *Lessons Learnt From UK Landfill Failures*. D.R.V. Jones, N. Dixon, & S.M. Storey. Proceedings Sardinia 2003, Ninth International Waste Management and Landfill Symposium, Cagliari, Italy; 6 - 10 October 2003.

monitoring. The current monitoring regime at Condition 6.11 (nine wells) will address the UK experience, but the TC recommends the *formation level* of the landfill be fixed at 78.6m OD into the licence, since this will ensure that the base of the lining system (base of BES layer) will be above the winter (28/1/2004) watertable, and provide clarity to the licensee during construction of the landfill.

The TC recommends the following amendments; to fix the formation level and correct the toe drain omission as above, but qualify it since the local population appears not to be using the groundwater, and groundwater quality is poor. Further the TC recommends the removal of Condition 6.11.2 since it requires the licensee to do works where groundwater supply is damaged – the TC consider groundwater in the area is already compromised and remediation for metals removal, chlorination and filtering would be required to make safe the groundwater for drinking water.

Recommendation

INSERT the following sub-condition after Condition 3.11.1:

3.11.2 The formation level of the landfill (base of mineral BES liner) shall be at 78.6mOD as based on Drawing No. Figure 3: Water Level Data of the *Article 16 response 14 May 2004* and winter watertable of 28 January 2004.

INSERT the following sub-conditions after Condition 3.24.2:

3.24.3 One year after the date of waste acceptance, the licensee shall submit to the Agency for its agreement SEW proposals for the provision of a groundwater management toe drain at the western side of the landfill footprint, as described in the *Article 16 response 14 May 2004*, to determine a groundwater management strategy for the facility. The groundwater strategy shall be agreed by the Agency and shall be implemented within a timescale specified by the Agency.

3.24.4 Any groundwater toe drain shall discharge to the surface water settlement lagoon.

3.24.3 Details of any groundwater toe drain including depth and type of matrix shall be agreed by the Agency as specified in Conditions 3.5 and 3.6.

DELETE sub-condition 6.11.2 .

(iv) The grant of the proposed waste licence subject to the twelve limited conditions would defeat the aims of the overall objective in Article 1 of the Landfill Directive to prevent or reduce as far as possible negative effects, on the environment, in particular the pollution of surface water, groundwater, soil and air, and on the global environment, including the greenhouse effect, as well as any resulting risk to human health from land filling of waste during the whole life-cycle of the landfill.

Technical Committee's Evaluation

The Agency shall not grant a waste licence unless it is satisfied that the following Sections of the Waste Management Acts are met:

40 (4)(b) the activity concerned, carried on in accordance with such conditions as may be attached to the licence, will not cause environmental pollution,

40 (4)(bb) if the activity concerned involves the landfill of waste, the activity, carried on in accordance with such conditions as may be attached to the licence, will comply with Council Directive 1999/31/EC on the landfill of waste (LFD).

Hence the licence once issued will be compliant with all terms of the LFD, as per the underlined above.

Further, in the case of this landfill at Annaskinnan the applicant has voluntarily proposed to 'prohibit the acceptance of organic wastesand be a residual landfill'⁷ as set out in its Article 16 response of 14 May 2004 and accompanying newspaper notice, rather than be a standard municipal waste landfill. This will ensure that the landfill will have reduced odour, leachate potential, and nuisance caused by bird/vermin scavenging (nuisance) and shall minimise the production of methane gas and hence meet the obligation of Recital 16 of the LFD.

The TC however considers the banning of organic waste at Annaskinnan would be impossible to achieve/enforce since residual wastes can contain biodegradable residues even after treatment, as set out in the DoEHLG *Draft National Strategy for Biodegradable Waste* document⁸. Other than residual landfill it is noted the outlets for residual waste are thermal treatment with energy recovery and Mechanical-Biological Treatment (MBT), but neither are yet developed in Ireland.

The TC consider that the licence should specify that all waste streams shall be pre-treated (off-site), to remove all, as is allowed by current commercial technology, organic wastes. Hence the licence shall stipulate only residual waste shall be accepted at the landfill, as per the recommendation (next box).

As a final point, to standardise the Annaskinnan landfill and meet BAT, the TC considers Part I of the licence be amended to specify the landfill facility as an engineered facility only. The use of Class 4 3rd Schedule applies only to older extended landfills where deep burial or sludge/liquid injection has occurred. This will not impact on the provision of any lined leachate/surface water lagoons since Class 5 covers this too:

⁷ The Draft National Strategy for Biodegradable Waste defines Residual Waste as: *mixed waste produced by households or businesses after all materials suitable for recycling and biological treatment have been separated out, residues from recycling and biological treatment operations and other waste that is unsuitable for recycling.*

⁸ Also, the term 'organic waste' can include grass, soil, carpets, paper and cardboard, etc.

