



**OFFICE OF ENVIRONMENTAL SUSTAINABILITY**

**REPORT OF THE TECHNICAL COMMITTEE ON OBJECTIONS TO LICENCE  
CONDITIONS**

TO:	Directors
FROM:	Technical Committee - Environmental Licensing Programme
DATE:	6 <sup>th</sup> September 2016
RE:	Objection to Proposed Determination (PD) issued for Ormonde Organics Limited for an installation at Killowen, Portlaw, County Waterford, Industrial Emission Licence Register W0287-01.

**Application Details**

Type of installation:	Biological treatment of biodegradable waste for the production of biogas to be converted via a combined heat and power plant into heat and electricity.
Category of Activity under IED (2010/75/EU):	Class 5.3 (b)(i)
Class of Activity under the EPA Acts 1992, as amended:	Class 11.4(b)(i)
Licence application received:	24 <sup>th</sup> September 2009
PD issued:	2 <sup>nd</sup> June 2016
First party objection received:	28 <sup>th</sup> June 2016

**1. Company and background to this report**

Ormonde Organics Limited has operated a biological treatment installation since 2007. The applicant currently operates under a waste facility permit issued by Waterford City and County Council. This permit authorises the acceptance of 8,000 tonnes per annum for treatment. The applicant proposes to increase the waste intake to 40,000 tonnes per annum as part of the licence application. The proposed treatment facilities include: reception, screening, storage of waste, anaerobic digestion, composting and combustion of biogas in a combined heat and power plant.

This report relates to a valid first party objection received by the Agency in relation to the Proposed Determination (PD) issued to Ormonde Organics Limited on 28<sup>th</sup> June 2016.

**2. Consideration of the Objection**

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

Objector's Name	Date Received
Ormonde Organics Limited	28th June 2016

The Technical Committee (TC), comprising of Caroline Murphy (Chair) and Caitríona Collins, has considered all of the issues raised in the objection and this report details the Committee's comments and recommendations following the examination of the objection.

### Objection 1: *Schedule A.2 Waste Acceptance*

The applicant noted that the List of Waste (LOW) Codes<sup>1</sup> listed in Table A.2 of the PD do not include all of the LOW codes that the installation is currently authorised to accept under their waste facility permit. They are concerned that they would be required to agree any additional waste codes required with the Agency on grant of licence and this would result in the applicant not being authorised to accept certain waste types that they had previously been authorised to accept whilst awaiting approval from the Agency. The additional 26 LOW Codes that the applicant has requested to be added to Table A.2 of the PD are listed in Appendix 1.

The applicant has also noted that this table states that the maximum amount of waste authorised to be accepted at the installation is 40,000 tonnes per annum. The applicant is concerned that should they wish to accept non-waste in the future for processing that this will consume a portion of the waste acceptance threshold and as such they would need to decrease the volume of waste they accept per annum to accommodate this.

### Technical Committee's Evaluation:

#### *Waste acceptance type:*

- The eight waste codes listed in Schedule A, Table A.2 of the PD are the complete list of waste codes provided by the applicant in Attachment H.1 – *Waste Types and Quantities* of the licence application form.
- The applicant submitted a copy of their current Waste Facility Permit WFP-WD-13-0001-01 on the 23<sup>rd</sup> September 2015 in response to an additional information request relating to the facility's current waste authorisation. This waste facility permit identified that 17 LOW codes were authorised for acceptance at the facility.
- In this objection the applicant provided a list of 33 LOW codes (See Table 1, Appendix 1) for consideration by the Agency as a replacement for Table 2 in the PD. These 33 LOW codes include:
  - 17 LOW codes authorised by the facility's waste facility permit, 8 of which are listed in Schedule A of the PD;
  - 16 LOW codes which are not authorised by the facility's permit;
    - LOW code 02 01 04 is for waste plastics;
    - LOW code 20 01 03 is not a valid code; and
    - LOW code 07 01 99 is for wastes from the Manufacture, Formation, Supply and Use of Pharmaceuticals.
- Ormonde Organics limited received planning permission for the following chapters of EWC codes in March 2012: 02 00 00, 07 00 00, 19 00 00 and 20 00 00. The Applicant stated in Section 1.2 of the EIS that the potential impacts of these additional waste codes were assessed cumulatively in the EIS.

The TC recommends:

- not to include the 16 LOWs codes which are not authorised by the facility's waste facility permit and which were not originally sought in the licence application to Schedule A, Table A.2 of the PD;

<sup>1</sup> List of Waste Codes from the Agency's *Waste Classification List of Waste & Determining if Waste is Hazardous or Non-hazardous*, Valid from 1<sup>st</sup> June 2015.

