OFFICE OF CLIMATE CHANGE, LICENSING & RESOURCE USE

INSPECTORS REPORT ON A LICENCE APPLICATION

To:	Directors	
From:	Yvonne Furlong	**- LICENSING UNIT**
Date:	11 JULY 2007	
RE:	Application for a waste Licence from WATERFORD CITY COUNCIL, Licence Register W0234-01	

Application Details	
Type of facility:	Composting Facility
Class(es) of Activity (**P** = principal activity):	3rd Schedule: (7), 13 4th Schedule: **2 (P)**, 13
Quantity of waste managed per annum:	9,000 tpa (Increasing to 20,000 tpa in 2008 subject to Agency agreement)
Classes of Waste:	Household and commercial organic waste and green waste.
Location of facility:	Green Road, Waterford City, Co. Waterford.
Licence application received:	07/12/2006
Third Party submissions:	None
EIS Required:	No
Article 14 Notices sent:	12/02/2007
Article 14 compliance date:	22/05/2007
Site Inspection:	07/02/2007

1. Facility

Waterford City Composting Facility is an existing waste composting facility and is currently operated by a private contractor (Veolia) on behalf of Waterford City Council. Waterford City Council is the owner of the site and equipment.

The facility was constructed in 2003 and the operations began in January 2004. An EIS was not required for the site, as it was granted a Part 8 under the Planning and Development Regulations, 2001, S.I. No. 600 of 2001 and the quantity of waste

processed is less than 25,000 tonnes per annum. The site is currently operating in accordance with a Certificate of Registration (Register No. R1600) which was granted by the Agency on the 30th of September 2005. The site is located approximately 5 km from Waterford City, in the townland of Ballybeg. The site is located in an industrial zone, adjacent to an industrial estate (Six Cross Roads Business Park) and adjacent to an EPA licensed Waste Transfer Station (W0177-03). The closest commercial receptor is the DHL facility in the industrial estate which is 40 m from the facility, the nearest residential sensitive receptor is on the Kilbarry Road 370 m from the facility.

The facility is now seeking a Waste Licence for a proposed expansion from the current annual intake of 9,000tpa (Certificate of Registration limit – 5,000tpa) to 20,000tpa by 2008. The site is also operating under a Department of Agriculture Animal By-Products licence, which was granted in November 2006. The applicant has requested the following waste activities;

- 3rd Schedule; (7), 13
- 4th Schedule; **2 (P)**, 13

The applicant applied for Class 7 of the Third Schedule of the Waste Management Acts 1996 to 2005 in order to pre-treat the leachate on-site for re-use or prior to its removal off-site for disposal. At the moment the applicant is not pre-treating the leachate produced on site and has no plans in the immediate future to do so. Also this class is not required for the reuse of leachate on site. For this reason I do not consider it necessary for the activities described in the application and thus recommend refusal of Class 7 from the 3rd Schedule and this is reflected in the Recommended Decision (RD).

It is proposed to operate the facility from 0700 to 2200 hours Monday to Friday and 0700 to 1800 hours on Saturdays and Bank Holidays. The proposed hours for waste acceptance are 0700 to 2030 Monday to Friday and 0700 to 1730 on Saturdays and Bank Holidays. The RD has allowed for this and arrangements can be made to facilitate contingencies subject to Agency agreement (Condition 1.6).

The facility currently employs a Facility Manager, four General Operatives and an Administration/Weighbridge Operator. The Facility Manager reports to the Director of Services in Waterford City Council.

2. Operational Description

The facility accepts source separated household and commercial organic waste along with green waste from householders, landscapers and the Parks Department of the City and County Councils.

At the facility the waste is tipped out in the materials reception building where it is visually screened for contamination and all large objects are manually removed. The material is then transferred into the mixer, where amendment material (bulking materials and water) is added. The mixer shreds and blends the material for composting. At the end of the mixing the moisture is checked and if necessary more water is added.

