

This report was approved for submission to the Board by Programme Manager Frank Clinton.
 Signed: K. J. Leary Date: 12/8/2010



LICENSING & RESOURCE USE

INSPECTORS REPORT ON A LICENCE REVIEW APPLICATION

TO:	DIRECTORS	
FROM:	Breen Higgins	Environmental Licensing Programme
DATE:	30/07/2010	
RE:	Application for a Waste Licence from Offaly County Council, Derryclure and Killeigh, Tullamore, County Offaly, Licence Register W0029-04	

Type of facility:	Non-Hazardous Landfill Facility
Classes of Activity (P = principal activity):	3 rd Schedule: Classes 1, 4, 5(P), 7, 11 & 13. 4 th Schedule: Classes 2, 3, 4, 9 & 13.
Quantity of waste managed per annum:	100,000 tonnes
Types of Waste:	Household waste, commercial waste, treated municipal sludge, construction and demolition (C&D) waste and industrial non-hazardous solids
Location of facility:	Derryclure and Killeigh, Tullamore, County Offaly
Licence application received:	14 November 2008
Third Party submissions:	One – 09/04/2009
EIS Required:	Yes: - submitted with application.
Article 14 Notices sent:	22/12/2009
Article 14 compliance date:	22/02/2010
Site Inspection:	14/01/2009

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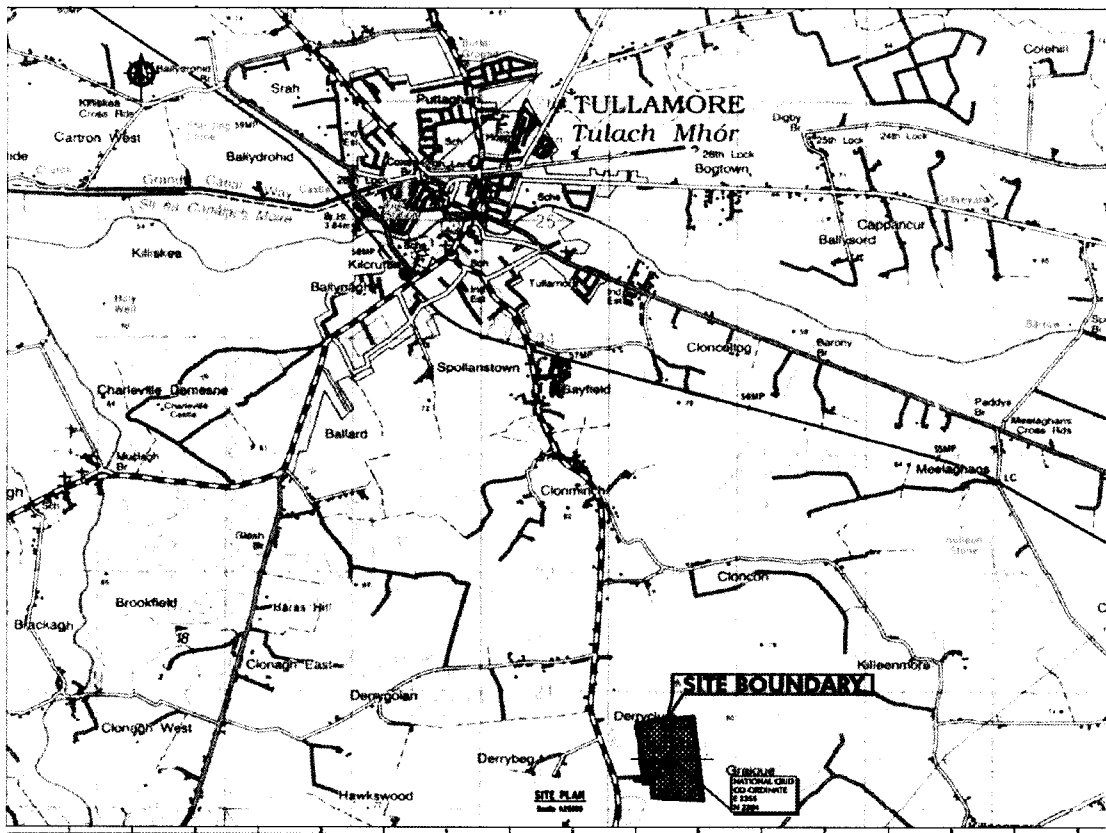
1. Facility

The licence review application relates to the proposed intensification of landfilling activities, at the existing location, from 40,000 tonnes per annum to 100,000 tonnes per annum (tpa).

