

**SECTION A. NON-TECHNICAL SUMMARY**

A Non-Technical Summary is to be submitted. The summary should include information on those aspects outlined in the Guidance Note and must comply with the requirements of Article 12 (1) (u) of the Waste Management (Licensing) Regulations, S.I. 395 of 2004.

The Non-Technical Summary should form **Attachment A.1**.

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## Attachment A - Non Technical Summary

### A.1 Applicant's Details

**Name\*:** Advanced Environmental Solutions (Ireland) Limited  
**Address:** Unit 1 Monread Commercial Park  
 Monread Road  
 Naas,  
 Co. Kildare  
**Tel:** 045 843 800  
**Fax:** 045 981 621

### A.2 Name and Address for Correspondence

**Name:** EPA Application c/o Bedminster International (Ireland) Limited  
**Address:** Oyster Point  
 Temple Road  
 Blackrock  
 Co Dublin  
**Tel:** 01 279 9575  
**Fax:** 01 279 9589

### A.3 Address of registered or principal office of Body Corporate (if applicable)

**Address:** Advanced Environmental Solutions (Ireland) Limited  
 Unit 1 Monread Commercial Park  
 Monread Road  
 Naas, Co. Kildare  
**Tel:** 045 843 800  
**Fax:** 045 981 621

### A.4 Planning Authority Details

The name of the planning authority in whose functional area the activity is or will be carried out:

**Name:** Waterford County Council  
**Address:** Civic Offices  
 Dungarvan  
 Co. Waterford  
**Tel:** 058 22057  
**Fax:** 058 42911

### A.5 Location of Activity

**Name:**  
**Address\*:** Killowen, Portlaw, Co. Waterford

<b>National Grid Reference (8 digit 4E,4N)</b>	S 4720 1790
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**A.6 Nature of Facility**

The application is for a proposed composting plant, using the Bedminster technology, and effluent treatment/storage facility. The proposed facility is located at Killowen, Portlaw, County Waterford. It is approximately 2km from the main Waterford /Clonmel Road and approximately 19kms from Waterford City. The proposed facility is adjacent to the R680 road 7km southeast of Carrick on Suir and 3km north of Portlaw. The location of the site is shown in Figure A.1. The site application boundary is shown in Figure A.2. The facility was previously operated as a tannery under IPC licence Reg No. 238.

The compost facility will be designed to receive 40,000 tonnes per annum of commercial, industrial and household waste containing biodegradable waste and sludges. The facility will be able to accept the waste in a mixed state or source segregated.

The existing wastewater treatment plant on site will be used to treat wastewaters generated on site (e.g. domestic wastewater from staff facilities and any leachate from the composting process) and effluent tankered to the site from other industries. The throughput to the wastewater treatment plant will be approximately 60,000 tonnes per annum.

**A.7 Classes of Activity**

In accordance with the Third and Fourth Schedules of the Waste Management Acts, 1996 to 2003, it is proposed to carry out the following classes of activity at the facility:

**Waste Disposal Activities, in accordance with the Third Schedule of the Waste Management Acts 1996 to 2003**

<b>Class 6.</b>	<p><b>Biological treatment not referred to elsewhere in this Schedule which results in final compounds or mixtures which are disposed of by means of any activity referred to in paragraphs 1 to 5 or paragraphs 7 to 10 of this Schedule.</b></p> <p>This activity relates to the production of composted material not meeting specified compost quality requirements.</p>
<b>Class 11.</b>	<p><b>Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.</b></p> <p>This activity relates to the blending or mixing of wastes, which cannot be recycled or recovered or do not meet compost standards, prior to disposal off site.</p>
<b>Class 13.</b>	<p><b>Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced</b></p> <p>This activity relates to the storage of waste, which cannot be recycled or recovered or do not meet compost standards, prior to disposal off site.</p>