Once the material is mixed it is transferred to the in-vessel digestor units (of which there are 20 with a capacity of $30m^3$ each) by a conveyer that helps break up any clumps and thus forms an homogenous compost within the vessel. The in-vessel

digestor units are completely sealed and have temperature versus time monitors. The vessels also have perforated floors allowing air to be introduced from the bottom and the collection of liquids. Aerobic conditions are maintained through a forced air system, this encourages the growth of mesophyllic and thermophyllic microbes, which are important in the composting process. The leachate is collected daily from the digestor units. Currently the leachate flows through the on site drainage system and is ultimately discharged untreated to the St. Johns River.

Following 14 days in the digestor units the material is moved to the second phase of composting. This involves the movement onto four outdoor Aerated Static Piles (ASP) with three pile turns over a 7-8 week period. This phase is called 'curing' and is a mesophyllic, aerobic process, that eliminates organic plant phytotoxins, consumes fungal substrate and provides additional biological stabilisation. Polyethylene pipes are buried in a concrete slab with upright pipes at the level of the curing pad floor. Air is drawn down through the curing pile and expelled through a biofilter.

The next phase of the process is the screening and storage. The screening process involves the oversized undecomposed materials and inert contaminants being separated by a rotating cylinder into a separate pile. If the material is highly contaminated it can be disposed of to an appropriate facility. If the contamination is low, the oversized materials are used in new batches to add porosity. Once the compost is screened it is stored for 21 days while pathogen tests are carried out.

As mentioned above the facility proposes to increase its annual intake from 9,000 to 20,000 tonnes per annum by 2008. The Waste Licence Application states that the proposed operational details will be forwarded to the Agency with the Specified Engineering Works (SEW) Report for approval to commence construction. The proposed extension plan for the facility involves the installation of in-vessel tunnels for the first stage of the composting process and a composting building. The compost building will contain indoor ASP pads. Following the indoor stage the material will be transferred to the existing outdoor ASP pads. The indoor stage of the process will reduce noise impacts on site. The material will then be removed to the compost building for screening and then transferred to the compost storage shed. An air extraction system will be installed in the composting building to mitigate potential odour and dust.

The RD specifies that the licensee shall, prior to commencement of licensable activities, put the current waste reception building under negative air pressure, with an appropriate air extraction and abatement system (Condition 6.15). The building shall also be fitted with fast action roller doors and the doors shall be kept shut where possible. The RD also specifies that the biofilters shall be appropriately sized and managed (Condition 6.15). At the moment the biofilters on site are not being operated to their optimal potential. This may be due to many factors such as ammonia loading, media type, air distribution network and moisture application. An odour study carried out on the biofilters on site found that equal air distribution was not optimised within the media bed matrix. A number of recommendations for improved biofilter management have been outlined in this study. Condition 6.15 of the RD requires biofilter operation be optimised in line with the recommendations of this study.

In relation to the proposed increased in waste acceptance Condition 3.20 of the RD specifies that the licensee shall prior to accepting greater than 5,000 (Cert of Reg

limit) tonnes of waste per annum submit a report for the agreement of the Agency demonstrating that there is sufficient additional facility capacity and that the appropriate infrastructure to manage the increased waste intake has been installed and commissioned on site.

3. Use of Resources

- Fuel: The facility currently uses 14 m^3 of diesel oil and 0.15 m^3 of lubricant oil on site per annum. The diesel oil is used to run the plant on site. The plant used in the composting process are; a tractor with hydraulics and a power take off shaft, a front-end loader, a roll off truck and a trommel screen.
- Electricity: The facility uses approximately 600kW of electricity on an annual basis.
- Water: The facility uses approximately 21,250 m^3 of water annually for purposes such as washing and wetting the compost.
- Materials: The principal raw material used on site is waste. The waste consists of household and commercial organic waste and green waste. Other materials used on site on an annual basis include:
    - 0.15 m^3 of coolants and antifreeze.
    - 2,000 kg of urea. This is used to achieve the ideal C:N ratio for the compost.
    - 0.20 m^3 of cleaning chemicals.
    - and 0.15 m^3 of insect repellent (Fendona) and 50 kg of rat bait (Klerat or Contrac).

As the facility is also licensed under the Animal By-Products Regulations the cleaning products used on site have been selected from the Department of Agriculture and Food approved list. Currently diesel, hydraulic and lubricant oils are brought to the site as required, however with the planned development, it is proposed to construct a bunded storage tank for cleaning chemicals and fuels.

