



**OFFICE OF
LICENSING &
GUIDANCE**

INSPECTORS REPORT ON A LICENCE APPLICATION

To:	DIRECTORS	
From:	MAEVE MCHUGH	- LICENSING UNIT
Date:	21 ST JUNE 2007	
RE:	APPLICATION FOR A WASTE LICENCE FROM FINGAL COUNTY COUNCIL, LICENCE REGISTER W0223-01	

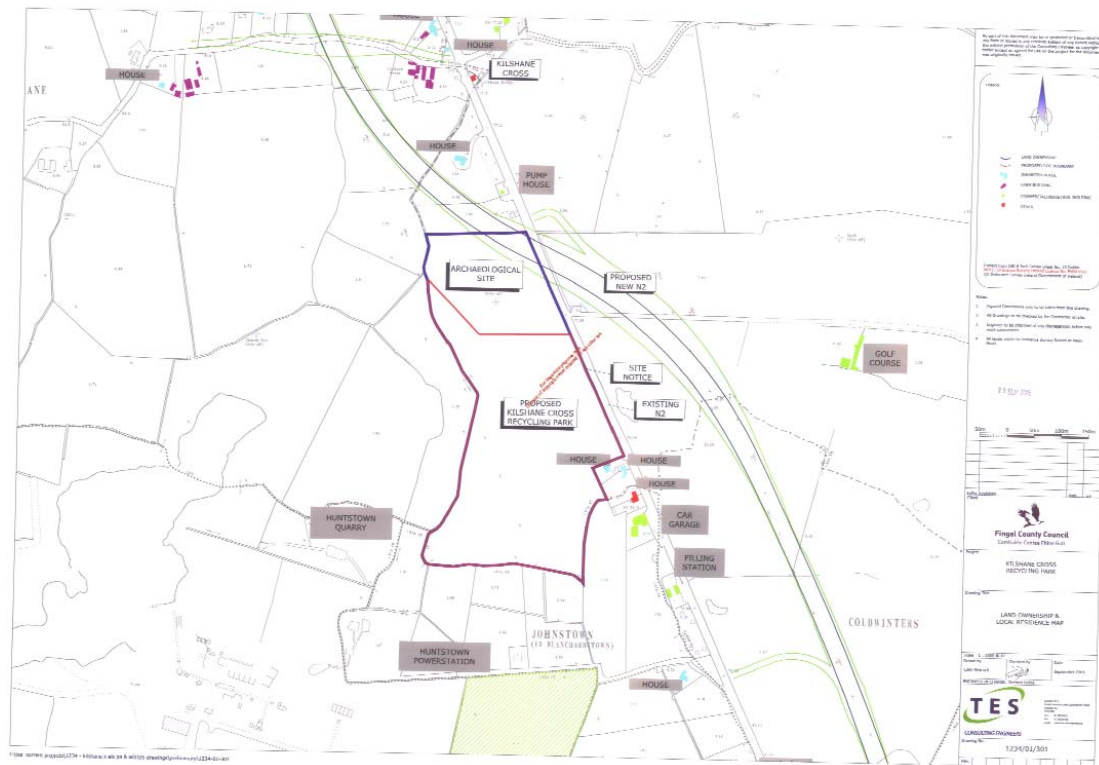
Application Details

Type of facility:	Integrated waste management facility including waste transfer station, biological waste treatment, sludge drying unit and C&D waste recovery.
Class(es) of Activity (P = principal activity):	3 rd Schedule: 11, 13 4 th Schedule: 2(P), 3, 4, 9, 11, 13.
Quantity of waste managed per annum:	211,511 t
Classes of Waste:	Household and commercial, sewage sludge, construction and demolition
Location of facility:	Newtown, Kilshane Cross, Dublin 15.
Licence application received:	29/09/05
Third Party submissions:	1
EIS Required:	Yes
Article 14 Notices sent:	21/02/06
Article 14 compliance date:	16/05/07
Site Inspection:	15/03/06

1. Introduction

The application from Fingal County Council (FCC) is for the development on a Greenfield site of an integrated recycling/waste management facility to contain what will effectively be four separate waste management units, each of which would be licensable in its own right. The site is located approximately 1.5km north of the N2/M50 interchange, in the townland of Newtown and is currently a field of agricultural land surrounded by hedgerows. The site is bounded immediately to the east by the N2, and to the west by a small stream which is

a tributary of the River Ward. There are several (15-20) private residences within a 1km radius of the site boundary, many of which are along the N2, lying SE, N and NW of the site. The site of one of the houses adjoins the boundary of the Kilshane Cross site to the east. The drawing below depicts the facility boundary outlined in red, residential properties in blue, commercial or industrial properties in green, farm buildings in purple and the proposed new N2 road cutting through the drawing from southeast to northwest.