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Derryclure Landfill is located approximately 5 km south of Tullamore town adjacent to the N80 National Secondary Road, see Figure 1.0 below. The facility is located on cutover peatland and is bounded to the north, east and south by raised bog (in the ownership of Bord na Móna), with rough pasture to the west. The nearest private dwelling is located approximately 500m from the north-west boundary of the facility; the proposed activities will not alter the existing footprint of the landfill.

Figure 1.0 Facility Location



Classes 1, 4, 5, 7, 11, and 13 of the Third Schedule and Classes 2, 3, 4, 9 and 13 of the Fourth Schedule were applied for in the review application. Class 5 of the Third Schedule is the Principal Activity, i.e., specifically engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment. The Classes applied for are in line with those already licensed under the existing licence, Reg. No. W0029-03, with one addition to accommodate the flaring/utilisation of landfill gas, i.e., Class 9 of the Fourth Schedule.

The facility currently accepts waste quantities in the region of 40,000 tonnes per annum (tpa); the review application seeks to increase intake levels to 100,000tpa. To accommodate the increase in throughput it will be necessary to extend the hours of operation and waste acceptance at the facility.

Waste acceptance at the facility is currently permitted Monday to Friday between the hours of 08:00 and 16:30 and on Saturdays between 08:00 and 15:00. The facility may currently be operated for an additional hour each evening to permit the covering of the daily intake, etc. This application seeks to extend these hours to permit waste handling between the hours of 07:30 and 19:00 Monday to Friday inclusive and 08:30 and 17:30 on Saturdays. The facility operating hours requested are from 07:00 to

19:30 Monday to Friday and 08:00 to 18:00 on Saturdays. The facility will be closed on Sundays and Bank Holidays.

The application also seeks to extend the hours of Waste Acceptance/Handling at the Civic Amenity facilities on-site to 08:00 to 18:00 Monday to Friday inclusive and 08:30 to 17:30 on Saturdays.

2. Reasons for Review

The applicant cites two reasons for their licence review request, namely: -

- The intensification of landfilling acceptance activities from 40,000tpa to 100,000tpa of household waste, commercial waste, treated municipal sludge, construction and demolition (C&D) waste and industrial non-hazardous solids.
- To seek an increase in facility opening hours.

