

This report has being cleared for submission to the Board by Senior Inspector: Brian Meaney

Signed: *Josephin Kennedy* Date: *01/09/09*



OF  
**LICENSING &  
RESOURCE USE**

**INSPECTOR'S REPORT ON A LICENCE REVIEW**

TO:	DIRECTORS
FROM:	Michael Owens OCLR - Licensing Unit
DATE:	31 August 2009
RE:	EPA-initiated review of a waste licence for Greenstar Holdings Limited, Knockharley Landfill - Licence Register No. W0146-02

<b>Application Details</b>	
Type of facility:	Landfill
Class(es) of Activity (P = principal activity):	4 <sup>th</sup> Schedule: 4, 9, 11 & 13 3 <sup>rd</sup> Schedule 1, 4, 5 P, 6 & 13
Quantity of waste managed per annum:	200,000 tonnes
Classes of Waste:	Household, commercial, industrial, construction and demolition.
Location of facility:	Knockharley, Navan, Co.Meath.
Licence review initiated:	18/06/09
Third Party submissions:	None
Licensee submission:	Yes (20/07/09)
Article 16(3)(a)(i) Notification	27/07/09
Article 16(3)(a)(i) Reply	21/08/09
EIS Required:	No
New or existing facility (i.e. operational pre- or post-16 July 2001)	New
Site Inspection	None

On 18th June 2009, the Environmental Protection Agency initiated a review of the waste licence relating to the landfilling activities at Knockharley Landfill, waste licence register number W0146-02. The review was initiated by writing to the licensee

and placing a newspaper notice in the Irish Independent. The reasons for initiating the review are as follows:

- Section 46(2)(b) of the Waste Management Acts, 1996 to 2008, requires that the EPA review a waste licence if “new requirements (whether in the form of standards or otherwise) are prescribed, by or under any enactment or Community act, being requirements that relate to the conduct or control of the activity to which the waste licence relates.” In this case, there is a need to further elaborate and give effect to articles 5 and 6 of Council Directive 1999/31/EC on the landfill of waste (the Landfill Directive) regarding the treatment of waste prior to landfill and diversion of biodegradable municipal waste from landfill.
- There is also a need to further the general Best Available Techniques (BAT) obligation to reduce the overall environmental impact of landfill. In this context, there are newly elaborated limits on the acceptance of biodegradable municipal waste at landfill (expressed in the document *Municipal Solid Waste – Pre-treatment and Residuals Management: An EPA Technical Guidance Document* published 19 June 2009) that have regard to the need to implement and achieve landfill diversion targets set out in the Landfill Directive. The diversion of biodegradable municipal waste will, *inter alia*, reduce landfill gas production and have consequent benefits regarding greenhouse gas emissions and the potential for odour nuisance.
- There is a need to enhance the licence’s control and management of odour as requested by the Office of Environmental Enforcement on foot of odour complaints received in relation to the facility.

In addition, one technical amendment made to the licence since its issue has been inserted and consolidated into the text.

The conditions limiting the acceptance of biodegradable municipal waste will contribute to implementation of the National Strategy on Biodegradable Waste (Department of the Environment, Heritage and Local Government, 2006).

The principal new/updated conditions relate to the following:

1. The requirement to treat all waste prior to acceptance for disposal (updated condition 1.6).
2. The imposition of new limits on the amount of biodegradable municipal waste that can be accepted at the facility (condition 1.13). From 1 January 2010, only 40% of municipal waste accepted at the facility for landfilling can be biodegradable. In 2013 this reduces to 24% and in 2016 to 15%. The benefits of this restriction include a reduction in landfill gas generation and hence odour nuisance potential and reduced leachate generation.
3. The need to measure waste intake and report compliance with the conditions described in items 1 and 2 above (condition 11.10).

4. Condition 1.16 prohibits the use of bio-stabilised residual waste<sup>1</sup> as daily cover unless the material has been stabilised in accordance with condition 1.14.4 of the licence and satisfies Department of Agriculture, Fisheries and Food requirements in relation to the treatment of animal by-products, recently articulated in DAFF guidance<sup>2,3</sup>. Material not meeting these requirements must be disposed of in the landfill body.
5. The need to ensure that all potential environmental liabilities are addressed (condition 12.2).