Drawing No 1 showing the location of the facility along with adjacent houses and buildings and the location of the proposed new N2 road.

Although Fingal County Council is the applicant and intends to be the licensee the facility is to be developed using the Public Private Partnership (PPP) process, with the intention that each operation within the facility will be developed and operated by a private contractor. The proposal to develop the park under the PPP process has meant that the applicant was unable at application stage, to supply information at a certain level of detail, as some of the design specifics of technical and infrastructural information will only emerge through the PPP process. Some drawings and details of site infrastructure, layout and emission points given in the application are generic in nature and the applicant clearly intends that they may be subject to change. However the applicant undertakes to achieve stringent emission limit values and sufficient information and detail has been provided to allow the Agency to make a decision in this case. The approach taken to progress the application to a Recommended Decision (RD) therefore was to impose emission limit values and trigger levels, and to be prescriptive in terms of conditions in the Recommended Determination, where perhaps the application was more generic or loose in its terms. In this way it is endeavoured to facilitate the PPP process. Any subsequent i.e. post-licensing alterations will be limited to those permitted under the terms of the licence.

2. Operational Description

The proposed development consists of the following:

- (a) A 'Construction and Demolition Waste Recovery Unit' (C&D) processing 75,000 tonnes per annum (tpa);
- (b) A 'Waste Transfer Unit' (WT) dealing with 65,000 tpa of municipal solid waste;
- (c) A 'Biological Waste Treatment Unit' (BWT) treating 45,000 tpa of separately collected domestic and commercial organic waste, and;
- (d) A so-called 'Sludge Hub Centre' (SHC) treating 26,511 tpa of dewatered sludge cake waste from wastewater treatment facilities in Fingal County Council's functional area.

The facility will accept non-hazardous waste only. Vehicles arriving at the recycling/ waste management park carrying waste will enter via a weighbridge where their documentation will be checked. From here they will continue to one of the four separate units. Each of the four units, apart from the Sludge Hub Centre will have its own dedicated waste inspection and quarantine area. The Kilshane Cross facility will operate between 7 a.m. and 10 p.m. Monday to Saturday and will normally be closed on Sundays and Bank Holidays, apart from the BWT unit, which by the nature of the process will operate on a continual basis. Some maintenance work may be necessary outside of these hours. It is estimated that there will be 40 full-time staff employed at the facility.

The following is an overview of each of the four separate units from an operational and emissions point of view.

2.1 Construction and Demolition Waste Recovery Unit

The C&D waste recovery unit is the only one of the four units at the Kilshane Cross recycling park that will operate out-of-doors. C&D waste material (Section 3.2.6 of the EIS) will consist mainly of soil, rubble, old road material, reinforced concrete, bricks, blocks etc., resulting from large development and infrastructural projects. The waste will be separated or reworked via a combination of processes including crushing, screening and removal of metals via magnet etc. Materials will be stockpiled in designated areas of the site and sold on as aggregate. It is envisaged that some loads will be acceptable without the need for further processing for example loads consisting of clean topsoil and bricks.

Emissions from the operation of the C&D Waste Recovery Unit could potentially include dust, noise and contaminated runoff. These potential emissions are controlled by conditions in the RD governing waste acceptance and characterisation, the requirement for impermeable hardstanding (the applicant proposed hardcore, rather than impermeable hardstanding) and collection and treatment of runoff. The construction of 3.5m high berms will help to mitigate dust and noise emissions. Noise emissions from the operation of the facility as a whole are dealt with in a separate section below.

2.2 Waste Transfer Unit

The purpose of the waste transfer station will be to facilitate the bulking up of waste loads from refuse collection vehicles to large articulated containers, for onward transfer to other waste management facilities such as landfill, materials recovery or thermal treatment. The applicant is not proposing 'treatment' of municipal solid waste as such at this unit. The waste will first be weighed and logged at the weighbridge. The transferring of waste from the refuse collection vehicles to the floor of the transfer building and then to the large volume articulated trailers is to take place within the transfer building. The air space within the transfer building will be maintained at a slight negative pressure and the air will be directed to an air treatment unit to mitigate odours. Odour emissions from the entire facility are dealt with under a separate dedicated section in this report.