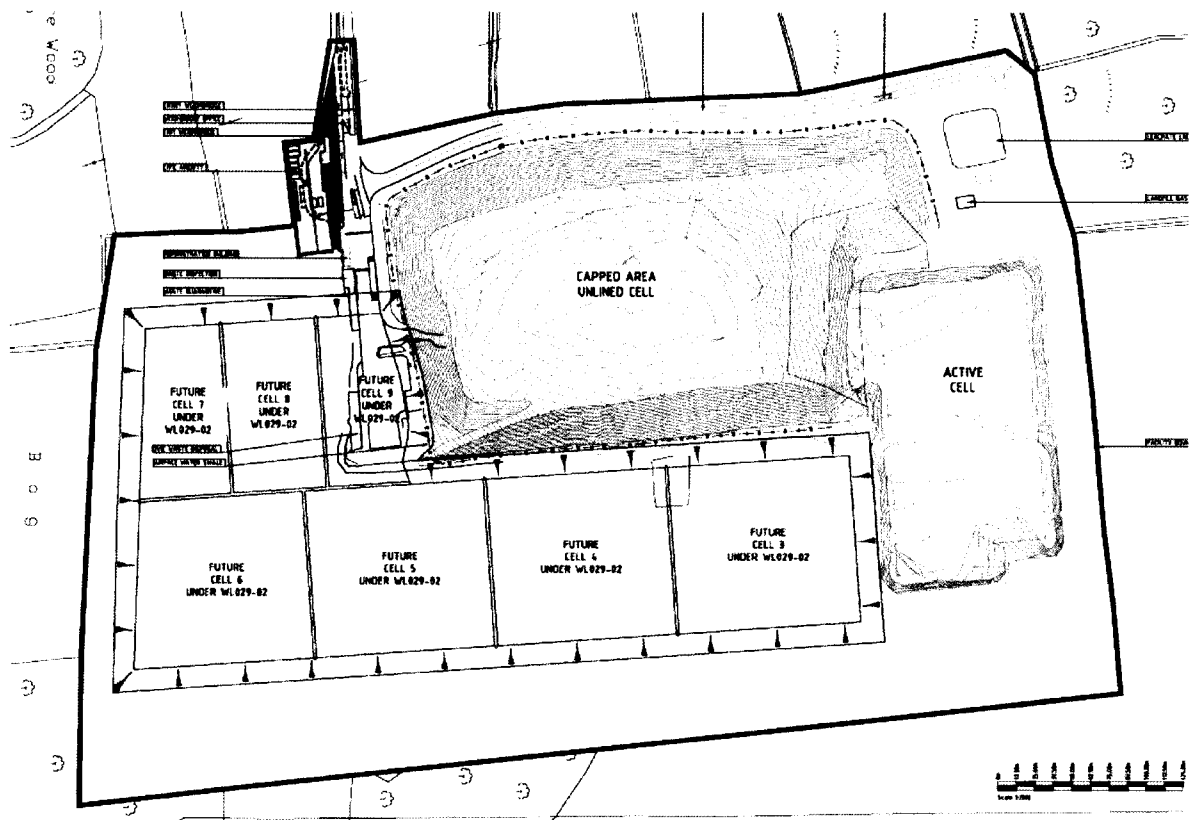
3. Operational Description

The Proposed Decision (PD) permits the acceptance of 100,000tpa of waste from the date of grant of the licence, consisting of household waste, commercial waste, treated municipal sludge, construction and demolition (C&D) waste and industrial non-hazardous solids. Household and commercial waste streams will account for the majority of material entering the site at 45,500tpa and 39,500tpa respectively. The PD also allows for the acceptance of treated municipal sludge (2,000tpa), C&D waste (2,000tpa) and industrial non-hazardous solids (11,000tpa).

The proposed intensification of landfilling activities from 40,000 tpa to 100,000 tpa will result in a reduction in the life span of the landfill by 14.5 years. The licensee anticipates that filling activities will have ceased at the site by 2018 should the increased rate of waste intake be granted.

The landfill consists of an unlined cell, which is based on the 'dilute and disperse' principle, this cell has recently been capped and landfill gas management infrastructure has been installed in line with Best Available Techniques (BAT). A licence review was granted by the EPA in 2003, Reg. No. W0029-02, permitting the development of an additional nine lined landfill cells. The first of these nine cells was constructed in 2006, with landfilling to this cell commencing in late 2006. No additional physical development will be required as part of this proposed intensification. The footprint of the site occupies a total of 29.6ha; the layout of the waste cells is depicted in Figure 2.0 below. A further review of the licence was granted by the Agency on 24/03/2010 (Reg. Mo. W0029-03). This review, initiated by the Agency, was undertaken to ensure that the facility operates in compliance with relevant requirements of the Landfill Directive including the need to limit the acceptance of biodegradable municipal waste and accept only treated waste.

Figure 2.0 Landfill Developments and Facility Infrastructure



The facility will be worked in 8 distinct phases each with a life span of 1-2 years, see Figure 2.0 above. The capacity of the cells varies from a minimum of c. 41,500 tonnes to a maximum of c. 179,000 tonnes. Waste filling is currently taking place at Cell-C1 ("Active Cell") located along the eastern boundary of the site.

The required infrastructure for the appropriate operation of a landfill site is substantially in place at the Derryclure facility, e.g., perimeter fencing, access road, office, maintenance building, on-site proprietary sewage treatment system, surface water management/ treatment infrastructure, leachate and landfill gas management infrastructure, weighbridges & wheel-wash facilities, waste quarantine/inspection area, civic amenity area and banded fuel storage.

The measures incorporated to protect environmental receptors are in line with BAT for this activity and the licensee has been cognisant of the appropriate guidance, i.e., the Agency manual on 'Landfill Site Design' (EPA, 2000) when developing the site.

As stated under *Section 2. Reasons for the Review* of this report the application seeks to extend the hours of waste acceptance and operation on-site. There has been a recent history of odour complaints from residents living in the vicinity of the landfill when a peak of 38 complaints were logged in December 2008 due to intensification of activities on-site. However, recent gas extraction and flaring works undertaken as part of an agreed Specified Engineering Works (Reg. No. W0029-02) has seen the rate of complaints fall back to low single digits per year. It is considered that the works undertaken will appropriately deal with the issue of odour nuisance on-site. Therefore, the extended opening hours have been accommodated under Condition 1.8 of the PD.