**Waste Recovery Activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2003**

<b>Class 2.</b> <b>This is the Principal Activity</b>	<p><b>Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes):</b></p> <p>This activity relates to the recycling of organic substances including composting and biological treatment of waste at the facility.</p>
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<b>Class 3.</b>	<b>Recycling or reclamation of metals and metal compounds:</b> This activity relates to the recycling or reclamation of metals and metal compounds prior to further recovery off-site.
<b>Class 4.</b>	<b>Recycling or reclamation of other inorganic materials:</b> This activity relates to the recycling or reclamation of inorganic materials prior to further recovery off-site.
<b>Class 13.</b>	<b>Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced:</b> This activity relates to the storage of waste prior to further recovery off-site.

**A.8 Quantity & Nature of Wastes to be Treated, Recovered or Disposed of at the Facility**

It is proposed to accept 100,000 tonnes per annum at the facility. The main aim is to compost waste and treat wastewaters.

Proposed quantity of wastes to be accepted at the compost facility:

Waste Type	European Waste Catalogue Codes	Tonnes/Annum
Household	20 01 08 biodegradable kitchen and canteen waste 20 02 01 biodegradable waste 20 03 01 mixed municipal waste	23,000 -Household biodegradable waste which can be collected source segregated or mixed (sorted at the waste facility)
Commercial Waste	As above 20 03 03 street-cleaning residues 19 12 12 other wastes (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 19 12 11	8,000-Commercial biodegradable waste which can be collected source segregated or mixed (sorted at the waste facility)
Industrial Non-Hazardous Solids	Similar to Household and Commercial Waste above	2,000 – industrial biodegradable waste which can be collected source segregated or mixed (sorted at the waste facility)
Sewage Sludges	19 08 05 sludges from treatment of urban waste water 20 03 04 septic tank sludges	4,500
Industrial Non-Hazardous Sludges	19 08 14 sludges from other treatment of industrial waste water other than those mentioned in 19 08 13 19 02 06 sludges from the physico / chemical treatment other than those mentioned in 19 02 05	2,500
<b>Total</b>		<b>40,000</b>

The proposed quantity of wastewater to be accepted at the wastewater treatment plant:

Waste Type	European Waste Catalogue Codes	Tonnes/Annum
Industrial waste not elsewhere specified (Trade and sewage effluent)	02 02 01 sludges from washing and cleaning 02 02 99 waste not otherwise specified 02 05 99 wastes not otherwise specified 02 07 01 wastes from washing, cleaning and mechanical reduction of raw materials Other non-hazardous effluents suitable for on site treatment	60,000
<b>Total</b>		<b>60,000</b>

### **A.9 Raw and Ancillary Materials, Substances, Preparations, Fuels and Energy, which will be Utilised in or Produced by the Activity**

The facility will use materials, substances, fuels and energy during construction and during operation. During construction materials will be used to build all the components of the facility e.g. tipping area, Eweson digester, aeration hall, and biofilter. The facility will use diesel fuel, electricity, and water during construction and operation and small amounts of vermin controls will be used during operation. Annual audits will be carried out to ensure that energy is being used efficiently.

### **A.10 Plant, Methods, Processes, Ancillary Processes, Abatement, Recovery and Treatment Systems and Operating Procedures for the Activity**

#### **A.10.1 Plant**

The facility will comprise some or all of the following plant:

- Bedminster technology for composting waste – the key elements of the process/plant are:
  1. Tipping area – enclosed area for receiving the waste. Associated infrastructure to sort mixed waste may also be located in this area;
  2. Eweson digesters (revolving compartmentalised aerobic drums that accelerate the natural process of biological decomposition). The digesters vary in size depending on waste quantity to be processed. The digester at this facility will be approximately 60 m long and 4m diameter and will be capable of processing 40,000 tonnes per annum.
  3. Primary screen – to screen compost as it is discharged from the digesters.
  4. Aeration building – temperature and humidity controlled area to achieve compost maturity.
  5. Final screen – to screen compost to market quality
  6. Biofilters – air from within the building is passed to atmosphere through biofilters to remove odour.
- Plant for recovery/storage of non-compostable wastes – this may include:
  1. Picking lines
  2. Magnet to remove metals
  3. Eddy current (aluminium)



4. Air compressor with blower to remove light wastes
- Wastewater treatment plant. This is operated on the sequencing batch reactor (SBR) process. Components include balancing tank, tanks where SBR process is carried out and sludge holding tank.