- not to include LOW codes 07 05 14 and 07 06 12 in Schedule A, Table A.2 of the PD, as these waste types are not resultant from animal, fish, plant or food treatment industries. Information has not been provided with the objection to demonstrate how waste resultant from these industries are conducive to treatment by composting or anaerobic digestion and the generation of high quality compost and digestate in accordance with Schedule E of the licence.
- to include the remaining 7 permitted LOW Codes (listed in italic font in Appendix 1, Table 1) in Schedule A, Table A.2 of the PD as these waste types are resultant from animal, fish, plant or food treatment industries and have been authorised under the facility's waste facility permit by the local authority.

If the applicant proposes to accept additional waste types this may be agreed with the Agency as per Note 1 Table A.2 of the PD. However, Table A.2 also requires that the waste types accepted under these LOW codes are conducive to treatment by composting or anaerobic digestion and the generation of high quality compost and digestate in accordance with Schedule E of the licence.

*Waste acceptance quantity:*

The 40,000 tonnes per annum maximum threshold applies to all inputs accepted to the waste treatment process as outlined in Note 2 of Table A.2 of the PD:

- *Note 2: This maximum refers to the quantity of material whether classified as waste or not, that can be accepted at the installation for composting and/or anaerobic digestion.*

Planning permission for the installation (Reg. No. 11392) relates to the intake of 40,000 tonnes per annum of waste for composting. It does not specify the intake of any other type of materials not classified as a waste.

The TC does not recommend a change to the maximum waste acceptance threshold listed in *Table A.2* of the PD.

**Recommendation:**

Add the following LOW codes to the second column of *Table A.2* of the PD:  
02 02 03, 02 02 04, 02 03 99, 02 05 01, 02 06 01, 02 06 03 and 19 09 02.

**Objection 2: Condition 3.29**

*3.29 Natural gas, or biodiesel (meeting CEN standard EN14214) shall be used in the boilers on site. In the event of an interruption to the supply of natural gas or biodiesel, an alternative fuel such as gas oil may be used with the prior written agreement of the Agency.*

The applicant has noted that there is no natural gas connection to the site and the existing boiler is fuelled by diesel and feels that the requirement to use biodiesel is onerous and requests approval for the use of diesel. The applicant also feels that because of the way the condition is worded that if there was an interruption in the supply of the specific fuel the boiler would have to be shut down until approval was granted by the Agency for an alternative fuel.

**Technical Committee's Evaluation:**

The Applicant listed diesel as a hazardous substance in their baseline report. This report confirmed there is no existing soil contamination and that the baseline level of Total Extractable Hydrocarbons (C5 – C45) is 50mg/kg.

The PD requires tanks which store fuel to be impervious to the fuel type they contain and that the areas in which fuels are stored are bunded. The PD also requires soil to be monitored for relevant hazardous every ten years.

The TC agrees with this change.

**Recommendation:**

Change the wording of condition 3.29 to add the word in bold below:

*Natural gas, **diesel** or biodiesel (meeting CEN standard EN14214) shall be used in the boilers ...*

**Objection 4: Conditions 8.8.1 and 8.8.2 and Schedule E**

Condition 8.8 requires compost and digestate to comply with the quality standard specified in Schedule E of the PD:

*8.8 Quality of Compost and Digestate*

*8.8.1 Digestate and compost shall comply with the quality standard as set out in Schedule E: Standards for Compost and Digestate Quality of this licence or an alternative quality standard.*

*8.8.2 An alternative quality standard for digestate and compost may be used subject to the agreement of the Agency. The use of any agreed alternative quality standard for digestate or compost shall not cause direct or indirect adverse impacts on human animal or plant health and shall not cause environmental pollution.*

Schedule E requires compost and digestate to meet a stability standard and maximum metal composition limits:

➤ **Schedule E - stability**

**Table E.1- Maximum Respiration Activity**

Parameter	Quality Limit
<b>Stability</b>	Oxygen Uptake Rate (OUR), ≤ 13 mmol O <sub>2</sub> /kg organic solids/hour

➤ **Schedule E – Metals Testing**

**Table E.2 – Maximum Metal Concentration Limits**

Parameter (mg/kg, dry mass)	Compost/Digestate Limit (mg/kg dry matter)
<b>Cadmium (Cd)</b>	1.5
<b>Chromium (Cr)</b>	150
<b>Copper (Cu)</b>	150
<b>Mercury (Hg)</b>	1
<b>Nickel (Ni)</b>	75
<b>Lead (Pb)</b>	150
<b>Zinc (Zn)</b>	400

**Note 1:** These limits should not be taken as an indication of suitability for addition to soil as the cumulative metal additions to soil should be first calculated.