4. Use of Resources

The resource use anticipated on-site after intensification is estimated to be as follows: - diesel oil (209,000 litres/annum), hydraulic oil (680 litres/annum), machinery engine oil (420l/annum), electricity (20,000 kWh/annum), topsoil [daily cover (72,000 tonnes)] and water (9,800m³/annum - estimate).

5. Emissions

5.1 Air

An odour impact assessment was undertaken for the Derryclure facility in April 2008 at the request of the Office of Environmental Enforcement (OEE) with the purpose of assessing the potential for generation of odours in the vicinity of the extended landfill.

The capped area of the landfill was surveyed for potential gas leakage areas. During the monitoring eleven (11) surface emission zones were identified. Within the older, capped area of the landfill emissions were reported to be due to insufficient gas abstraction at wellheads and failure of the capping system. The report recommended maintaining a slight negative vacuum pressure to mitigate the sources on the older capped area and ensure that all wellheads are tapped into the gas abstraction system. In the active cell areas it was recommended that abstraction of landfill gas take place in order to reduce emissions.

It should be noted that at the time of the assessment the permanent gas flare and collection system had not been commissioned and that the permanent capping of the old landfill section was not complete. Infrastructural developments including the installation of 18 vertical gas wells and commissioning of a landfill gas flare were completed in December 2008. This work resulted in a significant increase in the volume of gas being collected and flared-off, and in turn has resulted in a reduction in the potential for odours to be generated on-site. The work was extended further in recent months with the installation of horizontal gas extraction pipes along the cell perimeter. These developments will be continued and gas extraction infrastructure extended as waste is deposited.

These development works have resulted in a 75% increase in the volume of gas being extracted and flared; from a rate of c. 400m³/hr to the current level of c. 700m³/hr. This has coincided with a dramatic reduction in the numbers of odour complaints being received by the local authority in relation to the facility.

The PD, as drafted, includes conditions controlling the provision, operation, control and monitoring of landfill gas and, when operational, composting air emissions, as well as requiring the control of the working face as per *Condition 3: Infrastructure and Operation. Schedule B.4: Emission Limits Values for Landfill Gas Plant* shows a decrease in the permitted maximum volume to be emitted from the gas flare from 3,000m³/hr to 1,500m³/hr in line with projected maximum landfill gas generation figures specified in Section 2.3.3 of the EIS.

5.2 Leachate Emissions

The site comprises an un-lined 'dilute and disperse' zone and a fully lined and contained zone (Cells 1-9). The unlined portion of the landfill was capped in mid 2008 and incorporated facilities for the pumping of leachate from under the unlined area.

The proposed intensification will not impact on this area of the landfill. Furthermore, no additional construction or expansion is proposed and therefore it is not envisaged that there will be scope for any additional impact on the hydrogeology of the area due to the proposed intensification.

The current licence requires groundwater monitoring at a total of fourteen locations (eight up gradient and six down gradient). The monitoring results for each of the fourteen locations are reported in Section 4.2 of the Environmental Impact Statement accompanying the application and show the results to be below the guideline values given in the European Directive 98/83/EC, *Water Quality Intended for Human Consumption*. This monitoring requirement is to be retained in the PD for a reduced number of monitoring locations, as per *Schedule C: Control and Monitoring*.

5.3 Emissions to Surface Waters

No leachate or trade effluent will be discharged to surface waters. Discharges are associated with storm water run-off, hardstanding and buildings on-site. This run-off is collected in a network of drains and conveyed to an interceptor prior to discharging from the site at the western boundary (monitoring location SW-8). Surface water run off from the capped cells is discharged via a number of points to the north and west of the site, i.e., SW-8, SW-9 and SW-10.

It is not envisaged that the intensification of activities will have a significant impact on surface water discharges from the facility.

The PD outlines the monitoring regime to be employed for discharges to surface waters, as per *Schedule C.5*.

5.4 Emissions to ground/groundwater:

There will be no direct emissions to groundwater from the proposed intensification of waste activities at Derryclure. No additional physical development will occur and the intensification will be limited to those engineered cells authorised under the existing licence. A number of groundwater monitoring wells have been installed as required under the existing licence, see map no. CE07-286-01-007 of the application documentation. Groundwater quality monitoring will be undertaken at these locations as per *Schedule C: Control and Monitoring* of the PD.

It is not considered that the increased waste intake will impact substantially on the volume of leachate being generated as a result of cells filling more rapidly, as the cells in turn will be capped and restored sooner than would otherwise have been the case.