2.3 Biological Waste Treatment Unit

The Biological Waste Treatment Unit will utilise one of two main types of treatment technology; either in-vessel composting or anaerobic digestion (AD), to treat separately collected biowaste from the Dublin region. Regardless of what treatment technologies will be chosen the processing will take place indoors in an enclosed building. The conditions of the RD allow for the operation of either composting or anaerobic digestion, as proposed.

In-vessel composting

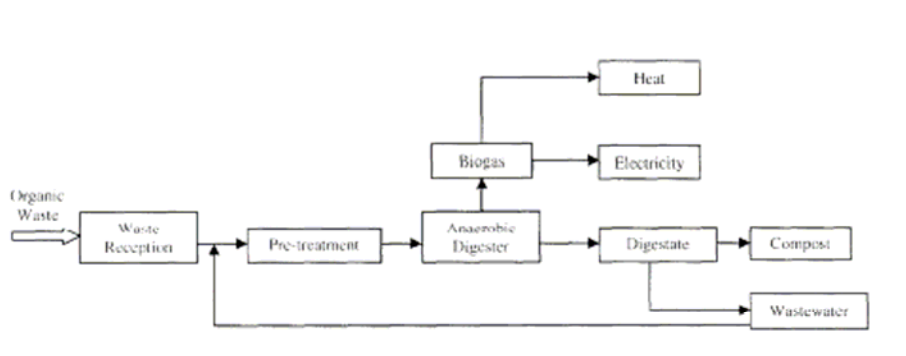
The composting process, if chosen, will take place within a large building and will include a waste reception area, a waste pre-treatment area, the in-vessel composting units, maturation pads, odour abatement system(s), process control and monitoring equipment, as well as a post treatment and bagging area. Waste will be inspected on arrival at the building and deposited on the floor of the enclosed waste reception area. Pre-treatment will take place here and may consist of screening or homogenisation (to control the particle size of the waste input material), removal of contaminants either mechanically or manually, and perhaps blending of waste materials and other feedstock such as bulking materials to achieve a desirable mix (e.g. a desirable Carbon/Nitrogen ratio). Following pre-treatment the waste will be placed in the in-vessel composting units. Here the waste material will be held for an appropriate residence time under automated controlled conditions of temperature and oxygen level, which will optimise the activity of the microbes that facilitate the composting process. The conditions of the Recommended Decision define the composting process within the in-vessel units. Maturation of the composted material will take place on aerated floors and will continue until the compost can be shown to be stabilised and mature. Finally the composted material will undergo any post-treatment necessary such as screening, blending and/or bagging to meet customer requirements.

The building will be maintained under negative pressure and process air will be extracted. Although the specific treatment technology has not yet been chosen it is thought that the air from the building will first be treated using a wet scrubber to remove dust and particulates and will then be passed to an odour abatement system (see 'Odour' section below).

Anaerobic Digestion (AD)

Anaerobic Digestion by definition is the biological decomposition of biowaste in the absence of oxygen and under controlled conditions by the action of micro-organisms (including methanogenic bacteria) in order to produce biogas and digestate. There are four stages in the AD process hydrolysis, acidogenesis, acetogenesis and methanogenesis and it is in the latter phase that biogas is produced.

The diagram below describing the main processing steps in the AD process is taken from the Environmental Impact Statement accompanying the application (Fig Figure 3.2.3 of the EIS Main text p160).



The biogas will be a mixture of carbon dioxide, methane and trace gases resulting from the anaerobic digestion of biowaste. Following cleaning (removal of dust and sulphur) and drying the biogas may be used in a Combined Heat and Power Plant to produce electricity and heat. The utilisation or flaring of the biogas will result in emissions to air which will be governed by the conditions of the RD. The conditions of the RD also require that where the biogas will not or cannot be utilised, it must be flared.

Digestate, the other end-product of AD will require further treatment such as dewatering and aerobic maturation (composting). Depending on the quality standards achieved the separated liquids may be applied to land as a fertiliser. The RD specifies the relevant quality standards.

The process in the Biological Waste Treatment Unit (BWT) will be continuous but waste acceptance and active processing such as turning etc will be limited to operational hours.