4. Emissions

4.1 Air

The biofilters are the main point source emissions to atmosphere from this facility. The main emissions to atmosphere from Waterford City Composting Facility are Dust, Bioaerosols and Odour.

Dust and Bioaerosols

In January 2006 dust monitoring was carried out at three locations on the site; at the southern boundary, at the northern boundary at the western end and the northern boundary to the east of the curing pads. The standard dust deposition limit (350 $mg/m^2/day$) was exceeded at two of the locations, D1 and D2, with levels of 403 and 408 $mg/m^2/day$ recorded respectively. The level recorded at the third monitoring location was 251 $mg/m^2/day$. At the time of monitoring, the entrance to the facility was located adjacent to D1, which was an internal roadway between two sites. A new entrance has since been installed. D2 is located adjacent to the curing pads; there are

no receptors within 300m of this monitoring point. D3 is located to the east of the curing pads, at the northern boundary of the site.

It is reported that dust is a good indicator of exposure to micro-organisms or their constituent parts (bioaerosols) (British Health and Safety Executive). Most published studies indicate that bioaerosols are reduced to background concentrations within a distance of 250m from a composting plant. The closest residence to the site is 370m away from the boundary and the nearest commercial/industrial receptor is 10m from the facility.

As Waterford City Council proposes to locate the majority of the operation indoors the risk of bioaerosol formation via wind is reduced.

The facility also has a 'Dust and Bioaerosol Control Plan' in place. This plan includes an assessment of potential impacts and control and mitigation measures. This is relevant to the existing and proposed site. This plan specifies such things as training of staff in relation to dust control and consideration of wind conditions and direction.

Odour

An odour impact assessment of the site was carried out in May 2005. Potential odour sources were identified from a site-specific odour measurement survey. From the survey it is predicted that 12 industrial facilities in the locality of the site will be exposed to odour concentrations between 3.0 and 38.0 $O_{UE}m^{-3}$ at the 98^{th} percentile in a worst-case meteorological year. All other receptors, commercial and residential, in the vicinity will be exposed to odour concentrations of less than 3.0 $O_{UE}m^{-3}$. The turning and tipping of waste, along with the opening of building doors and biofilter operations are believed to be the main causes of the odour. The Office of Environmental Enforcement received an odour complaint in relation to Waterford City Composting Facility on the 29 January 2007. Following on from this complaint the OEE carried out a site inspection and odour assessment on the 13 February 2007. The odour assessment found that there was a faint to moderate odour intensity NNE of the site at a bus stop in Clonard Park Estate. The OEE issued an action requirement in accordance with Certificate of Registration No. R1600, stating that the operator, Waterford City Council, shall ensure that odour does not give rise to nuisance at the facility or in the immediate area of the facility and requiring the operator to continue to review and modify operational practices where possible in order to minimise odour nuisance caused beyond the site boundary.

Currently a range of odour control mechanisms are employed at the facility to mitigate the odour impacts. Some of the control mechanisms include:

- The tipping of waste occurs indoors and the transfer of biowaste from the floor to the mixers begins immediately after delivery.
- There are two Odour Control Units on the material reception building. One is inside the building and the other is outside the building at the western door. These units are oscillating atomising units that produce an ultra fine mist that stays in the air and mixes with the dust and odour particles pulling them to the ground.
- Shredding occurs in the compost storage shed.
- The digestor phase occurs in in-vessel units.
- Biofilters are used on site, however as mentioned above the management of these requires improvement (Condition 6.15).

- Good housekeeping, maintenance of aerobic conditions, correct operation procedures and taking into account odour sensitive receptors and meteorological conditions.

Currently on site there is a waste reception building, 20 in-vessel digestor units, outdoor aerated static piles and a compost screening and storage building. The proposed expanded operations will consist of a waste reception building, in-vessel tunnel system, compost building (with indoor aerated static piles) and compost storage shed. It is planned to retain the outdoor aerated static piles and in-vessel digestor units on site. The proposed expanded operations means that from material reception through to curing and screening the process will be mainly carried out indoors. This building will have an appropriate air extraction system and biofilters.