The aquifer beneath the site is classed under the national Groundwater Protection Scheme (DEHLG-EPA-GSI) as Locally Important, and is moderately productive in local zones only. The underlying aquifer has a Moderate vulnerability rating (Groundwater Protection Scheme), with a Landfill response of R2¹ (landfill acceptable, subject to construction to BAT).

There are six groundwater wells located within 2km of the landfill footprint; the EIS confirms that there are no wells within 500m of the facility. The existing wells are not considered at risk from the landfill considering the vulnerability rating and the abatement measures employed on-site.

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

5.5 Wastes Generated:

The site will generate typical office waste, engine oil, lubricating oil and other plant maintenance wastes that will, as appropriate, be consigned off-site for disposal. Source segregation of the remaining waste will be carried out to recover as many recyclable materials as possible at the on-site civic amenity facility.

5.6 Noise:

Noise emissions from the proposed development are likely to arise mainly from the operation of plant, truck movements and the flaring of landfill gas. Owing to the remote location of the site, noise levels arising from on-site operations are not expected to result in nuisance at any sensitive receptor in proximity to the facility. The principal noise source is considered to be traffic using the N80 route. Noise monitoring will be undertaken on-site at a number of locations along the site boundary. Standard noise limits and conditions have been included in the PD (i.e., daytime 55dB(A) and night time 45dB(A) at the boundary of the facility, as per *Schedule C.4* of the PD.

5.7 Nuisance

The licensee utilises BAT (wheel wash, netting, daily cover, traps, etc.) for the control of landfill associated nuisances such as dust, litter, vermin, etc. Monitoring undertaken has indicated that dust impact on local residences is considered to be negligible. The PD includes various conditions for the control of litter, dust, vermin and pests, as per *Condition 6: Control and Monitoring*.

6. Restoration

The site has been operational since 1977 and was initially licensed in 1999 (Reg. No. W0029-01). The decommissioning and restoration of the site is not expected to occur in the near future, with a projected closure date of 2018 now being proposed. Standard conditions regarding decommissioning of the facility have been included under *Condition 10; Closure, Restoration and Aftercare Management* of the PD.

7. Cultural Heritage, Habitats & Protected Species

There are no protected habitats, areas or species affected by the proposed expansion in activities at this site.

8. Waste Management, Air Quality and Water Quality Management Plans

The intensification of activities at the Derryclure facility is in line with the policy objectives specified in the Midlands Waste Management Plan 2005-2010, endorsed by Offaly County Council. Section 7 of the plan outlines the approach towards waste management over the five-year period of the plan. With regard to landfill the plan states '*in the short term until such systems (Mechanical Biological Treatment, Thermal Treatment) are developed there will be a need for significant landfill capacity in the region*'. To this end a key driver for the intensification of activities at Derryclure is the pending closures of Ballydonagh (Reg. No. W0028-03), and Ballaghveny (Reg. No. W0078-03) landfills. It will be necessary in the short term to ensure that adequate landfill capacity remains in the region to address the infrastructure deficit in place in the short to medium term. Notwithstanding these pressures, it is critical that the facility adhere to the mandatory targets for the diversion of biodegradable municipal waste provided for in the EU Landfill Directive and specified under *Condition 8.2.8* of the PD.

9. Environmental Impact Statement

I have examined and assessed the EIS and having regard to the statutory responsibilities of the EPA, I am satisfied that it complies with Article 94 and Schedule 6 of the Planning and Development Regulations 2001 (S.I. No. 600 of 2001) and EPA Licensing Regulations (S.I. No. 85 of 1994, as amended).

10. Best Available Techniques (BAT)

I have examined and assessed the application documentation and I am satisfied that the site, technologies and techniques specified in the application and as confirmed, modified or specified in the attached PD comply with the requirements and principles of BAT. I consider the technologies and techniques as described in the application, in this report, and in the PD, to be the most effective in achieving a high general level of protection of the environment having regard - as may be relevant - to the way the facility is located, designed, built, managed, maintained, operated and decommissioned.

11. Compliance with Directives/Regulations

The activities undertaken come under the scope of the IPPC Directive and Landfill Directive. The proposals would be considered BAT and compliant with the requirements and objectives of these Directives.

The discharges to water as controlled by the PD satisfy the requirements of the Water Framework Directive 2000/60/EC.