Recommendation

DELETE the following as marked by strikeout:

- Part I Schedule of Activities Licensed
In pursuance of
- ~~Class 4. Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.~~
- Class 5. Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.

INSERT the following as marked with underline:

SCHEDULE A Limitations
A.1 AUTHORISED PROCESSES
The following waste related processes are authorised:

- i. Landfilling of residual non-hazardous waste (asbestos excepted, refer Condition 8.3)
- ii. etc.....

A.2 WASTE ACCEPTANCE
Table A.1 Waste Categories and Quantities
Only RESIDUAL Wastes shall be disposed of at the landfill facility as per Condition 8.1.1.

AMEND the following as marked bold:

8.2 Inert Waste
Inert waste accepted at the facility shall comply with the standards established in the EU Decision (2003/33/EC).

INSERT the following as marked with underline:

Glossary of Terms

Residual Waste:
Mixed waste produced by households or businesses after all materials suitable for recycling and biological treatment have been separated out, and residues from recycling/biological treatment operations, and other waste that is unsuitable for recycling.

(v) *In particular the Waste Acceptance Hours and Hours of Operation permitted by Condition 1.8, that is to say, 0800 to 1830 Monday to Friday and 0800 to 1600 on Saturday would involve serious and unacceptable congestion of delivery vehicles to the facility, and pollution to the environment on narrow unsuitable access roads on which a growing number of private residences are situated.*

Technical Committee's Evaluation

The matter of traffic is one for the planning authority and on appeal An Bord Pleanala (ABP).

(vi) *Landfill project is not in line with the relevant Waste Management Plan as required by Article 8 (b) of Landfill Directive and the proximity principle in EU law.*

Technical Committee's Evaluation

The same issue was raised in submissions to the application. These matters were discussed comprehensively in the *Inspector's Report*. The TC refers to Section 12.9 'Conflict with Waste Management Plan' of the *Inspector's Report*.

Recommendation

No Change

(vii) *The Proposed Decision and the Conditions attached thereto rely excessively on the proposed licensee to fulfil the Conditions of the licence, which in important instances leave the entire discretion to the licensee as to how the licence will be operated, for example, in Condition 9, in relation to the creation of a documented Accident Prevention Policy and an Emergency response procedure with no provision by the Agency for approving the Policy or procedure as satisfactory.*

Technical Committee's Evaluation

Conditions 9.1 and 9.2 specify that both the Accident Prevention Policy and Emergency Response Procedure be provided prior to the commencement of waste activities. Condition 9.3 determines the many requirements of the licensee in the case of an incident that adversely affects the environment. The facility will be subject to Agency inspections and audits to ensure licence compliance. Emissions from the facility will also be sampled and analysed by the sampling and monitoring team of the Agency. Licensee discretion with a licence and the terms of its conditions is not possible. Further, the primary business of landfilling cannot commence until the Agency has given its agreement as specified in Condition 3.4.

Recommendation

No change

3.2 Attachments to Each Objection

The proximity of housing, arising potential nuisance, deterioration in groundwater quality, increased traffic, and health matters are central to the attachments of each third party objection.

All 32 third party objection attachments have been tabled for convenience (see Table 2, next page) and are classified into SIX themes:

THEMES	Reference in Table 2
Nuisance	A
Surface water & Groundwater	B
Health Impacts	C
Habitat Impacts	D
Traffic/Planning/Waste Plans	E
Proximity of Housing	'Distance to Landfill'

Technical Committee's Evaluation

Nuisance

Twenty three objections received refer to nuisance. The issues in relation to nuisance were predominately concerned with birds, vermin and odour. Condition 5.6 of the PD specifically provides for the control of such nuisances and Condition 6.22 provides further control for birds. Further residual waste is only authorised at the landfill as discussed in section 3.1 (iv) above.

Surface Water and Groundwater

The objections referred to contamination of private wells (10 individual wells), the Royal Canal (it has not been fully demonstrated that the proposed landfill will not cause pollution of the Royal Canal, 600 metres away) and water pollution in general. For private wells refer to section 3.1 (iii) above, and for the Royal Canal, refer to Section 12.2 of the Inspector's report. Further, it is the TC's view that canal is clay lined and would lie above any water table, hence contamination cannot occur at the canal unless it is fed by surface water/accidental spillage upstream.