The RD specifies that inspections for odour shall be carried out daily on site. The RD also specifies that the licensee shall submit a detailed odour management plan to the Agency within three months. The Agency can also require the licensee to carry out odour monitoring and dispersion modelling as required (Schedule C.6). Condition 3.24.4 of the RD requires that the headspace gases from the leachate-holding tank be vented to an appropriate treatment system prior to release to the atmosphere; this will reduce the odour impact from the storage of the leachate. Condition 6.15 also deals with dust and odour controls. Condition 6.15.2 specifies that the licensee shall within twelve months put the current waste reception building under negative air pressure, with an appropriate air extraction and abatement system, fit the building with fast action roller doors and the doors shall be kept shut where possible and that the Biofilters shall be appropriately sized and managed.

4.2 Emissions to Sewer

All stormwater, surface water, sewage and leachate from the facility are discharged to sewer. However, as Waterford does not have a waste water treatment plant, the sewer discharges directly to the St. Johns River. St. Johns River is east of the facility and the lower River Suir is north west of the facility. All domestic, commercial and industrial foul water and surface water in the city are understood to be discharged to the River Suir and St. Johns River. The report 'Water Quality in the Suir/Barrow/Nore Estuary & Waterford Harbour - 2005, Revised Edition', 2005, states that the St. Johns River is seriously polluted.

Storm water at the facility arises from the wetting of roads in dry conditions for dust suppression, general housekeeping and cleaning. Sewage is generated from the hygiene facilities, the facility has a population equivalent of 7. Leachate is generated from the digestor units, the aerated static piles and washdown from the reception building. The current quantities and parameters of leachate produced at the facility are outlined below:

Table 1. Mean parameters for effluent discharged from the digestor units and the Aerated Static Piles

Parameter	**Flow m^3/day**	**BOD mg/l**	**Ammoniacal N mg/l**	**COD mg/l**	**Suspended Solids mg/l**
Digestors	1.2	13,600	785	34,560	6,730

ASPs	2.85	610	238	1,780	423

St. Johns River is a tributary to the River Suir and has a tidal flow. The tidal reaches of the River Suir extend far inland and are tidal to a point upstream of Carrick-on-Suir, some 61 km along the Estuary/Harbour from Hook Head. Surveys of the Suir Estuary were carried out by the Agency in 2005, in which ammonia levels were found to have increased significantly since the previous survey in 2003. The highest ammonia was recorded in the St. Johns River. Low concentrations of ammonia can occur naturally in water bodies arising from the microbiological decomposition of nitrogenous organic matter; therefore unpolluted waters contain small amounts of ammonia (usually <0.1mg/l N). Ammonia may also be discharged directly into water bodies by industrial processes or as a component of domestic sewage. Ammonia levels >0.2 mg/l N may therefore be an indication of organic pollution in water. However the ammonia levels in St. Johns River increased significantly between 2003 and 2005, such an increase would require a substantial source of ammonia. At the time of the survey (27/10/05) an effluent sample from the Kilbarry Composting facility, which commenced operations in January 2004, was taken and was found to have had an ammonia concentration of 650mg/l N. However, the exact cause of the ammonia increase needs further investigation. I understand that construction work is in progress on site that will mean discharges of ammonia are diverted to a holding tank in the coming weeks. In the same survey the total coliform counts were found to be high in the St. Johns River.

Waterford City Composting Facility as stated above is currently discharging leachate into the sewer and ultimately to St. Johns River, therefore breaching the terms of their Certificate of Registration (Register No. R1600). The Office of Environmental Enforcement issued a Section 55 Notice under the Waste Management Acts 1996 to 2005 to Waterford City Council on the 27 February 2007. This notice directed them to cease discharge of leachate to sewer and install a holding tank to contain this leachate before tankering it offsite for treatment/disposal. These works were to be completed by 30 April 2007. Waterford City Council subsequently made representations to the Agency and requested that the notice be withdrawn or else the time for compliance be extended to July 31st, 2007. This extension was granted by the Agency on March 29th, 2007. Condition 3.24.1 of the RD specifies that an appropriately sized leachate holding tank be installed and maintained on site by date of grant of licence. The leachate holding tank shall be fully enclosed except for the inlet and outlet pipes and the headspace gases shall be vented to an appropriate treatment system. Condition 6.17.5 states that all leachate from the composting operations shall be collected and reused in the composting process where possible. If reuse is not possible the leachate shall, with the prior agreement of the Agency, be removed off-site to a waste water treatment plant (Condition 8.10).