2.4 Sludge Hub Centre

The Sludge Hub Centre will treat wastewater treatment plant sludge generated in Fingal County Council's functional area. The unit will take in dewatered sludge cake of about 18% dry solids from the various treatment works. It is envisaged that, upon arrival, the sludge cake will be delivered to a belt feeder. The belt feeder will be covered with a canopy, which will provide for a slight negative pressure and air extraction from the building. The process air will be directed to an air treatment unit for odour control. The sludge will be dried by either direct application of a heat source i.e. conduction or by convection, whereby hot gas/air will be blown through the sludge. The substance resulting from the drying process will be of a pelletised or

granulated form and will be very dry i.e. with dry solids content in excess of 90%.

Emissions from this operation will include the following:

- exhaust air from the drying process discharging via an odour control unit;
- there will also be a liquid waste generated by the process which will characteristically have a high BOD and ammonia content.

As with the Biological Waste Treatment Unit the process in the Sludge Hub Centre is likely to be continuous but the acceptance of sludge outside of the normal hours of operation (as outlined above) is not permitted by the terms of the RD.

3. Use of Resources

The sludge drying process will use an equivalent of an estimated 25 million kilowatt hours per annum of natural gas. The facility as a whole will also use hydraulic oil (estimated 12,000 litres per annum), electricity (6,530,000 kilowatt hours) and diesel (200,000 litres). Water will be required for washing in the waste transfer station, cooling and scrubbing in the sludge hub centre (up to an estimated 650m³ per day for the latter) and domestic requirements.

Should anaerobic digestion be the chosen method for the treatment of biowaste the resulting biogas, following cleaning and drying, may be utilised to produce electricity and heat. This electricity and heat could in turn be used to power the Anaerobic Digestion Plant, and any excess could be used for other heat and power used at the recycling park, or exported to the national grid.

It is envisaged by the applicant that the pelletised or granulated thermally dried sewage sludge resulting from the process at the Sludge Hub Centre will have a number of useful applications including agricultural and industrial applications such as use as a fuel substitute in municipal waste incinerators, cement and brick kilns and industrial furnaces.

4. Emissions

4.1 Emissions to Air

The main emissions to air arising from the operation of the facility are discussed in this section. The air dispersion model used in this licence application is called the Industrial Source Complex Short-Term 3 (ISCST3). The modelled situation discussed below is a worst-case emissions scenario whereby anaerobic digestion is the chosen biological waste treatment method; therefore a gas utilisation plant is operational; as well as the other three main processes at the facility. It should be noted that the specifics of the control of emissions to air (Schedule C.1) will be agreed as part of the test programme specified in Condition 6.1 of the RD.

Sulphur Dioxide (SO₂)

As can be seen in Table 1 below the predicted ground level contribution of sulphur dioxide including the contribution from the ambient environment is lower than the limit specified in the National Air Quality Standards.

Table 1: Impact of Emissions to Air of Sulphur Dioxide

Parameter	Averaging Period	Predicted maximum Ground Level concentration	National Air Quality Standards
Sulphur Dioxide 99.8%ile Hourly Limit Value for the Protection of Human Health	99.8%ile hourly	72.5 µg/m ³ (47 µg/m ³ baseline contribution)	350 µg/m ³ not to be exceeded more than 24 times a calendar year
Daily Limit Value for the Protection of Human Health	24 hours	8.45 µg/m ³ (0.65 µg/m ³ baseline)	125 µg/m ³ not to be exceeded more than 3 times a calendar year
Limit Value for the protection of ecosystems	Calendar year and winter (1 st October to 31 March)	2.18 µg/m ³ (0.65 µg/m ³ baseline)	20 µg/m ³

Nitrogen Dioxide

In the case of the hourly averaging period for nitrogen dioxide the predicted maximum ground level concentration is 154.8 µg/m³, which corresponds to approximately 77% of the limit value with 80% of the total predicted contribution coming from the operation of the facility, and 20% attributable to baseline conditions. For the annual averaging period the predicted maximum ground level concentration corresponds to approximately 67% of the limit value however only 18% of the total predicted contribution comes from the operation of the facility with baseline levels accounting for the remainder.

Table 2: Impact of Emissions to Air of Nitrogen Dioxide

Parameter	Modelled Impact	Predicted maximum Ground Level concentration	National Air Quality Standards <small>Note 1</small>
Nitrogen Oxides (as NO₂)	99.8%ile hourly	154.8 µg/m ³ (30.8 µg/m ³ baseline)	200 µg/m ³ not to be exceeded more than 18 times a calendar year
(as NO₂)	Annual limit value for the protection of human health	26.85 µg/m ³ (22 µg/m ³ baseline)	40 µg/m ³

Note 1: Air Quality Standards Regulations (SI No. 271 of 2002) reducing standard to be fully achieved by 2010

Carbon Monoxide

As can be seen in Table 3 the predicted ground level contribution of Carbon Monoxide including the contribution from the ambient environment is far lower than the limit specified in the National Air Quality Standards (approximately 11% of the NAQS limit).