Health impacts

Objections were concerned with both human and animal health. The main concerns were pollution of water, air and land. Where the EPA grants a licence for a waste facility it is satisfied that the facility will not endanger human health. Further, refer to our discussion

regarding Section 40(4) of the WMAs as per section 3.1 (iv) above.

Habitat Impacts

Habitats and wildlife were mentioned in a limited number of objections, and in particular within objection No 31, which states that the scaring of protected wild birds is only allowed under the Acts where damage is being caused to agricultural, fisheries and forestry. Condition 6.22 of the PD manages this matter comprehensively and requires Agency agreement. The use of birds of prey is an option, as is the use of other static bird scaring techniques. The use of gas bangers is prohibited. There are no issues with the use of birds of prey from the viewpoint of welfare groups as it is felt that the practice does not cause actual physical harm to scavenging birds. It is used only as a technique to create an intimidating atmosphere for the aforementioned scavengers.

Traffic/Planning/ Waste Plans

With regard to Waste Management Plans and concerns about 'importing waste' from other regions, a recent Ministerial Direction (3 May 2005 WIR:04/05) confirms that one of the fundamental components of policy in regard to the regulation of the movement of waste is the enabling of 'inter-regional movement'. *The objections in relation to traffic noise were for the most part in reference to noise levels currently at the quarry and from increased levels of traffic. The competent authority in both these cases is the planning authority. Noise levels during the operation of the facility will be controlled by Condition 4.5 and Schedule B.3.*

Proximity of Housing

The issue of proximity to the landfill site and footprint is common with 11 objections specifying distances from the landfill edge (but not footprint) ranging from 50m - 175m. The TC refers to Section 12.3 of the *Inspector's Report 'Site Selection'* which debates the issue further.

The TC examined this in detail during the site inspection and the entire southwestern/western boundary was walked, and various distances from rear gardens to the landfill were paced out. The TC noted that several existing quarry spoil heaps/unexcavated faces lie between the housing and the landfill footprint (where filling is to occur) and rise to the natural high levels,

as deposited in the esker. These ridge deposits running north/south form an ideal screen between housing and gardens and the landfill footprint (see **Plate 2** which illustrates these features). The TC recommends that the existing gravel faces/stockpiles on the west side be worked into a new proposal for immediate restoration via a new Condition at 10.2.2. Further, the landfill footprint on the west side shall be amended, to fix it to the break in slope which runs between wells GW1 and GW4, as viewed in **Plate 3**. The new revised footprint will result in individual dwelling houses at the south-west corner (not gardens) having an increased distance to the landfill footprint by c. 20m to range at 175m to 200m, rather than the range of 155m to 180m specified in the PD. Filling should start on the west side immediately so that landscaping works on the west side are developed in unison.

The Technical Committee notes that the current footprint as referred to in Condition 3.2 (Drawing no. 0501014/01/518 'Proximity of Dwellings') is difficult to discern due to the small scale of the drawing. The TC consider that the following drawing reference be utilised since it presents the landfill footprint clearly with a larger scale, and is juxtaposed onto topographic and individual groundwater wells, aspects which can be used to better fix the footprint.

Overall the TC recommends the following:

Recommendation

AMEND Condition 3.2 by inserting the bold text as follows:

The landfill footprint (maximum aerial extent of landfilling) shall be as indicated in Drawing Reference **Figure 3 of the Article 16 response 14 May 2004**. **The western portion of the landfill footprint shall be reduced to a straight line as drawn between points GW1 and GW4.**

AMEND Condition 3.5.2 as marked bold:

Unless otherwise agreed, and so as to permit the necessary time for establishment and maturation of landscaping measures for impact mitigation, the operation of the facility shall commence with **Phases 1 and 2** (as indicated in Drawing Reference 0501014/01/520).

INSERT the following sub-condition after Condition 10.2.1:

10.2.2 Unless otherwise agreed the existing banks of lands on the west side of the landfill footprint set out in Condition 3.2 shall remain intact, and shall be incorporated into the landscaping documentation.

Submission on Objection The applicant (7 March 2005) submits on one page that having studied all objections, none of the points raised should prohibit the granting of a waste licence for the proposed facility.