**Note 2:** Incoming sludges (other than sewage sludges) shall be monitored quarterly (on a client by client basis) for the parameters outlined in this table and also for selenium (Se) and molybdenum (Mo).

**Note 3:** Monitoring of arsenic (As) is required if waste timber is used in the anaerobic digestion process.

The applicant feels that the above stability test should not apply to compost and that an alternative should be used for digestate for the following reasons:

- The Oxygen Uptake Rate (OUR) limit has been derived from I.S 441:2011 which applies to compost manufactured from source segregated, separately collected biodegradable materials; however, this standard prohibits the use of any materials that are contaminated with sewage sludges.

- The Waste Management (Use of Sewage Sludge in Agriculture) Regulations 1998, as amended, do not specify a stability limit value for treated sewage sludge and as such the applicant feels that the stability test in Schedule E is not required for compost which is made predominantly from sewage sludge.
- The applicant has provided confirmation from INAB accredited IAS Laboratories that the respiratory oxygen demand cannot be measured ( $OUR \leq 13 \text{ mmol O}_2/\text{kg organic solids}/\text{hour}$ ) for the digestate output due to the low dry matter content as the test is carried out on a dry matter basis.

The applicant proposes the removal of the need for stability testing of compost as per Table E.1. The applicant has proposed an alternative standard to measure the stability of the digestate based on Annex A, Table A.1 – Anaerobic digestate stability requirement, test parameter and upper limit value of PAS 110:2014. This standard measures the stability of whole digestate, separated liquor or separated fibre by measuring the parameter residual biogas potential (RBP) against an upper limit of 0.45 l biogas/g volatile solids.

The applicant has noted that: Table E.2 specifies a maximum metal limit for both compost and digestate. Note 2 of this table requires incoming sludges, other than sewage sludge, to be monitored for the metals listed in Table E.2. The applicant feels that the exclusion of sewage sludge indicates that the limits in Table E.2 do not apply to this waste type.

The applicant feels that the limits in Table E.2 are not suitable for a compost manufactured predominantly from sewage sludge and are of the opinion that the limit values for the maximum amount of metals that may be added to agricultural land, which are listed in Part 2 of S.I. No. 267 of 2001, are more appropriate:

Part II	
LIMIT VALUES FOR AMOUNTS OF HEAVY METALS WHICH MAY BE ADDED ANNUALLY TO AGRICULTURAL LAND, BASED ON A TEN YEAR AVERAGE	
Heavy Metal	Limit Value (kilograms per hectare per year)
Cadmium	0.05
Copper	7.50
Nickel	3.00
Lead	4.00
Zinc	7.50
Mercury	0.10
Chromium	3.50

### Technical Committee’s Evaluation:

#### Schedule E – Stability test:

The stability test in Part 1 of Schedule E forms part of the Agency’s compost quality standard. The Agency’s compost quality standard has taken into consideration the feedstock authorised in Schedule A of the PD which includes sewage sludge. The applicant is correct in their observation that the Irish Standard 441:2011 *Quality requirements for a compost manufactured from source segregated, separately collected, biodegradable materials* utilises the same stability test and threshold for compost (which excludes sewage sludge as an acceptable feedstock). The NSAI do not currently have an Irish Standard for the quality requirements for compost which includes sewage sludge as an acceptable feedstock. The TC does not recommend a once-off change in the Agency’s stability test which forms part of the Agency’s compost quality standard.

The applicant has highlighted difficulties in measuring the Oxygen Uptake Rate in digestate due to its low dry solid content. The stability test method and quality threshold in Schedule E and I.S. 441:2011 is more suited to compost. The scope of I.S. 441:2011 does not include digestate. The NSAI do not currently have an Irish Standard for the quality requirements for digestate.

The applicant has alternatively suggested the use of the stability test in Annex A, Table A.1 of the British Standard PAS 110:2014 *Specification for whole digestate, separated liquor and separated fibre derived from the anaerobic digestion of source-segregated biodegradable materials*. The TC agrees with the addition of a digestate specific stability test in Part 1 of Schedule E.

