

This report has been cleared for Submission  
to the Board by Dr Thomas McLoughlin  
Signed: Dr Thomas McLoughlin Date: 15/10/09



**OFFICE OF CLIMATE,  
LICENSING &  
RESOURCE USE**

**INSPECTORS REPORT ON A LICENCE APPLICATION**

TO:	DIRECTORS	
FROM:	Dr Tom McLoughlin	- Licensing Unit
DATE:	15 <sup>th</sup> October 2009	
RE:	Application for a waste Licence from Molaisin Compost Limited, Kilmolash, Cappoquin, Co. Waterford Licence Register W0245-01	

<b>Application Details</b>	
Type of facility:	Non-Hazardous Materials Recovery Facility
Class(es) of Activity (P = principal activity):	4 <sup>th</sup> Schedule: Class 2 P, 13
Quantity of waste managed per annum:	20,000 tpa
Classes of Waste:	Non-hazardous biosolids which include industrial and sewage sludges and other non-hazardous biodegradable materials (e.g. green waste) (excluding Animal By Products material which includes catering waste).
Location of facility:	Molaisin Compost Limited, Kilmolash, Cappoquin, Co. Waterford
Licence application received:	28/5/2008
Third Party submissions:	Ten
EIS Required:	Yes
Article 14 Notices sent:	18 <sup>th</sup> September 2008
Article 14 compliance date:	07 <sup>th</sup> October 2008
Article 16 (1) Notice sent:	07 <sup>th</sup> November 2008
Article 16 (1) compliance date:	1 <sup>st</sup> April 2009
Article 16 (1) Notice sent:	06 <sup>th</sup> May 2009
Article 16 (1) compliance date:	25 <sup>th</sup> May 2009
Site Inspection:	9 <sup>th</sup> September 2008

## 1. Facility

Molaisin Compost Limited (85% owned by McGill Environmental Ltd) have been operating a composting facility at Kilmolash, Cappoquin, Co. Waterford since January 2005 under a Local Authority permit. It should be noted that the Waste Management (Permit) Regulations 1998 were applicable for composting facilities up to 1000 M<sup>3</sup> at any time. The Waste Management (Facility Permit and Registration regulations 2007-2008) allows a facility to be permitted by the Local Authority accepting up to 10,000 tonnes per annum of biowaste. Amounts greater than 10,000 tonnes require a licence.

Presently, the facility at Kilmolash has the capacity to compost up to 12,000 tonnes of waste per annum and the applicant proposes to extend the size of the facility within the next 2-3 years which will require planning permission from the Local Authority. The company informed the Agency in November 2008, after submission of this waste licence application, that the facility needed an EIS under the Planning & Development Regulations. The Agency informed the applicant in November 2008 that the EIS had to be considered as part of the waste licence application and it needed to be assessed for compliance with Article 13(1) of the Waste Management (Licensing) Regulations, 2004 (S.I. No. 395 of 2004). The EIS was received by the Agency on 25<sup>th</sup> May 2009.

In accordance with the aforementioned Regulations, the Agency required the applicant to publish an additional notice in a newspaper circulating in the district in which the said activity is carried on as the Agency considered that the information contained in the EIS was significant additional data in relation to the effects on the environment of the proposed development<sup>1</sup>. This statutory obligation was fulfilled by the applicant. It should be noted that the Agency was precluded from making a proposed decision on this application until after 6<sup>th</sup> June 2009.

Originally the applicant proposed to apply for planning permission in the 2<sup>nd</sup> half of 2009, however, in a conversation (July 2009) with the company they stated that this will not occur until 2010 at the earliest. The facility will be extended to the east of the existing building, and will be constructed over a three-month period. The composting facility will be constructed to increase the capacity to 20,000 tonnes/annum of biowaste producing around 14,300 tonnes/annum of a Class 1 compost (good quality compost). The fact that this company can presently cater for 12,000 tonnes and considering that they may not complete the extension for 1-2 years, I wish to point out that Condition 3.14 of the RD allows the company to compost up to 12,000 tonnes per annum (equivalent to 230 tonnes per week). The facility would not be able to handle biowaste amounts greater than 12,000 tonnes until the extension to the facility is completed. Condition 3.14 states:

Waste acceptance of greater than 12,000 tonnes per annum (equivalent to 230 tonnes per week) shall not commence at the facility until the extension to the facility is complete and not without the prior agreement of the Agency.