PLATE 1: Current quarry operations allow effluent to flow naturally to a low point (see insets) where it is left to discharge directly into the watertable and aquifer. 29.04.2005



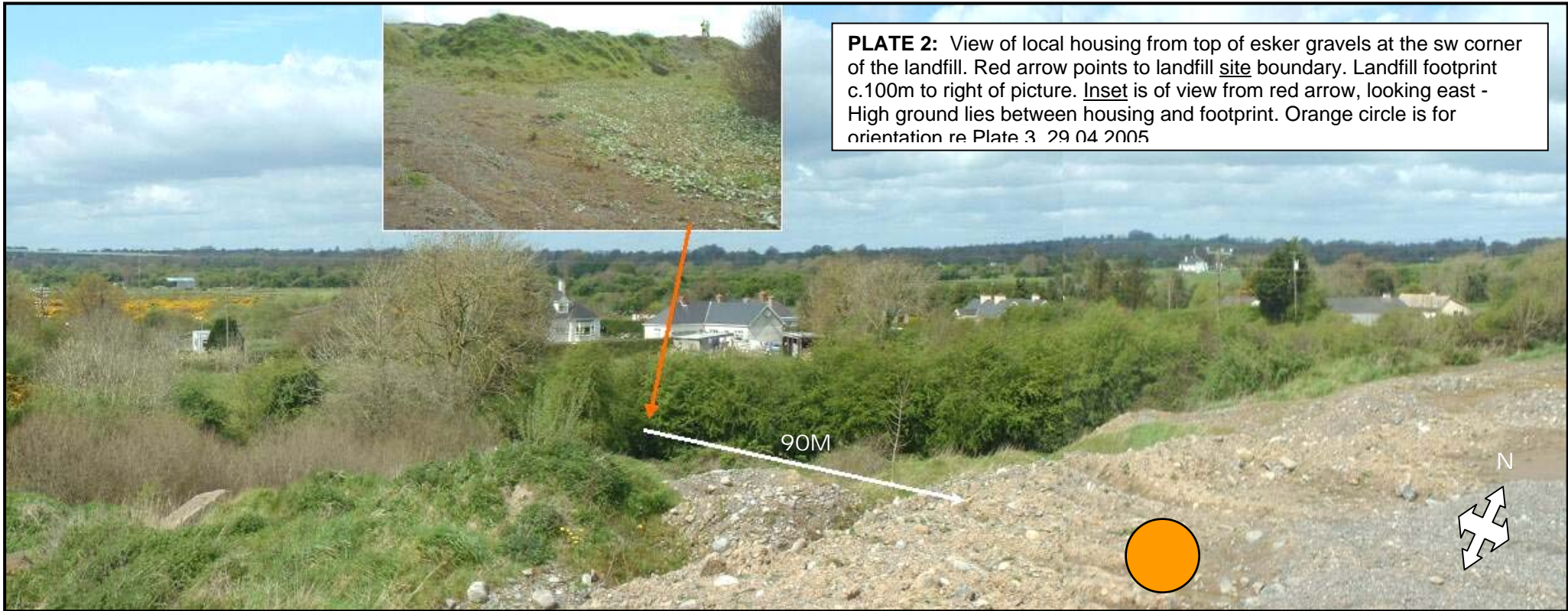


PLATE 2: View of local housing from top of esker gravels at the sw corner of the landfill. Red arrow points to landfill site boundary. Landfill footprint c.100m to right of picture. Inset is of view from red arrow, looking east - High ground lies between housing and footprint. Orange circle is for orientation re Plate 3 29 04 2005



PLATE 3: Panorama view of landfill sw corner. Orange circle orientates photograph to the same orange circle in Plate 2. The groundwater discharge weir of Plate 1 is to the right of picture. **The Inspector is standing at GW1** coincident with proposed landfill footprint. 29.04.2005