Parameter	Method of test	Upper limit and unit <sup>A)</sup>
<b>Stability of whole digestate, separated liquor or separated fibre</b>		
Residual biogas potential (RBP)	OFW004-005 [N6]	0.45 l biogas/g volatile solids
A) Assessment of RBP test pass or fail shall use the average of the triplicate RBP values that each sample test generates.		
<i><b>NOTE</b> The concentration of volatile fatty acids (VFA) in a sample may be determined ahead of an RBP test. If a digestate sample's VFA result exceeds 0.774 g COD/g VS, this might indicate that the sample will fail a subsequent RBP test. VFAs may be determined by gas chromatography.</i>		

#### Schedule E – Metals:

The applicant feels that the limits in *Table E.2 - Maximum Metal Concentration Limits* do not apply as note 2 of this table excludes the requirement to monitor sewage sludges and the compost is manufactured predominantly from sewage sludge. Schedule A of the PD listed a number of waste types, other than sewage sludge, which may be authorised for acceptance at the installation. The waste accepted at the installation is not proposed to be exclusively sewage sludge and as such the TC feels that requirements of Table E.2 applies to incoming sludges, other than sewage sludge, and to both digestate and compost treatment outputs.

Due to the compost being predominantly made up of sewage sludge the applicant does not consider the limits in Table E.2 to apply, they consider the limit values for amounts of heavy metals which may be added annually to agricultural land specified in Part II of the Waste Management (Use of Sewage Sludge in Agriculture) Regulations 1998, as amended, to be more appropriate<sup>2</sup>. These Regulations relate solely to sewage sludge and its application on agricultural land (land for the growing of all types of commercial food crops, including food crops for stock-rearing purposes). The installation treats waste other than sewage sludge and the objection does not state what type of land the soil improver is destined to be used on. On this basis the TC does not consider a change to Table E.2 and the maximum metal concentration limits for compost appropriate.

#### Recommendation:

Schedule E – Part 1. Stability, Table E.1 – changes in red font:

##### 1. Stability

*Table E.1.1.- Maximum Respiration Activity for Compost*

Parameter	Quality Limit
Stability	Oxygen Uptake Rate (OUR), ≤ 13 mmol O <sub>2</sub> /kg organic solids/hour



*Table E.1.2.- Maximum Respiration Activity for Digestate*

Parameter	Quality Limit Note 1
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<sup>2</sup> S.I. No. 148 of 1998 as amended by S.I. No. 267 of 2001.

<b>Stability</b>	<b>Residual Biogas Potential (RBP), ≤ 0.45 l biogas/g volatile solids</b>
<p><b>Note 1:</b> Assessment of RBP test pass or fail shall use the average of the triplicate RBP values that each sample test generates.</p> <p style="text-align: center;">◆</p>	
<p>Schedule E – Part 2. Metals, Table E.2</p> <p>No change.</p>	

**Objection 5: Schedule B.1 Emissions to Air**

*Schedule B.1.1: Emission Limit Value for Biofilters* lists AEP-5 as the Existing Woodchip Biofilter and AEP-6 as the Existing LECA Biofilter.

The applicant has stated that AEP-5 is the Existing LECA Biofilter and AEP-6 is the Existing Woodchip Biofilter.

**Technical Committee’s Evaluation:**

The Air Dispersion Modelling submitted labelled the points as per Schedule B.1.1 of the PD.

The TC recommends that the emission point reference labels should be changed to reflect the correct name of each biofilter. The emission point reference number, minimum discharge height and maximum flow volume are not changing and reflect the dispersion model input values.

**Recommendation:**

Change *Schedule B.1.1 Emission Limit Value for Biofilters* to read:  
 Emission Point Reference No.: AEP-5 Existing LECA Biofilter  
 Emission Point Reference No.: AEP-6 is the Existing Woodchip Biofilter.

**Additional item: Technical Committee clerical error correction:**

Change the header of the second column in Tables E.4, E.5 and E.6 (Schedule E) as follows:  
 Change from ‘Digestate Limit’ to read ‘Compost/Digestate Limit’.

**9 Environmental Impact Assessment Directive – Reasoned Conclusion Update**

The TC has reviewed the assessment in the Inspector’s Report and, taking into account the objection received, and the contents of this TC report, the TC considers that the likely significant direct and indirect effects of the activity have been identified, described and assessed in an appropriate manner as respects the matters that come within the functions of the Agency, and as required by Section 83(2A) and Section 87(1G)(a) of the EPA Act 1992 as amended.

It is considered that the mitigation measures as proposed in the Inspector’s Report will adequately control any likely significant environmental effects from the activity.