Condition 3.14 of the RD specifies that a proposal be sent to the Agency within three months from the date of grant of the license for the on-site treatment of the sanitary effluent. Upon agreement by the Agency the treatment system shall be put in place in line with a programme of works to be agreed by the Agency. Following the installation of the waste water treatment plant a maintenance, control and monitoring programme shall be established for the plant. Schedule B.2 ‘Emissions to Water’

specifies emission limit values for suspended solids and BOD upon installation of the waste water treatment plant.

Currently Waterford does not have a municipal waste water treatment plant, however it is currently under construction and will be an operational plant in the coming years. For this reason the RD has allowed for process effluent emissions to sewer upon agreement by the Agency. In the event of trade effluent going to sewer (following the installation of a waste water treatment plant in Waterford) Condition 6.7 allows for a monitoring programme to be agreed by the Agency.

The RD requires that, following the installation of the on-site treatment system and the leachate holding tank, no water other than storm water, shall be sent to sewer, without the agreement of the Agency.

4.3 Emissions to Surface Waters

Emissions to surface waters are the same as above, as all stormwater, sewage and leachate from the facility is discharged to sewer, and is ultimately discharged untreated to the St. Johns River.

4.4 Storm Water Runoff

Storm water is generated on site from the following processes:

- Cleaning of the marshalling yard;
- General housekeeping;
- Wetting of roads for dust suppression in dry weather.

The storm water is collected in a storm water collection system and discharged to sewer along with the leachate and sewage. The RD specifies, as mentioned above, that no liquid other than storm water shall be put to sewer, once all appropriate infrastructure is installed on site.

It has been recommended that within twelve months all storm water discharges from the facility pass through silt traps and Class I full retention oil separators. Appropriate containment measures (e.g. bunding) are required in the RD to prevent contamination of surface water due to leaks, spillages, etc. The Recommended Decision specifies that three-yearly testing of pipes, bunding structures and tanks shall be undertaken. Currently diesel, hydraulic and lubricant oils are brought to the site as required, however with the planned development, it is proposed to construct a bunded storage tank for cleaning chemicals and fuels.

As all the water drainage systems on site are intermingled and emitted to St. Johns River from one single emission point to the sewer, storm water emissions are to be monitored along with all other waters emitted from the site until the waste water treatment system is installed on site. When the waste water treatment plant is installed

storm water emissions will be monitored in accordance with Schedule C.2.3 ‘Monitoring of Storm Water Emissions’.

The RD requires a firewater retention risk assessment study be carried out within six months of the grant of the licence to determine if the activity should have a firewater retention facility. If it is found that a significant risk exists for the release of contaminated firewater then the licensee shall prepare and implement a risk management programme.

4.5 Emissions to ground/groundwater

According to the Geological Survey of Ireland (GSI) an Ordovician Volcanics (OV) formation underlies the site with the subsoils being mainly till derived, chiefly from Devonian Sandstones. The GSI has classified the Ordovician Volcanics Formation that underlies the site as a ‘Regionally Important Aquifer with fissured bedrock (Rf)’. The underlying site has been classed as having a high to low vulnerability (HL) however only an interim study took place.

There are no emissions to ground from the facility and there are no proposed emissions to ground for the future. There are no boreholes on site and the facility is serviced by a water main.

The RD requires that within three months of date of grant of licence, the licensee shall submit proposals to the Agency for the location of a groundwater monitoring well for regular monitoring of groundwater quality.

4.6 Wastes Generated

The facility accepts source segregated organic waste from household and commercial sectors and green waste from householders, landscapers and the City and County Councils Parks Departments. Contaminants may be present in the source segregated waste particularly through non-compliance with the 3-bin system.