TABLE 2: SUMMARY TABLE OF THE 32 ATTACHMENTS TO THE OBJECTIONS

		A Nuisance B Water & Groundwater C Human Health/Livestock D Habitats G Traffic/Planning/ Development Plans/Waste Management Plans/Ammenity	Themes of Grounds			
Obj No.	Name	Comment	Themes of Grounds	Distance to landfill		
10	Kehoe	LF will cause nuisance from vermin, noise pollution to the local environment of air and water. Substantial filth from delivery vehicles which will impact negatively on the health of local residents including the objector and objector's family. Furthermore adopt the several other grounds of objections and the reasons, considerations and arguements therefor now being lodged by Mr Walmsley acting on behalf of the Killucan-Kinnegad Environmental Group.	A	B	C	
24	Maher	Dwelling 1 mile from LF, afraid of pollution to water, debris carried by wildlife are a serious health hazard.	A	B	C	
15	Kellaghan	Presence of dump would devastate the natural eco system of the area - lead to significant decrease in the numbers of wildlife currently found in the area. Site proposed on location of saturated permable base the pollution that would be caused to surface and groundwater should result in the loss of aquatic life and would contaminate drinking supply for livestock. Noise ELV exceeded during initial site developoement works at nearest residence located 150m form LF footprint - many houses located closer than 150m when curtilage of the house is included. Overlap of mining and waste operation will increase noise levels from traffic associated with both acitivities. Dramatic increase in volume of lorries using Killucan-Kinnegad road. Emissions from lorries when stopped at railway and for weigh-in will result in decrease of air quality. Use of birds of prey will lead to decline in bird population. Articles 2 & 3 of the Birds Dir. Cultural Heritage, Habitats and Protected Species that amo	A	B	D	
1	Quinn	Own well. Health of family, not healthy working environment, house about 250m, air pollution dust, water pollution, vermin, road transport	A	B	E	
21	Fox	Noise levels during 2 year overlap of mining and landfilling would be unacceptable including noise from vehicles waiting a rail crossing, next year an hourly train service from Mullingar will further cause delays at the crossing - this was not taken into consideration when decison of proposal to grant a licence was given. Recent UK reports on LF showed significant increase in lower birth weights in houses closte to LFs - close proximity particularly for young families where given no due consideration by the Agency. Viusual impact of the completed landfill cap was not taken into consideration by the inspector. Odour -close proximity were not given due consideration nor any guarantee or stated amount given by the applicant as to how much these measures would reduce the odour nuisance. Hours of operation excessive- EPA did not consider impact on local residents. Increased levels of stress, anxiety and detrimental effects on health has not been taken into account by the EPA when considering the application.	A	C	G	
33	Darby	Proximity to house - 150 m from site. Trucks sitting at railway crossing wil pollute air and be a huge nuisance factor as well as a huge infringement on personal safety and welfare. Family - passing traffic will mean that children will not play in garden for fear of lorries travelling at high speed. Objectors suffer from respiratory infections. Health will be affected due to the increase dust and dirt particles in the air due to excessive traffic and dump in general. Essential for objector's health and the welfare of the children to remain living in a safe, clean and stress free environment. rat infested dump would not be healthy. Will not get value of the house if selling it. View from kitchen and garden will be dump. Will affect lifestyle - who will	A	C	E	150M
8	Fagan	House on elevated site overlooking LF - affect visual amenity of the local landscape. Proximity to LF - affect respiratory condition which would be aggravated by toxic dust and gas emissions. Increased vermin and scavenging birds populations unacceptable. Threat of proposed LF affect objector's well-being due to worry and anxiety. Operating hours quiet lengthy - will be living with negative side effect 24/7.	A	C	E	
13	Crowley	All aspects of the development which pertain to health are of great importance to the objector. Boundary of site only 50m away. Increase in traffic will mean can't walk as advised to do by doctors and can't go elsewhere for walks as can't drive. Non-Hazardous facility - accepting asbestos which cause lung cancer and is therefore a serious health hazard. Proximity to LF will cause total pollution of objector's property. With air pollution, vermin, birds etc and pollutant gases emission can forget about horticulture in the future. Danger of general pollution from run off grave doubts of suitability of private well. Traffic will be passing house every 2-3 min. and railway gates means that traffic will be backed up in front of house for considerable time periods - will be huge nuisance factor as well as a huge infringement on ojector's personal safety and welfare and visually will be an eyesore.	A	C	E	50M
29	Bourke	Farm, bloodstock and house supplied by well water. The LF would ruin the entire beauty of Hyde Park Stud Farm and its surrounding areas. Royal Canal will be destroyed. There would be lot of fly tipping. Hyde park Stud farm - public stud farm only main source of income and in the windpath. Fertility of mares and stallions dependant on local environment, require dust free air and non-polluted water. Local roads can not take greatly increased traffic.	A	C	E	