A number of other conditions are also amended or inserted. Existing conditions with timeframes have been altered to remove references to dates now past. The following is a full list of new or amended conditions and schedules in the licence (not including technical amendments previously made):

**Table 1 List of new or amended conditions**

Condition or Schedule number	Replacing an existing condition?	New condition?	Description
Interpretation		✓	To update with new definitions.
1.6	✓		Updated requirements with regard to treatment of waste prior to acceptance for disposal at the landfill facility.
1.8		✓	Prohibits the acceptance of explosive, corrosive oxidising or flammable wastes.
1.9			Prohibits acceptance of gypsum waste at the site.
1.10		✓	Prohibits dilution or mixture of waste as a means of meeting waste acceptance criteria.
1.11.3	✓		Substitution of "public holidays" for "bank holidays"
1.13		✓	Sets out timeframes and limits for acceptance of biodegradable waste acceptable at the facility.
1.14		✓	Determination of the biodegradable content of MSW accepted for disposal at the facility.
1.16		✓	Limitations on the use of biostabilised residual waste as landfill cover.
2.3.2.1	✓		To update requirements for Environmental Objectives and Targets.
2.3.2.3		✓	Sets out requirement for Landfill Environmental Management Plan (LEMP)
4.3	✓		Final capping – allowing variations to the condition to be agreed.
5.3		✓	Development of waste acceptance procedures.

<sup>1</sup> Defined in the PD.

<sup>2</sup> Conditions for approval and operation of composting plants treating animal by-products in Ireland, 27 March 2009, Department of Agriculture, Fisheries and Food, Animal By-Products Section.

<sup>3</sup> Conditions for approval and operation of biogas plants treating animal by-products in Ireland, 27 March 2009, Department of Agriculture, Fisheries and Food, Animal By-Products Section.

Condition or Schedule number	Replacing an existing condition?	New condition?	Description
5.4	✓		Sets out new requirements for use of waste quarantine area.
5.6.1(b)	✓		Updates requirements with regard to the dimensions of the working face at the landfill.
5.9.5	✓		Amendment to timescale allowed for permanent capping of filled cells.
5.15		✓	Sets out additional requirements for waste acceptance procedures.
6.6	✓		Groundwater trigger levels
6.10	✓		Sets out new requirements with regard to odour management.
8.14		✓	Sets out requirements for testing and analysis of waste accepted at the facility.
10.2	✓		Updates requirements with regards to records for waste consignments arriving at the facility.
11.3	✓		Updated condition relating to waste recovery reports.
11.8		✓	Sets out requirement for written receipt for waste consignments accepted for disposal at the facility.
11.9		✓	Sets out requirement to notify the Agency where waste received at the facility fails to meet the waste acceptance criteria.
11.10		✓	Sets out requirement for generation and submission of summary waste reports to demonstrate compliance with Condition 1.13.1 (diversion of BMW from landfill).
12.2	✓		Sets out requirements with regard to Environmental Liabilities and financial provision for closure, restoration and aftercare.
12.3		✓	Sets out requirements with regard to the setting of landfill costs to cover landfill operation, closure and aftercare.
Schedule A Table A.2		✓	Sets out total permitted landfill capacity.
Schedule D Table D.9.1		✓	Sets out the frequency of monitoring of bio stabilised residual waste.
Schedule D.10 Table D.10.1		✓	Sets out the frequency of ambient odour monitoring with methodology to be agreed with the Agency.
Schedule E	✓		Updates requirements for reporting to the Agency.
Schedule F	✓		Sets out additional reporting requirements in the Annual Environmental Report.

## Compliance with Directives/Regulations

Table 1 sets out new and amended conditions that, subject to compliance with those conditions, will ensure that the facility operates in conformance with the provisions of the Landfill Directive (1999/31/EC).

## Proposed Decision

It is my opinion that the new/amended conditions proposed in the attached Recommended Decision address: BAT as set out in the Pre-Treatment Guidance Document (referenced above); provisions of the Landfill Directive (1999/31/EC); and the concerns regarding odour nuisance as notified by the Office of Environmental Enforcement. The new/amended conditions will not cause any new or increased emissions over and above the emission limit values specified in the licence. Thus the requirements of section 40(4) of the Waste Management Acts 1996 to 2008 will continue to be met.

## Submissions

As the EPA initiated this review, the licensee was entitled to make a submission. A submission was received from the licensee. The following are the items addressed in the submission:

1. The licensee proposes that the new requirements with regard to waste treatment should not apply to Knockharley landfill as Condition 1.6 of the current licence already sets out waste treatment requirements for the landfill.