On reception at the facility, large contaminants such as plastic are manually removed. Following the composting process the material is screened to remove oversized un-decomposed materials or inert contaminants (‘overs’). The larger portion will be transported off site for suitable disposal and the low contamination overs (e.g. woodchip) are reused in the process.

Currently the process generates approximately 25% overs, however it is hoped to reduce the quantity of waste for disposal to less than 10%. Therefore a condition under the objectives and targets of the Environmental Management System is included in the RD requiring the licensee to reduce the oversized un-decomposed materials or inert contaminants (‘overs’) from the composting process. This will aid in achieving the above-mentioned target of 10% overs.

Following the installation of the leachate holding tank on site, the leachate will be tankered off site to an appropriate facility for disposal or recovery. Schedule C.4 of the RD specifies monitoring of trade effluent arising on site. It specifies quarterly monitoring of pH, BOD, COD, Metals, Ammonia and Sulphate, along with an annual Organic Screen.

Hazardous waste is not and will not be accepted at the facility.

4.7 *Noise*

Noise monitoring was carried out on site in January 2006. The monitoring was carried out at three site boundary locations and a noise sensitive location to the south east of the facility. Monitoring representative of both day and night was carried out. The following results were obtained:

Reference No.		N1	N2	N3	NS2
Location		Southern Site Boundary	Northern Site Boundary	Eastern Site Boundary	South East of Site
Night-time Monitoring	L_{Aeq}	45	43 (48)*	49	51
	L_{A10}	58	46	57	57
	L_{A90}	45	44	45	45
Daytime Monitoring	L_{Aeq}	66 (71)*	48 (53)*	55	70 (75)*
	L_{A10}	69	71	56	74
	L_{A90}	60	47	48	53

*The rating level recommended by the EPA incorporates the addition of a 5-decibel penalty to the specific noise level from an activity if the noise contains clearly audible tonal and/or impulsive elements. The penalty of 5 dB has been added to the L_{Aeq} level and the resultant rating level is indicated in brackets where applicable.

- N1: At night the main source of noise at this location was traffic noise from the adjoining industrial premises, there were no operations at the compost facility or the adjacent Waste Transfer Station. A background nighttime L_{Aeq} of 45 dB was recorded compared to a background L_{Aeq} of 60 dB during the day. The highest daytime measurement was L_{Aeq} 66 dB however tonal components were detected during the day subjecting the L_{Aeq} to a 5 dB penalty, thus leading to a day time L_{Aeq} of 71 dB. The main sources of noise during the daytime were waste delivery and collection vehicles, front end loading machines and reversing sirens from both the composting facility and the adjacent Waste Transfer Station.
- N2: As tonal aspects were detected during nighttime monitoring the L_{Aeq} at N2 was 48 dB. The only noise source at this point was from the nearby Ballybeg Housing Estate. A daytime LAeq of 53 dB was detected at this point.
- N3: The main source of nighttime noise at this point was due to a faulty door on one of the composting vessels at the time of monitoring; also traffic movements at the adjacent site were also audible. The daytime noise sources were mainly traffic from the adjoining site and reversing sirens.
- NS2: This monitoring point is located at the entrance to the Six Cross Roads industrial estate, to the south east of the facility. The main source of nighttime noise was traffic from the Kilbarry Road. The daytime L_{Aeq} at this location was 75 dB. The main source of this noise is traffic from the Kilbarry road. A total of 199 vehicles passed by the monitoring location during the monitoring

period, a large amount of which were articulated vehicles. A construction site was located approximately 100 meters to the north of the monitoring point.

Noise levels recorded during the monitoring period were influenced by nearby industrial activities and road traffic as well as on site activities. A green waste shredder, which can be a major source of noise, is used at the facility. The RD specifies that the shredder shall only be used indoors and only used between the hours of 08:00 and 18:00.

The proposed development of the facility will involve the construction of a composting building. There may be a short term, temporary noise level increase; the site will implement normal construction management practices to manage the construction noise.

The proposed changes to the facility will lead to intensification of the on site activities, especially traffic. The majority of the operations will however be brought indoors and it is believed the increased traffic will not have a significant effect on the area due to the existing large numbers of heavy goods vehicles in the area.