### **A.10.2 Methods, Processes, Systems & Operating Procedures**

#### **Compost Facility**

Waste is first sorted and then the organic fraction processed. The core of the process is the 'Eweson Digester', a revolving compartmentalised aerobic drum that accelerates the natural process of biological decomposition.

Wastes and biosolids are fed into the digester in optimum balance. Temperature and moisture are controlled to encourage a dense and varied microbial population. Within 3 days, the organic fraction is transformed into a new product. The product is screened to remove the large residues, which go for recycling or disposal at an appropriate facility.

For the next three weeks, the product undergoes controlled secondary composting and curing before final screening. The whole process is monitored to ensure total compliance with regulatory authorities requirements.

The process occurs within a totally enclosed and controlled environment. All air from the buildings and process passes through biofilters – a carefully managed natural medium, which can consist of layers of gravel, compost and wood chips. Microorganisms in the biofilter naturally consume odorous compounds eliminating odours.

Since the entire processing operation is enclosed within buildings (as opposed to open air windrows composting), there is no contamination of surface or groundwater's.

Standard operating procedures for the acceptance, handling and processing of waste will be developed prior to commencement of operations at the facility.

#### **Wastewater Treatment Plant**

The wastewater treatment plant is operated on the SBR process.

Standard operating procedures for the acceptance, handling and processing of wastewaters shall be retained at the facility.

### **A.10.3 Waste Acceptance Hours and Hours of Operation**

Waste will be accepted at the Facility Monday to Friday inclusive between the hours of 08.00 to 19.00 and on Saturdays 08.00 to 17.30. Waste handling (sorting, mixing etc) will be from the hours of 07.00 to 20.00 hours Monday to Friday inclusive and 08.00 to 18.00 on Saturdays. The compost plant and wastewater treatment plant will be operated continuously.

**A.11 Information for the purpose of enabling the Agency to make a determination in relation to the matters specified in paragraphs (a) to (g) of Section 40(4) of the Act**

**A.11.1 Section 40(4) (a) Compliance with Emission Standards:**

AES will operate the facility so that it complies with all relevant emissions standards. Since the entire process occurs within a totally enclosed and controlled environment there will be no release of potentially contaminating water to surface water or groundwater's. Treated effluent and uncontaminated surface water will be monitored before release to the River Suir. This is in line with practice at the site under IPC licence Register No. 238. All air from the buildings and process passes through biofilters – a carefully managed natural medium, which can consist of layers of gravel, compost and wood chips. Microorganisms in the biofilter naturally consume odorous compounds eliminating odours. The carrying on of waste activities in doors will ensure dust emissions are minimised. Noise will emit from plant and equipment on site and will attenuate over distance. Noise from the facility will not exceed daytime (55dB(A)) or night time limits (45dB(A)). Further details on emissions can be found in Section 3 of the EIS.

**A.11.2 Section 40(4) (b) Environmental Pollution:**

The proposed design, management and operating practices at the facility will ensure that environmental pollution is avoided. This will include all waste activities related to composting being carried on indoors and the treatment of air from within the building by passing it through a biofilter.

**A.11.3 Section 40(4) (c) Best Available Technology (BAT) or Best Available Technology Not Entailing Excessive Costs (BATNEEC):**

All waste activities related to composting will be carried on indoors and BAT/BATNEEC will be used to minimise emissions to the maximum extent practical.