Table 3: Impact of Emissions to Air of Carbon Monoxide

Parameter	Modelled Impact	Predicted maximum Ground Level concentration	National Air Quality Standards Note 2
Carbon Monoxide	Maximum daily 8-hour mean	1,093 µg/m ³ (600 µg/m ³ baseline)	10,000 µg/m ³

Particulate Matter (PM₁₀)

While the modelled maximum predicted ground level concentration of this parameter over the 24 hour averaging period is 89% of the limit value (as per the National Air Quality Standards) it is important to note that only approximately 37% of this impact is due to the proposed activity with the remaining contribution coming from the ambient environment.

In the case of the annual averaging period the maximum ground level concentration is 18 µg/m³, which corresponds to 90% of the limit value, but in this case only 16% of the overall predicted contribution comes from the proposed activities with the remaining contribution coming from the ambient environment.

Table 4: Impact of Emissions to Air of Particulate Matter (PM₁₀)

Parameter	Modelled Impact	Predicted maximum Ground Level concentration	National Air Quality Standards Note 1
Particulate Matter (PM ₁₀)	24 hours	44.6 µg/m ³ (28 µg/m ³ baseline)	50 µg/m ³ not to be exceeded more than 7 times a calendar year
Particulate Matter (PM ₁₀)	Annual limit value for the protection of human health	18 µg/m ³ (15 µg/m ³ baseline)	20 µg/m ³

Note 1: Air Quality Standards Regulations (SI No. 271 of 2002) reducing standard to be fully achieved by 2010

The Schedules of the RD include Emission Limit Values (ELVs) for nitrogen dioxide, sulphur dioxide, carbon monoxide and particulates from the various items of combustion plant, as well as ammonia, hydrogen sulphide and

mercaptans from the composting biofilter, the monitoring of which is required on a biannual basis.

The IPPC Reference Document on Best Available Techniques for Waste Treatment Industries (August 2006) specifies that BAT is to reduce the air emissions of the exhaust gas when using biogas as a fuel by restricting the emissions of dust, NO_x, SO_x, CO, H₂S and VOC by using an appropriate combination of the following techniques:

- a. scrubbing the biogas with iron salts
- b. using de-NO_x techniques such as Selective Catalytic Reduction
- c. using a thermal oxidation unit
- d. using activated carbon filtration

In order to achieve the ELVs in the RD the licensee must use these techniques or equivalent, to be agreed with the Agency under the Test Programme specified in Condition 6.1.

Odour

The application acknowledges that, as the proposed recycling park is a Design/Build/Operate project, quantifying odour emissions is difficult therefore the odour modelling carried out utilises expected design criteria and desk top odour emission data to determine maximum allowable odour emission rates from the facility. It is not expected that odour issues will arise in relation to the operation of the C&D WRF. For the remainder of the facility two odour scenarios were looked at and modelled as follows:

- (i) The first scenario includes the operation of the Waste Transfer station and Sludge Hub Centre and an odour control unit(s) treating all odorous air and indoor composting,
- (ii) The second includes the operation of the Waste Transfer station and Sludge Hub Centre and an odour control unit(s) treating all odorous air and indoor anaerobic digestion and a gas utilisation plant.

The second, anaerobic digestion scenario is considered to be the worst-case scenario from an odour emissions point of view and so it is this scenario that is discussed here. Again the applicant uses the ISCST3 model to predict odour outcomes, expressed as odour units per metre cubed (OUm³) from the operation of the unit.

Odour Control Methods Proposed

While the exact odour control methods are not specified the applicant nonetheless undertakes to consider using the following techniques:

Waste Transfer Station

- Annular bed filtration system (using activated carbon) for the treatment of odorous air from the Waste Transfer Station (WTS);

Biological Waste Treatment Unit

- Biofiltration to treat odorous air from the Biological Waste Treatment (BWT) Unit (either the composting or AD process);
- Flaring and/or gas utilisation plant for the treatment of anaerobic digestion biogas;

Sludge Hub Centre

- Two-stage chemical scrubbing, thermal oxidation or other odour removal systems that will achieve required boundary odour levels will be considered for the Sludge Hub Centre.