The operation is an industrial composting business using a controlled static pile ( a pile of compost that is not turned mechanically), forced aeration system. This aerobic process of composting takes place completely indoors under negative pressure and the extracted air is subjected to biofiltration to ensure that odours are not problematic. The incoming non-hazardous biosolids which include industrial and sewage sludges and other non-hazardous biodegradable materials are initially mixed with 'amendment material' such as dry finished compost and other materials, e.g., compost, sawdust, woodchips and spent leaves, and then moved into the aerated composting bays to start the biological process of composting. When

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<sup>1</sup> Article 16(2)(a) of the Waste Management (Licensing) Regulations 2004

the company sent in their application they had planned to accept separated household and catering waste for composting.

However, following a meeting with the Department of Agriculture, Fisheries and Food on 21st August 2008, it was determined that their current facility design is not suitable for Animal By-Products. On foot of this, the company made the decision not to apply for an Animal By-Products permit. The Agency were informed of this decision in October 2008 in their article 14 (2)(b)(ii) reply.

I wish to point out that the nearest residence is located approximately 100metres from the facility.

This recommended decision (RD) allows waste acceptance and handling during the following hours:

- Between 8 a.m. and 6 p.m. Monday to Saturday.

The above hours of acceptance and handling were applied for by the company and in my opinion are reasonable taking on board any potential nuisance that might be caused to the nearest receptor sites (dwelling houses) if the hours of acceptance were increased.

There will be 3 full time operators at the facility and the facility will be provided with technical and administrative support from within the trading group.

## **2. Operational Description**

On completion of the proposed extension of the facility, there will be a total of 22 composting bays in the factory (10 existing and 12 proposed). The composting bays all have underfloor aeration channels. The 12 new bays will be completely enclosed with concrete roofs. The new section of the facility will be constructed using the same material as the existing building. There will be an aeration fan behind each composting bay, to blow air up through the pile which also controls the temperature. This ensures proper composting conditions. These fans will be in tunnels behind the composting bays and the process will be automated through a control panel. Each new bay will have its own biofilter and extraction fan. There will be an 'amendment material' storage area situated inside the existing building where such material will be stored prior to use. All incoming biosolids will be delivered to the facility in covered containers. The delivery trucks will tip their loads off the existing ramp into the acceptance area within the building which is under negative pressure which ensures good management of any potential odours.

## **3. Use of Resources**

The facility has included details on raw material and energy consumption as follows:

- ⇒ Diesel fuel oil 30,000 litres;
- ⇒ Electricity usage: 900,000 KW per annum for aeration, extraction and electrical appliances for the proper functioning of the building. This will increase by approx. 450,000 kW for the new extension.
- ⇒ water usage, approx 230 litres will be used daily which will be taken from an existing well on the site.

## **4. Emissions**

### **4.1 Air**

#### Odour

The applicant has stated that odour emissions from the facility will be controlled by the enclosed nature of the process and the provision of biofilters for the treatment of odourous emissions. All waste processing will be required to be carried out indoors and all process air from these areas will be extracted and biofiltered. Subjective odour assessments at the biofilter outlet will be required on a daily basis as per 6.5 of the RD. Quarterly odour monitoring and analysis for odourous compounds is also required at the biofilters as per Table C.1.2 of the RD.

#### Dust

The applicant has stated that there will be no significant dust emissions from this facility as they have carried out measurements and that emission levels for dust will be met. It should also be pointed out that all material will be processed in-doors and material will be delivered in closed containers thus minimizing possible dust problems at the site. Dust monitoring will be required as per Schedule C of the RD.

#### Bioaerosols

The composting of biodegradable waste involves a microbiological process where microbes (for example, bacteria and fungi) proliferate and grow by using the nutrients in the compost for food. High total viable cell counts (TVCC) are reached during the process and the microbial cells can be aerosolised (i.e. become airborne), particularly, during mechanical agitation of the composting material. This gives rise to the term 'bioaerosol'.