**A.11.4 Section 40(4) (cc) Activity Consistent with the Relevant Waste Management Plan:**

The implementation of statutory Waste Management Plans is underway since 2001, generally on a regional basis. The Waste Management Plans contain ambitious targets for waste recycling and energy recovery with the targets of the EU Landfill Directive in mind. Based on surveys carried out during 2003, approximately 15% of municipal waste generated is currently diverted from landfill. By contrast the targets of the Plans typically require up to 90% diversion of municipal solid waste (MSW) from landfill by 2013.

In accordance with Section 22 of the Waste Management Act, the six authorities in the South East Region agreed to make a Joint Waste Management Plan. The local authorities involved in the South East Regional Waste Management Plan are:

1. Waterford County Council
2. Waterford City Council
3. Tipperary South Riding County Council
4. Wexford County Council
5. Kilkenny County Council



## 6. Carlow County Council.

The Waste Plan includes composting as an integral element to deal with the management of waste. The plan enables independently established private entities to provide waste facilities/services in the Region.

The quantities of biodegradable municipal waste to be managed in the Region are discussed in the *National Strategy for Biodegradable Waste - Draft Strategy Report, April 04*, which estimates, based on the overall municipal waste generation in 2001 (9.8% in south east), that the gap in treatment capacity required for biodegradable municipal waste (BMW) in the south east regional to be for 2006 (117,889 tonnes), 2009 (169,177 tonnes) and 2016 (252,611 tonnes). The Draft Strategy indicates the need for central biological facilities with a target capacity of 35,154 tonnes by year 2009 to deal with biodegradable municipal waste in the South East Region.

The South East Regional Waste Plan notes that water and sewage treatment, agriculture and certain industries generate liquid wastes, which contain a high organic solid content. The quantity of non-hazardous sludges in the region, expressed in terms of their solid content extracted from the Waste Plan are set out below.

**Table 1.2 Sludge Arisings in the South-East**

Type	Tonnes Dry Solids (tDS/y)
Sewage	5,287
Water Treatment	1,313
Agricultural	698,853
Non-hazardous Industrial	91,543
<b>Total</b>	<b>796,996</b>

The proposed facility at Portlaw, to compost and treat effluents, is ideal for the requirements of the South East Region and will not prejudice measures taken or to be taken by the relevant authorities for the purpose of the implementation of the South East Regional Plan.

### A.11.5 Section 40(4) (d) Fit & Proper Person:

The applicant can be considered a fit and proper person as defined in the Waste Management Act for the following reasons:

- The applicant has no convictions under the Waste Management Acts, 1996 to 2003, the EPA Act 1992 and 2003, the Local Government (Water Pollution) Acts 1977 and 1990 or the Air Pollution Act 1987;
- Staff with appropriate skills to operate and manage the facility will be employed;
- Financial provisions will be put in place to address risk liabilities and residual management. The cost of managing, developing, operating, and monitoring the facility will be borne by the applicant.

**A.11.6 Section 40(4) (e) the Applicant has Complied with Requirements Under Section 53(Financial Provision):**

The audited accounts for AES for 2002/2003 are included with the application.

AES are committed to meeting the requirements of a waste license. Prior to commencement of waste operations, AES will obtain insurance to cover potential environmental liabilities incurred by the carrying on of the waste activities relating to this application. If for some reason waste operations were to cease at the facility and AES does not envisage this happening; the only costs that would need to be covered would be the removal of waste held at the facility at that time. To cover such an eventuality, AES are willing to provide security that will be payable to the EPA.

**A.11.7 Section 40(4) (f) Energy will be Used Efficiently:**

The facility will use energy during construction and operation. The facility will use diesel fuel and electricity. Annual audits will be carried out to ensure that energy is being used efficiently.

**A.11.8 Section 40(4) (g) Noise from the Activity will Comply with any Regulations under section 106 of the Act of 1992:**

Noise will emit from plant and equipment on site and will attenuate over distance. Noise from the facility will not exceed daytime (55dB(A)) or night time limits (45dB(A)) and will comply with and will not result in the contravention of any regulations under section 106 of the Act of 1992.