The IPPC Reference Document on Best Available Techniques for Waste Treatment Industries (August 2006) specifies that for highly odour-intensive wastes, BAT for storage and handling is to use closed feed bunkers constructed with a vehicle sluice and to house and equip the bunker area with an exhaust air collection device (BREF Section 5.2 and 4.2.2). The RD requires the applicant to design the plant in accordance with BAT insofar as the ELVs are specified.

Predicted Odour Emission Levels (OUm^{-3})

It is important to note that the predicted odour emission levels outlined in the application are based on modelling which incorporates the mitigating effects of odour abatement technologies, despite the fact that such technologies have not yet been specified. It also assumes that not only will the odour emission levels in OUm^{-3} be reduced by the abatement system, but also that the tone or offensiveness of the odorous air will have been mitigated.

According to the UK IPPC Draft Horizontal Guidance for odour not all odours have the same potential to cause annoyance. For example odours arising from putrescible materials are typically considered to be more offensive than odours from a bakery, which might be better tolerated. The draft guidance document goes on to describe the relative offensiveness of odours categorising them as low (e.g. odours from chocolate manufacture or brewery), medium (e.g. sugar beet processing or intensive livestock rearing) or high (for example wastewater treatment plant odours or activities involving putrescible waste).

The modelling carried out by the applicant also divided the odour emissions from different aspects of the facility operations and modelled them simultaneously, each for a different offensiveness threshold. The setting of emission limit values and monitoring requirements to determine compliance with same, based on such an assessment, would be impractical as facility operations will most likely run concurrently, and people experience odour nuisance from the operations of a facility as a whole, not specifically from different aspects of a facility's operations. For this reason it is considered that, where odour monitoring or assessment is to be carried out, one odour offensiveness criteria should be referred to for this development as a whole, and that that odour criterion should correspond to the 'high' offensiveness odour category i.e. $1.5 OUm^{-3}$. Because of the integrated nature of the facility this criterion is to be applied to the overall boundary of the facility. This indicative criterion should be used unless it can be shown that the offensiveness level more appropriately belongs to a lesser category.

It is my opinion that one of the most potentially significant aspects of the proposed development in terms of emissions to the environment will be the impact of its odour emissions. The conditions of the RD however, require that initial intake of waste into each of the three potentially odorous operations at the facility will be on a pilot basis for the purposes of test programmes only. The test programmes will determine whether the odour control methods will achieve the required odour levels (i.e. a threshold of 1.5 OUm^{-3}) outside the facility boundary. The specific operation will not be allowed to proceed until such time as the licensee can, under a pilot test programme(s), which will be limited in time and must be representative of full-scale operation under normal conditions (normal waste types and quantities), show compliance with licence conditions relating to odour. Following start-up of facility operations the principal condition controlling odour emissions will be that which specifies that no emissions, including odours, from the activities carried on at the site shall result in an impairment of, or an interference with amenities or the environment beyond the facility boundary or any other legitimate uses of the environment beyond the facility boundary.

Bioaerosol Emissions

Bioaerosol emissions will be generated from the operation of the proposed facility, in particular from biological waste treatment. The composting process will be contained within a building and maintained under negative pressure with process air vented through a biofilter, and this is where bioaerosol emissions to air will largely arise.

A study was carried out by Cré the Composting Association of Ireland in association with the EPA, and published in 2004, on the subject of bioaerosols and composting. The study recommended that there be a guideline set-back distance or buffer zone of 200m from composting facilities to a sensitive receptor for the abatement of all potential nuisances emanating from a composting facility, including bioaerosols. The UK EA recommends a distance of 250m.

As can be seen in Drawing No. 1 on page 2 of this report there is a cluster of three residential properties lying immediately to the east of the facility boundary (and shown in blue in Drawing No. 1). These properties and other adjacent properties other than residences (described in page 2 above), sit less than 100m from the proposed biological waste treatment unit. It is noted that information submitted in March 2007 advises that this cluster of three houses has recently been purchased by the applicant.

Based on the above information and considering that all waste handling in the Biological Waste Treatment Unit must be maintained under negative pressure the RD requires that there shall be no bioaerosol emission point within 200m of any occupied dwelling. Bioaerosol monitoring will be required on an annual basis and ambient bioaerosol levels must also be established prior to the commencement of Biological Waste Treatment at the unit.