30	Leech	The most beautiful countryside on this earth turned into a rodent, insect infested poisonous super dump. Serious financial implication for objector & family. Concerned with emotional effects and also affected healthwise, leisurewise and travelwise.	A	C	E	175M
16	Toner	Birds will be drawn to LF - proposed birds scarce tactic would affect the noise levels. Adverse effect of vermin and flies. Photo text: 1 & 2: traffic waiting at train crossing will cause noise pollution and vibration and hazardous condition for traffic. 3: Damage done to edge of road and grass verge. 4: difficulty in manoeuvring lorries through the narrow railway gates.	A	E	-	175M
26	Ennis	Pub adjacent to the canal. Close proximity to LF would cause odour, toxic fumes, lorries carrying poisonous materials like asbestos, vermin. Increase in noise pollution. No consideration to protect the hard work the community has put into restoring this elegant area and natural habitat. It will adversely affect objector's business.	E	A	-	
9	Keena	Constant smell in house and on the washing. No fresh air in house and no walks due to the unhealthy smell of the LF. Rats, birds, litter and dust would leave our lives a misery. Rat infested unhealthy mountain of rubbish 155 m from our home. Increased traffic will leave roads very dangerous to local people - with fumes from traffic and dump locality will be highly polluted. House will devalue who would want to live in a noisy, smelly, polluted countryside.	E	A	-	155M
11	Coleman	175 m from LF - vermin and smells would become major health hazard. Roads directly in front of house unsuitable for large volumes of traffic. Noise level would be unacceptable. Lorries would be backed up to entrance of house when railway gates are closed.	E	A	-	175M
2	Oxley	Health hazard, pollute air with gas emissions & dust, methane gas - global warming, odours affect air which we breathe, own well, LF adversely affect water table, high level of noise, huge increase of traffic, prospect of overlooking waste facility, amenity of canal, community conscious about recycling - efforts in vain, LF foisted upon us with other people's rubbish.	E	A	B	
6	Leech	Adverse effect on the amenities on an adjacent occupier or user, result in unacceptable emission of noise, fumes, dust, water and soil pollutants, grit or vibration. Royal Canal destroyed by this development, . Own well contaminated by leakage into soil.	E	A	B	
17	Leech	Objector's family lived in area for generations, prize its rural setting and enjoy amenity of the canal. If granted licence poses a severe threat to our heritage by pollution of air and water. Uses well for drinking water purposes. Anxiety about health issues brought about by emissions of fumes, noise, contaminated dust, water and soil pollutants. Will be unable to open windows or front doors with smells. Greenstar cannot guarantee no smells - know this from their site in Kilcullen. Cannot be guaranteed that contaminated dust will not affect our health, crops and vegetables. Family of four some of them would like to build in the area - sad day if Greenstar determined where they live no other reason than greed. The area has a thriving recycling industry which received a 1st prize from An Taisce.	E	A	B	
18	Keegan	Objecting to the fact that the Agency see fit to pollute and poison a beautiful area. Grows vegetables and has own well - site will pose serious risk of contamination to my land and water supply. Tranquility of area will be polluted by noise from site and there will be increase in air pollution from trucks. Canal - destroy any amenities that are or could progress - huge tourist attraction. Property devalued. Vermin worrying factor. Poisoning of vermin could have serious consequences on the wildlife. Facility non-hazardous - accepting asbestos waste , health hazard.	E	A	B	170M
3	Nea	Roads not wide enough to cope with increased traffic, air will be polluted, vermin carry disease, increased traffic will make walking impossible and dangerous, house devalued, contaminate water supply - own well	A	B	E	
14	Glennon	Depend on very good supply of spring water - now run risk of being contaminated. Volume of heavy goods vehicles will lead to greater noise pollution together with toxic fumes and dust discharged from cargoes of rubbish poses a health risk. The lorries will at times be carrying asbestos and other poisonous materials. Pest infestation which would be impossible to control. Canal - local amenity threatened, natural habitat for many species, adversely affect tourism. Appears to be lack of consideration for the health and safety of the local people and undermining of hard work done in restoring this unique area.	A	B	E	
19	Ennis	Extra traffic will cause pollution from noise and fumes. Potential accidents on roads. No infrastructure for this traffic, how will noise limitations be enforced? Well in close proximity to LF - this will probably be contaminated by leachate. Object because of the contamination of the countryside with smells of vermin and dust and the possibility of chemicals being disposed at the site. Will bring in vermin, birds, flies in large numbers. Contamination will affect this generation's and future generation's health. Will damage the tourism potential of the canal.	A	B	E	
20	Longe	Live and work in close proximity to designated site - fear for future in farming. Contamination of feed from birds scavenging LF. Flies also cause of contamination as carrier of infection. Contamination from particles in air onto pastures and crops which animals consume. Contamination of water supplies from failure in the sealing process in the LF allowing the leaching of toxins into the water table. Supply milk for human consumption - any ill health in animals would be out of business. Increase in traffic will decrease road safety for objector + family. Mean big delay due to rail crossing, rail crossing narrow only allow passage of one vehicle. Road objector lives on short cut by-passing Kinnefad would be attractive to lorries with waste. Acceptance of asbestos allowed, Asbestos, methane and carbon dioxide gases in atmosphere along with emission from lorries would be unacceptable health risk. Large volume of machinery needed at LF will cause unacceptable level of noise pollution able to hear from house.	A	B	E	