Response:

It is proposed to replace the existing condition 1.6 with an updated condition that makes specific reference to the EPA publication *Municipal Solid Waste – Pre-treatment and Residuals Management*, EPA, 2009, and the pre-treatment requirements therein.

Recommendation:

No change on foot of this submission.

2. The licensee proposes a number of arguments as to why the requirements with regard to diversion of BMW from landfill should not be applied to landfill operators generally. I have summarised each argument in turn below. The Agency response is set out in turn.

(i) The diversion targets set for BMW are not appropriate and fail to take into account the most recent ESRI economic forecasts and the associated downturn in waste arisings. The limits will result in “over-compliance” with the Landfill Directive targets and the necessary consequent level of investment would be disproportionate.

Response:

Condition 1.13.1 will allow for the EPA to vary the percentage limits. Such variations will be made where they are deemed necessary in the first instance based on the actual landfilling of waste during 2010. Should landfilling rates be so low as to mean a significant 'overshoot' of the landfill directive target will occur, then the percentage limits will be recalculated to a level that will ensure the landfill directive targets can be met. Condition 11.10 of the licence provides for quarterly reporting of municipal waste and biodegradable municipal waste landfilling rates, thus progress during the year can be tracked.

Recommendation:

No change on foot of submission.

(ii) The BMW targets do not take account of diversion of BMW through recycling, act an disincentive to investment in recycling technology and represent an inequitable pressure on landfill operators as the targets apply to landfill only and not the recycling or BMW treatment industries.

Response:

The percentage limits have been calculated taking municipal waste recycling into account. As in (i) above, a significant increase in recycling that leads to a reduction in landfilling could bring about a recalculation of the percentage targets to a level that will ensure the landfill directive targets can be met. In relation to the point, that "the limits apply to landfill operators only and there is no mechanism for encouraging waste operators without landfills to increase BMW treatment or recycling": The limits apply to landfill operators, but compliance with the limits will impact on all upstream waste operations.

Recommendation:

No change on foot of submission.

(iii) The "devolution" of a Member State obligation to a small number of landfill operators is an inequitable and inappropriate response to the failure by the State to develop a policy for the provision of adequate infrastructure for the treatment of BMW.

Response:

Notwithstanding any progress (or lack thereof) in the installation of increased segregated collection and treatment capacity, on foot of policy initiatives or otherwise, it remains a fact that the landfill directive applies to landfills and the restriction on the acceptance of biodegradable municipal waste applies ultimately to landfills. It is not considered disproportionate or inequitable to impose acceptance limits at the landfill gate. These limits will necessarily impact on all upstream operations that wish to have continued access to landfill capacity.

Recommendation:

No change on foot of submission.

(iv) The restriction of BMW for disposal at landfill in the absence of alternative treatment facilities is contrary to the Agency's obligations to environmental protection.

Response:

Recent research carried out by Cré, and published in an InterTrade Ireland Report (Market Report on the Composting and Anaerobic Digestion Sectors, May 2009), shows that not only is there a significant amount of biodegradable waste treatment capacity currently available on the island of Ireland, but that there is also significant potential extra capacity available to build should the extra BMW come onto the market.

Recommendation:

No change on foot of submission.

(v) Licence Conditions setting out BMW targets are flawed and unenforceable.

Response:

An enforcement procedure and mechanisms relating to the measurement of BMW diversion are currently being developed by the Office of Environmental Enforcement.

Recommendation:

No change on foot of submission.

3. Instead of amending licence conditions relating to waste treatment, the licensee proposes a change in the wording of Condition 11.3 on Waste Recovery Reports to include provision for annual reporting of recovery rates.

Response:

The proposal would not yield any improvement in recycling or recovery rates, or in the diversion of waste from landfill.

Recommendation:

No change on foot of submission.

4. The licensee proposes a change in the wording of Condition 4.3.1 so that there is provision for agreement with the Agency as to the technical standard of the final

landfill cap. This is, as the licensee argues, due to the fact that BAT for landfill cover will change over time and that the technical standards as set out in the licence will over time become redundant. Provision for agreement with the Agency will avoid the need for future technical amendments or licence reviews.

Response:

Condition 4.3.1 is proposed for amendment to permit the licensee to seek the Agency's agreement to proposed variations to the requirements of the Condition.