It is also considered that the proposed activity, if managed, operated and controlled in accordance with the licence conditions included in the PD, with the inclusion of the amendments proposed in this report, is unlikely to damage the environment as a whole and the risk of potential impacts occurring is not unacceptable.

It is further considered that the proposed activity, if managed, operated and controlled in accordance with the licence conditions included in the PD, with the inclusion of the amendments proposed in this report, will not cause environmental pollution or the breach of any environmental quality or emission standard, and can be authorised by the Agency in accordance with Section 83(5) of the EPA Act as amended.

## **10 Overall Recommendation**

It is recommended that the Board of the Agency grant a licence to the Applicant

- (i) for the reasons outlined in the proposed determination and
- (ii) subject to the conditions and reasons for same in the Proposed Determination, and
- (iii) subject to the amendments proposed in this report.

Signed:



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Caroline Murphy, Inspector  
for and on behalf of the Technical Committee



## Appendix 1

Table 1: List of LOW Codes requested for addition to the Final Decision by the applicant.

LOW Code	Description
02 01	Waste from agriculture, horticulture, aquaculture, forestry, hunting and fishing:
02 01 02	Animal-tissue waste.
02 01 03	Plant-tissue waste.
02 01 04	Waste plastics (except packaging).
02 02	Wastes from the preparation and processing of meat, fish and other foods of animal origin:
02 02 01	Sludges from washing and cleaning.
<b>02 02 03</b>	<b>Materials unsuitable for consumption or processing.</b>
<b>02 02 04</b>	<b>Sludges from on-site effluent treatment.</b>
02 03	Waste from fruit, vegetables, cereals, edible oils ...
02 03 01	Sludges from washing, cleaning, peeling, centrifuging and separation.
02 03 04	Materials unsuitable for consumption or processing.
02 03 05	Sludges from on-site effluent treatment.
<b>02 03 99</b>	<b>Wastes not otherwise specified.</b>
02 05	Wastes from the dairy products industry:
<b>02 05 01</b>	<b>Materials unsuitable for consumption or processing.</b>
<b>02 05 02</b>	<b>Sludges from on-site effluent treatment.</b>
02 06	Wastes from the baking and confectionary industry:
<b>02 06 01</b>	<b>Materials unsuitable for consumption or processing.</b>
02 06 02	Wastes from preserving agents.
<b>02 06 03</b>	<b>Sludges from on-site effluent treatment.</b>
02 07	Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa):
<b>02 07 01</b>	<b>Wastes from washing, cleaning and mechanical reduction of raw materials.</b>
02 07 02	Wastes from spirits distillation.
02 07 03	Wastes from chemical treatment.
<b>02 07 04</b>	<b>Materials unsuitable for consumption or processing.</b>
<b>02 07 05</b>	<b>Sludges from on-site effluent treatment.</b>
07 01	Wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals:
07 01 99	Wastes not otherwise specified.
07 05	Wastes from the MFSU of pharmaceuticals:
<b>07 05 12</b>	<b>Sludges from on-site effluent treatment other than those mentioned in 07 05 11.</b>
<b>07 05 14</b>	<b>Solid wastes other than those mentioned in 07 05 13.</b>
07 06	Wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics:
<b>07 06 12</b>	<b>Sludges from on-site effluent treatment other than those mentioned in 07 06 11.</b>
19 08	Wastes from waste water treatment plants not otherwise specified:
19 08 05	Sludges from the treatment of urban waste water.
19 08 09	Grease and oil mixture from oil/water separation containing only edible oil and fats.

19 09	Wastes from the preparation of water intended for human consumption or water for industrial use:
<i>19 09 02</i>	<i>Sludges from water clarification.</i>
19 12	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified:
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11.
20 01	Separately collected fractions (except 15 01):
20 01 03	NOT LISTED
<b>20 01 08</b>	<b>Biodegradable kitchen and canteen waste.</b>
<b>20 01 25</b>	<b>Edible oil and fat.</b>
20 02	Garden and park wastes (including cemetery waste).
<b>20 02 01</b>	<b>Biodegradable waste.</b>
20 03	Other municipal wastes:
20 03 04	Septic tank sludge.

**Notes:**

1. LOW codes (X 17) highlighted in yellow are those codes currently authorised under the facility's waste facility permit.
2. LOW codes (X 8) in bold are listed in Table A.2, Schedule A of the PD.
3. LOW codes (X 7) in italic font are recommended by the TC for addition to Table A.2, Schedule A of the FD.