4 Glynn	Water from own well contaminated, vegetables contaminated, plants destroyed, vermin carrying disease, flies not able to open windows, birds excess bird droppings, increased heavy traffic - danger for children, build up of heavy traffic and heavy goods vehicles at level crossing, health -family member with asthma, vibration will be felt from site/site vehicles, dust, noise, canal, young family, built home on conditions that we would have a healthy environment for children, 150m away from LF.	A	B	E	150M
5 Doyle	Possible pollution to water courses due to leachate leakage, own private well, noise and air pollution from vehicles, nonhaz LF - acceptance of asbestos waste, road safety - road unsuitable for volume of traffic, royal canal -amenity usage	E	B	A	
7 O'loughlin	LF poses a serious threat to health and well-being. LF permanent threat to family water supply. Canal - devastated that boating trips consisting of sailing by the stench of decomposing rubbish. Kinnegad and Kullucan/Rathwire have had boom in population, probably half is children - LF serious threat to their health and quality of life. Traffic generated will be enormous -roads not adequate. Lousy planning not dealing with waste disposal where the problem arises, transporting and handling will involve yet more pollution and consumption diesel, fumes, noise etc.	E	B	C	
23 Leonard	LF massive environmental threat to the town of Kinnegad - new town development near traffic to Anniskinnan and LF only 1.5 miles from majority of homes. Not in accordance with County Development Plan for Westmeath 2002-2008 - EPA decision undermines this directive. Midlands Waste Management Plan, government policy and EU LF directive precluded this type of development. Object to Section 7 of the IR stating that "regional/county borders do not restrict the movement of waste. Eu proximity principle - high level of Dublin waste into LF would mean nearly all the waste traffic going through Kinnegad. EIS - 40 truck per day - Kinnegad Development Plan 2002 did not take into account huge increase in commercial traffic. Killucan Rd narrow, vehicles significant impact on local environment through emission, smells, dust, grit, vibrations, road erosion, children's safety, noise and future unknown pollutants, road used by children and walkers. Canal - natural amenity destroyed by development. Concerned for natural her	E	B	C	
28 Keena	Endanger objector & family and inflict greatly on lifestyle. Home situated 150m form LF. Fearful of gas emission, rodents, noise and leakage of pollution into objector's well and rivers and the Royal Canal. Endanger wildlife in the area. Depend on farming for livelihood - Great concerns for the health of livestock.	E	B	C	150M
25 Gaffney	Objector always lived here, house and farmyard located 600 m N of LF. Current landscape viewed from front door will be replace by a mountain like mound of waste. Has been dairying for the past 30 years. "North stream" flows directly forim LF through objector's land - dairy herd drink water.	E	B	C	
27 Whelehan	Familyconcern with their future well-being with prevailing winds and nautrual flow of several small streams and drains bringing any leakage effluent etc straight towards them. Quality of local well water. Royal canal natural local recreation area. Huge amount of traffic generated by LF, effect on local roads which are both narrow and poorly surfaced and the risk posed for locals. Objector involved in the creation of a man-made fishing facility as long-term business plan - at a stroke this will turn years of work and investment to dust.	E	B	C	
12 Cole	emission from LF might harm children living and playing in the area. Proximity to house -50 m from buffer zone. Risk of rodents, Weil's disease who is going to guarantee the safety of our children. To build LF shows that the countryside no longer represent clean living but a life of noise pollution, air pollution and water pollution. Major increase in traffic flow. Railway tracks would mean prolonged stationary periods for the trucks in close proximity to the house - excessive exposure to emissions and noise on top of the unnecessary proposed exposure. Worried of water supply contamination - own well. Disastrous effect on the lifestyle of people living in areas with LF (Dunsink, Dublin & Kilcullen, Kildare). Don't think any one can fully guarantee that the effluent from waste which will in no doubt seep into our soil, will not affect our crops and plant life.	E	B	C	50M
31 Walmsley	Recreational areas of houses lie 70m distance, proximity. Gardens are used for vegetable plots. No risk assessment has been undertaken. Increase traffic in associaton with busy railway crossing. Disagree with importing wastes from Dublin. Discharge from SW lagoon to 'north stream' contravenes Groundwater directive. <i>TC Response: The GW Directive doesn't apply . Further, Schedule B2 of the licence will control Q to the river.</i> No recent site inspections done yet current sand & gravel quarry is bigger and appears to have impact on groundwater. Liner degradation issues. Odour issues and BnM attachment included. <i>TC response: See Section 12.12 of Inspector's report, no new information, already addressed in IR.</i> Noise and traffic. Any bird management scaring techniques will affect local Royal Canal populations.	E	B	D	70M (this being garden not a building)
22 Murphy	Standard letter. No additional grounds.				
32 Dowling	Applicant. Objection to Conditions: 3.2, 3.11.1.(d), 6.14.2.(d), 8.1.10, 10.3, 12. Schedules: C.3 Air Monitoring, Groundwater Monitoring, Receiving Water Monitoring.				