Recommendation:

Amend condition 4.3.1 to include the text "*Unless otherwise agreed by the Agency ...*".

5. The licensee proposes a change in the wording of Condition 5.4 to increase the time permitted for storage of certain non-odorous wastes in the Waste Quarantine Area.

Response:

The existing condition sets a time limit for the storage of material in the quarantine area – "*No waste shall be stored in the Waste Quarantine Area for more than one month.*" The standard condition in newer licences is proposed. The standard condition is sufficiently flexible to satisfy the changes requested by the licensee.

Recommendation:

Update the quarantine condition and insert as condition 5.4: "*Any waste deemed unsuitable for acceptance at the facility and/or in contravention of this licence shall be immediately separated and removed from the facility at the earliest possible time. Temporary storage of such wastes shall be in a designated Waste Quarantine Area. Waste shall be stored under appropriate conditions in the quarantine area to avoid putrefaction, odour generation, the attraction of vermin and any other nuisance or objectionable condition.*"

6. The licensee is proposing a change in the wording of Condition 5.6.1 to permit changes in the dimensions of the landfill working face.

Response:

No change to Condition 5.6.1 is proposed, as the existing wording already allows for variation of the working face dimensions with the prior agreement of the Agency: "*Unless the prior agreement of the Agency is given, the following shall apply at the landfill: ...*".

Recommendation:

No change on foot of the submission



7. The licensee is proposing a change in the wording of Condition 5.9.5 to permit final capping of closed landfill cells within 24 months rather than 12 months. The licensee proposes that this approach would allow sufficient time for the waste mass to settle to a more stable profile.

Response:

Condition 5.9.5 currently reads: "*Filled cells shall be permanently capped within 12 months of the cells having been filled to the required level.*" The condition is proposed for amendment to reflect the standard condition used in newer licences.

Recommendation:

Amend condition 5.9.5 to read as follows: "*Unless otherwise agreed, filled cells shall be permanently capped within 24 months of the cells having been filled to the required level.*"

8. The licensee is proposing a change in the wording of Condition 6.10, which proposes new requirements with regard to odour assessment and management.

Response:

Due to the number of odour complaints received in relation to Knockharley landfill, the Office of Environmental Enforcement has identified the facility as being in need of enhanced control regarding the prevention and management of odour. Subsequently, a new Condition 6.10 (to replace existing conditions 6.10 and 6.11, both of which will be deleted) is proposed that imposes new obligations regarding prevention, assessment and management of odour. In addition, a new schedule D.10 is proposed for the ambient monitoring of odour.

Recommendation:

Impose updated condition 6.10 on odour control and monitoring. (The condition is too long to reproduce here).

Include a requirement for monthly ambient odour monitoring in Schedule D.10 according to a methodology to be agreed.

9. The licensee proposes the removal of the current Condition 6.12, which states:

*"The licensee shall install a continuous VOC monitor with directional information at the school (if agreed) otherwise at a location on a site agreed with the Agency. This requirement will be reviewed by the Agency on an annual basis."*

The licensee reports that agreement cannot be reached with the school board as to the possible location for such a monitor. In addition, it is argued that any VOC results at

the school would be doubtful, as ambient VOC levels at the school are open to interference from other sources of VOC between the landfill and the school, which is approximately 1 km from the landfill facility.

Response:

The condition is not proposed for deletion. The Condition requires the selection of an alternative location for the monitor should it prove impossible to install a monitor at the school.

Recommendation:

No change.

10. The licensee is proposing a change in the wording of Condition 7.1, to amend the manner in which odour annoyance would be perceived and addressed. The licensee is proposing a change of wording similar to that used by the Environment Agency of England and Wales.

Response:

Condition 7.1. states: *“The licensee shall ensure that vermin, birds, flies, mud, dust, litter and odours do not give rise to nuisance at the facility or in the immediate area of the facility. Any method used by the licensee to control any such nuisance shall not cause environmental pollution.”*

The licensee’s proposal is to consider odour separately to the main condition 7.1, as follows: *“Emissions from the activities shall be free from odour at levels likely to cause significant odour annoyance outside the site, as perceived by an authorised officer of the Agency, unless the operator has used appropriate measures agreed with the Agency under condition 8.1.4 to prevent or, where that is not practicable, to minimise the odour.”*

The licensee suggests that “the wording obliges the operator to keep the facility free from odour annoyance or to prevent odour as much as is practicable using Best Available Techniques.”