I wish to point out that at this facility the composting will be carried out indoors, also the air that will be extracted from the composting building will be biofiltered. Therefore, the risk to human health from bioaerosols is vanishingly low for persons outside the building.

The company will carry out annual monitoring of bioaerosols levels in particular, in relation to monitoring for *Aspergillus fumigatus* (AF). The results of this monitoring will give an indication of the background levels of AF which can then be compared to the results of the annual monitoring requirements of this fungus in accordance with Schedule C of the RD.

The HSA will be notified of the final decision in due course having regard to functions with regard to safety at work legislation, in particular in relation to bioaerosols that might have an impact on workers in the facility.

### **4.2 Emissions to Sewer**

There are no emissions to sewer. A bio-unit will be used on site and the tank will be dewatered and the contents composted on a regular basis.

### **4.3 Emissions to Surface Waters**

No leachate or runoff will be generated from the composting process and therefore there is no discharge to surface water. Rain and storm water falling on the hardstanding area and the facility roof will constitute clean runoff. A soak pit will be constructed adjacent to the facility for receipt of clean runoff. Surface water quality will be analysed on a bi-annual basis as per Schedule C of the RD.

#### **4.4 Emissions to ground/groundwater**

No direct emission to groundwater is allowed (Condition 5.2).

The site will be covered in impermeable hardstanding (Condition 3.4).

It is not envisaged that any run-off will enter the local groundwaters directly; however as a precautionary measure due to possible indirect run-off, groundwater boreholes were installed at the boundary locations of the new site. The applicant proposes to carry out groundwater monitoring bi- annually for specific indicator parameters, the RD includes such ambient monitoring requirement.

#### **4.5 Wastes Generated**

The applicant proposes to accept a total of 20,000 tonnes per annum (250 tonnes per week from the Southern region and surrounding counties) of non-hazardous biodegradable waste for composting. The incoming materials accepted on site are non-hazardous industrial and sewage biosolids. No hazardous materials will be accepted on site.

#### **Arrangements for off-site disposal or recovery**

Regarding the recovery of the finished material the applicant has stated that depending on the origin and nature of the biosolids, the destination of the finished product will be landfill as an organic cover material or for agricultural and landscaping uses. This must be stabilized as per Schedule E of the RD. Compost is transported from the facility by covered truck or trailers, and material manifests are signed by relevant personnel in order to document the life cycle of the original waste to the finished product use.

#### **4.6 Noise**

The facility operation has resulted in an average of an extra 8 vehicles travelling on the road daily. This is not expected to increase by more than 2 vehicles per day, even with the proposed extension. An increase of 100 tonnes per week is only an extra 5 delivery vehicles. A noise survey was commissioned by the applicant which indicated that no audible noise was noticeable at NSL during the day and night survey.

Schedule C set the requirements for noise monitoring. The noise emission limit values to be measured at any noise sensitive location are set in Schedule B.

#### **4.7 Nuisance**

##### Litter

Litter is not an issue on site as the waste is delivered on site in enclosed or covered refuse trucks. Once the waste comes on site it is unloaded and mixed inside the materials reception building. The application states that daily litter inspections are carried out and a skip is on site at all times for temporary storage of litter collected on site prior to disposal off site.

##### Dust

All activities take place indoors at the facility. There is no loading or unloading of materials outdoors. In my opinion dust will not be a problem at this facility.

##### Vermin

The site is visited by a vermin control company on a monthly basis and there are a number of bait points set up internal and external to the building. site

##### Flies, birds, pests

As waste is unloaded and mixed in the materials reception building the impact of birds and flies is reduced.

Potential nuisances from the facility are controlled by Condition 6 of the RD.

## **5. Restoration**

The decommissioning and restoration of the site is not expected to occur in the near future. Standard conditions regarding closure of the facility have been included in Condition 10 of the RD.

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

According to the applicant a review of the National Parks and Wildlife Service (NPWS) database ([www.heritaaedata.ie](http://www.heritaaedata.ie)) revealed that the site is not contained within or contains a designated site of ecological interest.