The landfilling operations are controlled in a manner considered appropriate to adhere to the requirements of the Groundwater Directive (80/68/EEC). No direct or indirect discharges are permitted from the facility. Monitoring results submitted with the licence application do not indicate that any polluting substances are present in the groundwater as a result of activities being undertaken at the landfill.

12. Compliance Record & Site Visit

I am advised by the Office of Environmental Enforcement (OEE) of the Agency that compliance with the licence has generally been good. The views and suggestions of the OEE inspector for the site have been taken into account as part of this preparation of this PD.

A site visit was undertaken on the 14/01/2009 and a thorough walk over of the site was conducted in the presence of the then facility manager (Mr. Brendan King). The activities on site were in line with those expected at an operational landfill. No unusual or unexpected activities were encountered. The facility manager was extremely co-operative giving a detailed and informative account of present and proposed activities at the Derryclure facility and was forthcoming with information on all aspects of the operation.

13. Fit & Proper Person Assessment

The legal, technical and financial standing of the applicant qualifies them to be considered Fit and Proper Persons.

14. Submissions:

14.1 CEWEP

One valid submission was made by CEWEP Ireland in relation to the proposed intensification of Derryclure landfilling activities.

The main issues raised in the submission are summarised below. However, the original submission should be referred to at all times for greater detail and expansion of particular points.

CEWEP made a submission to the Agency in the form of a seven-page document and four appendices in support of their argument. CEWEP comments that the submission is being made as part of a nationwide campaign to highlight the impact of

excess landfill capacity on the development of alternative waste management technologies.

CEWEP contends that there is *'no demonstrated need for the intensification'* of activities at Derryclure landfill due to the recent decision by An Bord Pleanála to approve an extension at Drehid landfill. The submission contends that in so doing An Bord Pleanála has effectively accommodated the waste needs of the greater Dublin area. In addition to this, it is stated that *'any regional deficit can easily be absorbed by the national landfill capacity surplus'*.

CEWEP's view is that it is critical that unnecessary landfill capacity be avoided so not to create a disincentive to the provision of alternatives such as recycling, mechanical biological treatment and waste-to-energy.

Comment:

National and regional strategy/plans regarding the management of waste have been considered during the assessment of the application. The proposal for intensification of the landfilling activities is considered by Offaly County Council to be a necessary infrastructural development for the midlands region.

It is noted that in the short to medium term there will be an on-going shortfall in landfill capacity in the Midlands region. This is due to the closure of Ballydonagh landfill, Co. Westmeath with a loss of 60,000tpa and the expected closure of Ballaghveny landfill in North Tipperary in 2012 with the further loss of 49,000tpa. Furthermore, Ballaghadereen, Co. Roscommon (W0059-02), is expected to close in 2011 with the loss of c. 20,000tpa capacity.

A review of existing and proposed landfill capacity indicates that Derryclure will be one of only two landfills operating in the midlands region, the other being Kyletalesha (W0026-02). The Midlands Waste Management Plan identifies landfill as continuing to play a key role in waste management in the short to medium term, until such time as alternative systems are developed, e.g., mechanical biological treatment, thermal treatment, etc.

The recent waste licence review exercise undertaken by the Agency, to compel all licensees to divert municipal biodegradable solids away from landfill in line with the targets established in the Landfill Directive, will act as a key driver for the provision of such alternative systems. The Waste Management (Food Waste) Regulations 2009 will also be extremely important in diverting biodegradable waste away from landfill and towards alternative recycling infrastructure. However, it is appropriate that sufficient landfill capacity is available in the region for residual waste to be deposited in a controlled and authorised manner. It is worth noting that Offaly County Council is not compelled to use the available landfill capacity at the authorised fill rate proposed in the PD but is compelled to observe the requirements of the two initiatives mentioned in this paragraph.

The proposals are deemed to be compatible with the objectives of the Midlands Waste Management Plan, the National Biodegradable Waste Strategy (2006), and other national waste policy statements.

15. Charges

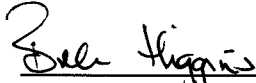
The current enforcement charge for the site is €26,704; the revised charge for the PD is €20,945 and is reflective of the enforcement effort required under the Conditions of the PD.

16. Recommendation

In preparing this report and the Proposed Decision I have consulted with Agency technical and sectoral advisors Mr. Brian Meaney and Dr. Karen Creed.

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

Signed



Breen Higgins

Inspector

Office of Climate, Licensing and Resource Use

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 1996-2010.