4.2 Emissions to Surface Waters/ Storm Water Runoff

St Margaret's stream is a tributary of the River Ward and discharges to the River Ward to the NE of the site 3-4 km distance from the site. Three different locations on the River Ward were monitored for biological water quality in 1998 and these were described as being slightly or moderately polluted according to the Biotic Indices (Q ratings). Nonetheless a submission from the Eastern Regional Fisheries Board, which will be discussed further below, discusses more recent and improved Q-rating data and the importance of the Ward River as part of a salmonid habitat, the protection of which is paramount.

Storm water emissions will arise from runoff from roofs and from areas of hardstanding, which are not used for the handling and storage of waste and will drain to grit traps and oil interceptors. This type of runoff will discharge to the St. Margaret's Stream via grit traps and Class 1, full retention oil interceptors, and a settlement/attenuation pond in the SW corner of the site. The storage of fuels etc will be within appropriately bunded areas.

4.3 Emissions to Sewer

Process emissions to sewer will potentially arise from a number of activities on the site as follows:

- Domestic wastewater from onsite accommodation,
- Runoff and wash-water from the waste transfer station,
- Liquor from the process at the Sludge Hub Centre,
- The Biological Waste Treatment Unit which will consist of either:
 - composting, or
 - anaerobic digestion
- Wheel wash
- Fire water.

On site and off-site treatment

The application states that the liquor generated by the sludge treatment process and the Anaerobic Digestion process (if AD is chosen) will be partially treated if required, in order to meet any discharge limits imposed by the sanitary section of FCC.

The maximum estimated daily sewer BOD loadings for the entire site, in the absence of any on-site treatment, are given in the application as 508 m³/day at a concentration of 167 mg/l i.e. 84.87 kg BOD per day.

Foul water will then be discharged to sewer prior to its ultimate treatment at Ringsend WWTP and discharge into Dublin Bay. The Ringsend plant has a design capacity of 1.7 million population equivalent and treatment consists of primary settlement, secondary treatment, and ultraviolet disinfection. The emission limit values governing emissions to sewer and the monitoring of emission to sewer are controlled by the Water Services Authority at per their discharge consent under Section 52 of the Waste Management Act (1996 to 2005). It should be noted that the specifics of the control of emissions to

sewer (Schedule C.6) will be agreed as part of the test programme specified in Condition 6.1 of the RD.

4.4 Dust and other Issues:

The C&D Waste Recovery Unit will have the potential to generate nuisance due to dust. The conditions of the RD require that measures such as a sprinkling/irrigation system will be taken to control dust from the storage and handling of C&D waste. All other operations at the proposed site will be carried out indoors and this will help significantly in the control of vermin, birds etc.

The control of birds at this facility is especially important because of the proximity of the site to Dublin airport. The RD specifically precludes the storage or handling of any waste, apart from C&D waste out of doors.

4.5 Noise:

From a noise perspective the site is characterised by being adjacent to the N2 road, approximately 2km NW of the M50, and very close to the road cut for the new proposed N2 Finglas to Ashbourne road scheme (as can be seen in Drawing 1 on page 2 above). The proximity of the site to Dublin airport is also a determining factor in the local noise environment with the nearest point on the main runway lying approximately 2km from the site. There is a power plant and a quarry nearby. The applicant estimates that noise levels from the operation of the Kilshane Cross facility at the nearest house (i.e. just outside the facility boundary) will be well below the limits set by the Agency and well below the existing baseline noise levels.

It is however the case that baseline noise levels may change following the completion of the Finglas to Ashbourne road scheme, which will move heavy traffic further away from the proposed facility boundary. The applicant in Section 4.7.3 of the EIS proposes mitigation measures in relation to noise, such as the construction of berms, and the conditions of the RD require that these measures be implemented. The Schedules of the RD contain ELVs in relation to noise emissions, which are consistent with Agency Guidelines.

5. Restoration

The conditions of the RD require that should the licensed activity cease the licensee must carry out appropriate work to decommission the facility and render it safe from an environmental emissions point of view.

6. Cultural Heritage, Habitats & Protected Species

There is an archaeological monument recorded as a “motte and bailey (possible)” or moated site adjacent to and north of the site of the proposed development. Moated sites are associated with Norman/Anglo-Norman settlement of the late 13th – early 14th century. No surface trace of the site survives today above ground. The archaeological site is not within the boundary of the licensed facility but is under the ownership of the applicant.

Two designated nature conservation areas lie within 5kms of the proposed development, these are: Santry Demesne proposed Natural Heritage Area (pNHA) (4.5km distance) and the Royal Canal also pNHA (4.2kms distance from the site). The proposed site itself is a single field dominated by semi-improved grassland much of which will be removed during the course of the proposed development resulting in a permanent moderate impact on local ecology. Several hedgerows exist along the boundaries of the site and the licensee is required where possible to maintain these.