The condition is not proposed for amendment. It is not considered appropriate to allow the licensee to seek to “prevent odour as much as is practicable” and thereby remove the basic requirement that odour does not give rise to nuisance at the facility. Revised odour conditions will be introduced into this licence, as outlined in item 8 above.

Recommendation:

No change on foot of submission.

11. The licensee is proposing the inclusion of an additional table in Schedule D to provide for odour monitoring according to methodology based on best international practice.

Response:

A new Schedule D.10 will be inserted into the licence, which requires ambient odour monitoring according to a standard methodology to be agreed with the Agency. This will enable a database of odour incidence to be developed.

Recommendation:

Insert new schedule D.10 governing ambient odour monitoring. (Also mentioned in item 8 above).

12. The licensee is proposing a change to the wording of Condition 8.14.2. This Condition sets out requirements with regard to the commencement of odour monitoring at the facility to take into account the wording change proposed for Condition 6.10 (See No. 8 above).

Response:

As the new Condition 6.10 imposes new obligations regarding assessment, prevention and management of odour, it is proposed to remove Condition 8.14.2 from the licence.

Recommendation:

No change on foot of the submission. Delete condition 8.14.2.

13. The licensee is proposing changes to Schedule C.5 to remove the volumetric flow limit on the landfill gas combustion plant and flare stacks and to change the ELV's for the combustion gases. The licensee refers to a modelling exercise that was carried out by independent consultants on landfill gas production.

Response:

No amendment to Schedule C.5 is proposed, as the existing wording in the schedule already allows for variation of the emission limit values "on the basis of the technology employed." In any case, it is not considered possible to evaluate the impact of such a change within the confines of this limited review of the licence.

Recommendation:

No change

14. The licensee is proposing changes to Table D.7.1 (Landfill Gas Utilisation Plant/Enclosed Flare Parameters and Monitoring Frequency) of Schedule D.7 to reflect proposed changes to Schedule C.5 and to bring the Schedule into line with other landfill licences.

Response:

No change is proposed for Table D.7.1. As above (item 13), it is not considered possible to evaluate the impact of such a change within the confines of this limited review of the licence and in the absence of a full technical assessment of the proposed changes. In any case, Condition 8.2 allows for the frequency of monitoring to be amended with the agreement of the Agency.

Recommendation:

No change

15. The licensee is proposing a change of wording to Condition 1.8.1.3, which currently states that '*Waste shall not be accepted at the landfill on Bank Holidays*' to '*Waste shall not be accepted at the landfill on Public Holidays*'.

Response:

Amendment is proposed in line with new licences.

Recommendation:

Amend condition 1.11.3 to read as requested above.

16. The licensee is proposing changes to Table A.1 of Schedule A (Waste acceptance), to allow for the following:

- Removal of the term 'recovery' from the construction and demolition waste stream.
- Permit inclusion of asbestos in the C&D waste stream with a quantity limit of 25,000 tonnes C&D waste per annum.

The licensee is also proposing the insertion of additional conditions to permit the acceptance of asbestos for disposal at the facility.

Response:

It is considered that ambiguities with regard to disposal, both in terms of waste streams and permitted quantities, may be created if the requested amendment is made. Therefore, it is not proposed to change the licence as requested by the licensee as it is not possible, within the confines of this limited review of the licence, to evaluate the

impact in the absence of a full technical assessment of the proposed changes. Equally, regarding the request to permit the acceptance of asbestos for disposal at the facility, it is not possible to evaluate the impact in the absence of a full technical assessment of the proposed changes.

Recommendation:

No change

18. The licensee is proposing a change of wording to Condition 11.7.1, which sets out the requirements with regard to the submission of an AER for the facility. The licensee is proposing that the AER be submitted by the 31<sup>st</sup> of March of each year rather than within one month of the end of each year. The licensee argues that this change would bring the licence into line with other recently issued Waste Licences.

Response:

Condition 11.7.1 is proposed for amendment as requested in line with newer licences.

Recommendation:

Amend the reporting date for the AER to 31 March in condition 11.7.1.

No third party submissions were received.

### Overall Recommendation

I have considered all the documentation governing the grounds for the review of this licence, including the licensee's submission, and recommend that the Agency grant a revised licence subject to the conditions set out in the attached RD and for the reasons as drafted.

Signed



Michael Owens  
Inspector

**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 1996-2008.