**A.12 Emissions**

The potential emissions from the facility are described below. Further details on emissions can be found in Section 3 of the EIS.

**A.12.1 Surface water**

Treated effluent and uncontaminated surface water will be monitored before release to the River Suir. This is in line with practice at the site under IPC licence Register No. 238.

**A.12.2 Odours/Dust/Litter**

The process occurs within a totally enclosed and controlled environment, thereby minimising dust dispersion and potential for litter. All air from the buildings and process passes through biofilters – a carefully managed natural medium, which can consist of layers of gravel, compost and wood chips. Microorganisms in the biofilter naturally consume odorous compounds eliminating odours.

**A.12.3 Sewage**

Domestic wastewater arising from staff use at the facility will be treated in the onsite wastewater treatment plant.

**A.12.4 Noise**

Noise will emit from plant and equipment on site and will attenuate over distance. Noise from the facility will not exceed daytime (55dB(A)) or night time limits (45dB(A)).

**A.12.5 Assessment of the Effects of Emissions on the Environment**

An assessment of the effects of the above listed emissions on the environment has been carried out and it has been concluded that the proposed technology and management practices at the facility will ensure the effects of emissions on the environment will not be significant. Further details on emissions can be found in Sections 3 of the EIS.

**A.13 Monitoring and Sampling Points**

The monitoring locations are shown in Figure A-3. Further details on monitoring can be found in Section 4 of the EIS.

**A.14 Arrangements for the Prevention, Minimisation and Recovery of Waste arising from the Activity Concerned**

The principal aim of the processes at the facility is to generate compost and treat wastewaters. It is also intended to assess potential outlets for the recovery of residual wastes arising i.e. wastes that cannot be composted.

**A.15 Arrangements for the Off-site Treatment of Solid or Liquid Wastes****A.15.1 Solid Wastes**

Market outlets for the compost and sludge generated will be sought. Any solid waste that does not meet compost standards will be removed for recovery or disposal at appropriate (licensed or permitted) outlets.

**A.15.2 Liquid Wastes**

It is not envisaged that any liquid waste will be removed from the facility.

**A.16 Emergency Procedures to Prevent Unexpected Emissions**

An Emergency Procedure will be developed prior to facility operation and will deal with unexpected emissions such as odour/dust emissions to air, noise or emission to water and other eventualities e.g. fire or plant breakdown. The above-unexpected emissions/eventualities are not anticipated, however if they do arise they will be dealt with as per the procedure.

The Emergency procedure will include details of persons to contact, emergency services numbers and actions to be taken.

**A.17 Closure, Restoration and Aftercare of the Facility**

It is anticipated that the plant will be operated indefinitely. However if the facility should close for some unforeseen reason all waste and all equipment will be removed from the facility. Waste would be removed to authorised facilities. Equipment would be recycled where possible. The building where waste activities are proposed would remain and would likely be used again.

There would not be any need for aftercare management as there would be no emissions from the facility once decommissioning has taken place.

**A.18 European communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulation 2000**

The above Regulations do not apply to the proposed activity.

**A.19 Geological and Hydrogeological Nature of the Land**

There will be no direct discharge to groundwater, as all proposed waste activities shall take place on hard standing surfaces and indoors. Historic data indicates that the site is underlain by some 12.5m to 35m of overburden overlying weathered limestone bedrock, which is a major aquifer. Michell Ireland abstracted its water needs from onsite groundwater wells. These wells are still available as a water supply.

The existing development and previous activities at the site had no discharges to groundwater, with a wastewater treatment plant used to treat wastewaters and the resulting effluents being discharged to the River Suir. Groundwater quality has been tested, as part of the requirements of IPC licence 238, and there is no indication of any problems with groundwater quality.

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