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

It is considered that the proposed development is in accordance with the Waste Management Plan for the region and will contribute to the achieving of targets in the National Strategy on Biodegradable Waste.

8. 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 (SI 600 of 2001) and EPA Licensing Regulations (SI 85 of 1994, as amended).

9. Compliance with Directives/Regulations

The facility will, in accordance with this licence be compliant with the requirements of the IPPC Directive. In relation to regulations governing animal by-products the RD requires that before commencing operations the licensee must satisfy the Agency that, where applicable, it has obtained consent from the Department of Agriculture and Food to treat animal by-products in composting/biogas facilities.

10. Proposed Decision

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.

11. Submission

There was 1 submission made in relation to this application.

11.1 Submission from Pat Doherty of the Eastern Regional Fisheries Board (ERFB), 15a, Main Street, Blackrock, Co. Dublin

Mr Doherty makes 7 points in his submission and he asks that these will be taken on board by the Agency when assessing the application. The points are as follows:

- (i) *The ERFB does not object to the proposed development from a fisheries perspective however, the development is within the catchment of the Ward River, an important salmonid system. Streams from the proposed site drain to the Ward River around the Owens Bridge area.*

Comment: - The point is noted and taken account of in considering this application.

- (ii) *The Ward River is exceptional among rivers in the area having resident salmon and sea trout populations, highlighting the ecological sensitivity of this particular watercourse and the Ward Catchment in general. Electrofishing surveys carried out in September 2003 by the ERFB found a significant population of juvenile salmon in the lower reaches of the Ward around Swords. Sea trout have been found in the Ward upstream of Coolatrath Bridge in the Lower Ward area.*

Comment: - The point is noted and taken account of in considering this application.

- (iii) *Ground preparation and associated construction works, including large-scale topographic alteration and the creation of roads and buildings (as proposed), have significant potential to cause the release of sediments and pollutants into surrounding watercourses. Pollution of the adjacent freshwaters from poor on-site construction practices could have a significantly negative impact on the fauna and flora of this freshwater system. A comprehensive and integrated approach for achieving surface water protection during plant construction and operation should be implemented as described in EIS Section 4.2.*

Comment: - It is assumed that the submitter intended here to refer to Section 4.4.2 of the EIS, rather than Section 4.2, as stated as Section 4.4.2 of the. EIS deals with mitigation measures regarding the protection of surface water. The Conditions of the RD require that such mitigation measures will be implemented, as described in this Section of the EIS.

- (iv) *Substantial potential exists for pollution of local surface waters as a result of foul water loadings from this development (EIS Table 3.2.6). It should be noted that any waste recycling activities must not have a negative impact on the quality of surface waters and or salmonid habitats in the Ward catchment.*

Comment: - The conditions of the RD require that all process water or wastewater (other than for example digestate from anaerobic digestion which may be reused in the process) will be discharged to sewer. This will include all runoff from areas used for the handling and storage of waste. Most of the waste processing at the facility will be carried out indoors. Discharges to surface water at the St. Margaret's stream will consist of runoff from areas of the site which are not used for the handling or storage of waste and all such runoff will be required to be directed through a grit trap and Class 1, full retention oil separator prior to discharge.

- (v) *It is recommended that the "Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites" (<http://www.fishingireland.net/erfb/protect.htm>) be consulted when undertaking any works on this site, particularly in the vicinity of surface water features. The Board requests that it be*

informed at least 3-4 weeks in advance of any diversion work to be carried out during channel alterations of any kind.

Comment: - Both of the recommendations listed here have been included as conditions of the RD.

- (vi) *The EIS highlights poor water quality in the Ward system. EPA data collected in 2001 (subsequent to the data referenced in the EIS) has shown an improvement at two of the three EPA monitoring stations. Q3 was recorded at all three sites on the Ward in 2001. This improvement in water quality highlights the importance of comprehensive on-site surface water management in order to continue the protection/improvement of aquatic biological status both locally and downstream.*

Comment: - The point is noted and taken account of in considering this application.

- (vii) *The surface water monitoring programme should provide for a visual inspection of any discharges on a daily basis.*

Comment: - Daily visual inspection of discharges to surface water have been included as a requirement in the RD.

12. Charges

€24,500 annual charge, subject to Condition 12.

13. 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

Maeve McHugh

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 1996-2003.