The Agency has received no noise complaints to date in relation to this facility. It is recommended that the installation be required to comply with the noise limits of a daytime value of $55L_{eq}$dBA and a night-time value of $45L_{eq}$dBA and that there shall be no audible tonal or impulsive component in the noise emissions from the activity at the nearest noise sensitive location. The RD requires the licensee, as part of ongoing environmental improvements at the site, to assess noise emissions from the activity and identify measures to reduce noise emissions within six months of the date of grant of licence. Implementation of the measures identified shall be agreed with the Agency. The RD requires that the facility carry out a noise survey of the site operations annually.

4.8 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 regular litter patrols of the site boundary and access road will be undertaken. The RD also specifies that litter arising from the site shall not result in an impairment of, or an interference with amenities or the environment at the facility or beyond the facility boundary.

In the proposed extension to the facility the operations of the site will be largely brought indoors, this will also help reduce the problem of litter on site.

- Dust

In January 2006 dust monitoring was carried out at three locations on the site. The standard dust deposition limit (350 mg/m^2/day) was exceeded at two of the locations, D1 and D2, with levels of 403 and 408 mg/m^2/day recorded respectively. As Waterford City Council proposes to locate the majority of the operation indoors the

risk of dust formation is reduced. Schedule B.1 requires quarterly dust deposition monitoring.

The facility also has a 'Dust and Bioaerosol Control Plan' in place. This plan includes an assessment of potential impacts and control and mitigation measures. This is relevant to the existing and proposed site. This plan stipulates requirements such as training of staff in relation to dust control and consideration of wind conditions and direction. The RD requires infrastructure be provided at the site for the monitoring of windspeed, wind direction and rainfall on a daily basis (Condition 6.24).

- Vermin

As vermin can be a major nuisance at waste management facilities all operations involving raw wastes are carried out within a material reception building. The digestion phase is also enclosed. There are strict cleaning procedures in place on site and as a precaution there is pest control on site. The site is inspected monthly and there are a number of bait points set up internal and external to the site.

In the proposed extension to the facility the operations of the site will be brought indoors, this will also help minimize any problem of vermin on site.

- Flys, birds, pests

As waste is unloaded and mixed in the materials reception building the impact of birds and flies is reduced. To prevent flying insects the internal walls are sprayed with Fendona or Qquapy six times a year.

- Condition 5.7 of the RD controls potential nuisances at the facility.

5. Cultural Heritage, Habitats & Protected Species

There are no recorded features of architectural, archaeological or historical importance within the site boundary. The site is not located on or adjacent to any ecological designated area.

6. 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.

Waterford City Composting with it's 20 digestor units currently composting 9,000 tpa, does not have the capacity to treat the predicted quantities of biowaste following the implementation of a 3-bin collection system across the South East Region. The three bin system was introduced to achieve the diversion of biowaste from landfill

tagets set out in the National Strategy. It is for this reason that the facility is proposing to increase their operations to 20,000 tpa.

The Water Quality Management Plan for the Suir Barrow and Nore Estuary (May 1990) has as a specific objective for the St. Johns River, the improvement of several reaches where the existing quality standards are less than satisfactory. The Plan identifies the Suir estuary and St. John's River in Waterford City as one of the most seriously affected sections. This assessment is based on a 1983 survey of water quality. The above-mentioned report 'Water Quality in the Suir/Barrow/Nore Estuary & Waterford Harbour - 2005, Revised Edition', 2005 shows that the St. Johns River is still an area of concern. The water and leachate management required by the RD are in keeping with the objective of the Plan relating to the improvement of water quality in the St. Johns River.

There is no Air Quality Management plan in place for the area in question.

7. 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.

8. Compliance with Directives/Regulations

The facility does not fall under the scope of the landfill or IPPC Directives. In relation to the groundwater directive, the facility will not have any direct emissions to groundwater. The facility is currently operating under an Animal By-Products licence, therefore complying with the Animal-By-Product regulations.

9. Submissions

There were no submissions made in relation to this application.

10. Charges

The RD requires that the applicant shall pay an annual contribution of €11,080 (Condition 12.1.1).

11. 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

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Yvonne Furlong

Inspector

Environmental Licensing Programme

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 1996-2005.