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

The National Strategy on Biodegradable Waste sets out measures to progressively divert biodegradable municipal waste from landfill in accordance with the targets in EU Directive 1999/31/EC on the landfill of waste. Article 5 of the Directive specifically requires each Member State to prepare a National Strategy on Biodegradable Waste which will set out measures aimed at the separate collection, recovery and recycling of biodegradable waste. The Directive also sets out targets in relation to the progressive diversion of biodegradable municipal waste from landfill.

The Government policy also called for the development of waste recovery facilities employing environmentally beneficial technologies, as an alternative to landfill, including the development of composting and other feasible biological treatment facilities capable of treating up to 300,000 tonnes of biodegradable waste per annum to meet the required targets.

It is for this reason that the applicant is proposing to increase their operations to 20,000 tpa.

## **8. 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 Recommended Decision 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 RD, 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.

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

The facility does not come within the scope of the IPPC Directive, there are no discharges to water so the emissions are not an issue for the Water Framework Directive. The applicant has stated that it does not intend to treat ABP material. The company informed the Agency in their Article 14 reply, that their current facility design is not suitable for Animal By-Products. Consequently, they made a decision not to apply for an Animal By-Products licence thus no catering waste will be accepted at this facility.

## 10. Fit & Proper Person Assessment

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

## 11. Proposed Decision

It is my opinion that the technology proposed for this composting facility is appropriate and the risk to the general public from nuisances like odour will be extremely low due to the fact that the composting process is carried out under controlled conditions, in particular:

- ⇒ process is carried out indoors
- ⇒ provision of oxygen to ensure aerobic conditions
- ⇒ temperature control by aeration,
- ⇒ use of negative pressure in the building
- ⇒ use of biofiltration.

In my opinion all the above provides the appropriate measures for the proper control of such composting facilities, in particular to control any potential odours which can be problematic to persons living in the vicinity of such facilities. Good management of this facility is also of paramount importance, it should be noted that Condition No 2 of the RD sets the requirements for good management of the facility.

## 12. Submissions

To date, ten (10) submissions were received from Mr Gerard Cummins, Woodstock, Cappoquin (November 2008-Sept 2009). He has major concerns of odour coming from the facility. He has sent these odour complaints to the Local Authority and more recently to the Office of Environment Enforcement (OEE). He resides approximately 300m from the facility.

In his first submission dated 11<sup>th</sup> November 2008, Mr Cummins stated:

*'I wish to express my concerns regarding the above referenced waste application, From March 2005 a foul smell is evident from this site almost on a weekly basis, I contacted Waterford County Council in February 2006 (who issued a three year waste permit to facility) and have been keeping a daily log of Odour events since that date, Waterford County Council in my opinion were slow to act on complaints, so in December 2007 I contacted the EPA, completing a Complaint form C3 The most recent odour issue, occurred on 04th November and was forwarded to the EPA'.*

On foot of a Section 63 (1) notice which was issued by the OEE in July 2007, Waterford County Council have performed nine independent odour assessments at Molaisin Composting facility since May 2008 which involved different members of staff and no odour was detectable at any time. They advised the Agency in May 2009 that no enforcement action be taken on these complaints.

### **OCLR response**

I did not detect any odour during my site visit to this facility in September 2008.

The applicant has stated that odour emissions from the facility will be controlled by the enclosed nature of the process and the provision of biofilters where odourous emissions are expected. All waste processing will be required to be carried out indoors and all process air from these areas will be extracted and biofiltered. Subjective odour assessments at the biofilter outlet will be required on a daily basis.

It should be noted that this company will be operating a composting facility which will have a very low impact on the surrounding environment due to the technology that they propose to use on site. The low impact can be attributed to all operations occurring within the facility. The composting process employed by McGill is a controlled process and well established in the industry. Biofiltration is regarded as BAT for the sector to minimize odours. With biofiltration capacity at a very high level, any odourous compounds will be eliminated and clean air will be emitted into the surrounding atmosphere.

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

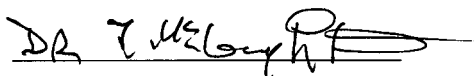
### **13. Charges**

The RD requires that the applicant shall pay an annual contribution of €4,873.00 (Condition 12).

### **14. Recommendation**

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

Signed



Dr Thomas McLoughlin

Senior 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 1996-2007.