4. FIRST PARTY OBJECTION

The applicant submitted a four page letter (dated 4 February 2005) addressed to the Agency as follows:

4.1 Condition 3.2

The landfill footprint (maximum aerial extent of landfilling) shall be as indicated in Drawing Reference 0501014/01/518 of the Application.

Greenstar request the Drawing Reference be changed to the site layout drawing.

Technical Committee's Evaluation

The TC refers to Section 3.2 of this report, which changes the wording of the condition entirely.

Recommendation

Refer to Section 3.2, above

4.2 Condition 3.11.1 (d)

The lining system on the base of the facility shall be laid to a minimum slope of 1:50.

The applicant objects to this condition as it refers to the establishment of a specific gradient rather than the guidelines provided in the EPA Landfill Manual – Site Design.

Technical Committee's Evaluation

The 1:50 slope is required to ensure that leachate will move freely and quickly to the leachate collection system of the landfill. This slope is standard for all landfills which the EPA has licensed.

Recommendation

No Change

4.3 Condition 6.14.2 (d)

Permanent gas monitoring system to be installed in the site office and any other enclosed structures at the facility.

The applicant requests that this telemetry condition be linked to buildings only.

Technical Committee's Evaluation

This sub-condition is intended to capture all the landfill gas monitoring requirements of a licence and ensures that all landfill gas monitoring points will be incorporated into the telemetry system. This approach is standard to all landfills which the EPA has licensed.

Recommendation

No Change

4.4 Condition 8.1.10

Bulk gypsum wastes shall not be placed in any landfill cell accepting biodegradable waste.

The applicant requests that this Condition be deleted to avoid duplication since it appears as Condition 8.1.7 also.

Technical Committee's Evaluation

The TC notes this typographical error.

Recommendation

DELETE Condition 8.1.10 from the licence.

4.5 Condition 10.3

Unless otherwise agreed, filled cells shall be permanently capped within twenty four months of the cells having been filled to the required level.

The applicant requests that this Condition be deleted to avoid duplication since it appears as Condition 10.1 also.

Technical Committee's Evaluation

The TC notes this typographical error. The TC recommends removal of Condition 10.3 from the licence:

Recommendation

DELETE Condition 10.3 from the licence.
Re-number Conditions 10.4 to 10.9 accordingly.

4.6 Condition 12

Agency Charges

The applicant requests that the EPA provide an additional sub-condition under charges to provide for re-imburement of charges when annual monitoring has been reduced or where the landfill has not yet been constructed.

Technical Committee's Evaluation

The annual agency charge, in this case a nominal €18,250, is a fee which takes into account the costs regarding the enforcement of the new licence for the next calendar year to cover assessment of reports, and the auditing, inspection, sampling/analysis at the facility. The landfill site will require site inspections/monitoring, on licence issue, even if the landfill has not yet been built. Aspects such as infrastructural progress, Qa/Qc, SEW approval, baseline monitoring, and assessment of licensee reports will still need to be carried out by the Agency, on licence issue. Invoices are issued by the Agency on receipt of the phased construction plan (Condition 3.5).

However, it is normal for the Agency to amend the annual fee under the terms of the final sentence in sub-condition 12.1.1, where the waste activities for which the licence is issued are not fully operational.

Recommendation

No Change

4.7 Schedule C3 - Ambient Monitoring

The applicant points out several errors in the proposed decision, schedule C, which need correction if a licence is to be issued.

Technical Committee's Evaluation

The TC notes these typographical errors caused in the final drafting of the proposed decision.

Recommendation

Amend the following as marked bold:

Air Monitoring

Location: D1 – D4 (incl.) Drawing Ref: 0501014/01/506 (or as may be amended under Condition **6.4**).

Groundwater Monitoring

Location:

Groundwater Wells (refer Condition **6.11**)

And,

Discharge from western groundwater interceptor drain (prior to merger with surface water treatment system).

Receiving Water Monitoring

Location:

SW2 in Drawing Ref: 0501014/01/506, and storm-water discharge from southern service road (or as may be amended under Condition **6.4**)

Overall Recommendation

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

1. for the reasons and conditions outlined in the proposed decision; and,
2. subject to the recommendations outlined in this TC report.

Signed,

EurGeol Malcolm Doak,
INSPECTOR

BA (Mod) Earth Science TCD, MSc (Hydrogeology) NCEA. PGeo.
for and on behalf of the Technical Committee.