



Office file only
re planning
Environmental Protection Agency
29 JUL 2005

Aoife O'Flaherty
Planning Division
Waterford County Council
Civic Offices
Dungarvan
Co. Waterford

COMHAIRLE CHONTAE
PHORTLAIRGE
25 JUL 2005
Resubmit
RANNOG PLEANALA

212-1

25th July 2005

Our Ref.: MDR03411t004
File Ref.: 330

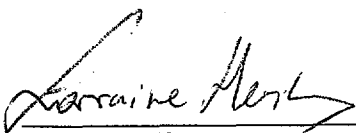
Re: Reply to Request for Additional Information - Planning Application No. 04/1831

A Chara,

Please find enclosed six copies of the additional information requested by Waterford County Council in your correspondence dated the 26th of January 2005 to supplement the EIS which was submitted to the Council.

Also attached is a revised Executive Summary for the EIS, which contains up to date information, enclosed in the attached report.

Yours Sincerely,


John Mac Namara
On behalf of AES (Irl) Ltd.
LH/lh.

For inspection purposes only.
Consent of copyright owner required for any other use.



ADVANCED ENVIRONMENTAL SOLUTIONS IRELAND

COMHAIRLE CHONTAL
PHORTLÁIRGE
25 JUL 2005
04/1831
RANNOG PLEANALA

Revised Non-Technical Summary

Reply to Waterford County Council

Request for Further Information

Re: Planning Application 04/1831

For Proposed Waste Management
Facility at

Killowen, Portlaw, Co. Waterford

July 2005

For inspection purposes only.
Consent of copyright owner required for any other use.

TABLE OF CONTENTS

1	THE APPLICANT	1
2	GENERAL DESCRIPTION OF THE SITE	1
3	ALTERNATIVES	1
3.1	ALTERNATIVE LOCATIONS	2
3.2	ALTERNATIVE TECHNOLOGIES	2
4	DIFFICULTIES ENCOUNTERED IN COMPILING THE REQUIRED INFORMATION	3
5	CLASSES OF ACTIVITY	3
6	QUANTITY & NATURE OF WASTES TO BE RECOVERED OR DISPOSED OF AT THE FACILITY	4
7	RAW AND ANCILLARY MATERIALS, SUBSTANCES, PREPARATIONS, FUELS AND ENERGY, WHICH WILL BE UTILISED IN OR PRODUCED BY THE ACTIVITY	5
8	PLANT, METHODS, PROCESSES & OPERATING PROCEDURES FOR THE ACTIVITY	6
8.1	PLANT	6
8.2	METHODS, PROCESSES & OPERATING PROCEDURES	6
8.2.1	Compost Facility	6
8.2.2	Wastewater Treatment Plant	7
9	WASTE ACCEPTANCE HOURS AND HOURS OF OPERATION	7
10	EXISTING ENVIRONMENT, EMISSIONS, MITIGATION MEASURES & LIKELY SIGNIFICANT IMPACTS	7
10.1	EXISTING ENVIRONMENT	7
10.2	POTENTIAL EMISSIONS & LIKELY IMPACTS	8
10.2.1	Air (Odour, Dust Bioaerosols)	8
10.2.2	Climate	9
10.2.3	Cultural and Archaeological Heritage	9
10.2.4	Flora and Fauna	9
10.2.5	Human Beings	9
10.2.6	Traffic	10
10.2.7	Soils, Geology and Groundwater	10
10.2.8	Landscape	10
10.2.9	Surface Water	10
10.2.10	Materials Assets	10
10.2.11	Noise and Litter	11
10.2.12	Interrelationships	11
10.3	MITIGATION MEASURES	11
10.4	LIKELY SIGNIFICANT IMPACTS	11
11	PROPOSED ENVIRONMENTAL MONITORING	11

ENVIRONMENTAL IMPACT STATEMENT - NON TECHNICAL SUMMARY

1 THE APPLICANT

The applicant is Advanced Environmental Solutions (Ireland) Ltd (AES). The company was established in 1996 as Waste Recycling Ireland and commenced trading as Advanced Environmental Solutions (Ireland) Ltd in July 2001, through the acquisition of Midland Refuse Service (Laois) Ltd., O'Briens Waste Recycling, and EC Waste Disposal. Other acquisitions included O'Doherty Waste Disposal, Higgins Waste, AP Waste Disposal and Maxwell Waste.

In March 2002, AES acquired Landfeeds Environmental Ltd. and in July 2002, the Environmental Protection Agency (EPA) licensed Midland Waste Company Ltd. in Navan together with the now licensed Alina/Rent-a-Bin facility in Tullamore. AES also acquired Feehan Environmental in August 2002, and Pembroke Waste Disposal in Kilkenny during September 2002.

The policy of the company is to manage waste in a manner which maximises the reuse and recycling of materials while minimizing the volume sent to landfill; this is achieved by utilising the most modern technologies, ensuring regulatory compliance and working in partnership with customers and organisations at international, regional and local levels.

2 GENERAL DESCRIPTION OF THE SITE

The application is for a proposed composting facility using the Bedminster technology. 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 integrated pollution control (IPC) licence Reg No. 238. The proposed facility is approximately 3.2 hectares in size.

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 Bedminster technology is 'in vessel' and all waste activities will be undertaken indoors. 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 effluents tankered to the site from other industries. The throughput to the wastewater treatment plant will be approximately 60,000 tonnes per annum.

3 ALTERNATIVES

AES is primarily concerned with the management of waste. Ireland as a nation relies heavily on landfill and there is a need to recover and make better use of wastes generated. Composting will play a key role in this matter and AES identified the need for such a facility. Legislation is becoming more stringent in relation to the form of materials that can be spread onto land and AES also identified the need for a facility to further treat effluents, which previously were spread directly to land. AES had the choice to do nothing or set up the proposed facility, consisting of a compost plant and effluent treatment plant. Considering national policy and current issues with waste, AES decided to follow the latter option.

3.1 ALTERNATIVE LOCATIONS

The following factors were taken into consideration by AES when considering alternative locations in 2004:

1. The proposed facility to be located in an area which is not densely populated. An agricultural area would be preferable.
2. The site must offer sufficient land area to accommodate an enclosed building where all waste treatment will take place.
3. The site must offer sufficient land area to accommodate a wastewater treatment plant.
4. The site must offer sufficient land space to accommodate a biofilter to treat odorous air extracted from the building.
5. The building (existing or proposed) must be large enough to ensure sufficient treatment capacity for approximately 40,000 tonnes of organic waste material.
6. The boundary of the facility must not be located within 250 metres from the nearest sensitive receptor.
7. A sufficient buffer area of at least 50 metres from the facility should be available to ensure compliance with ABP Regulations.
8. The proposed development must not have a significant visual impact on local residents and must be in-keeping with the surrounding countryside as much as possible.
9. There must be good access roads and a good overall transport network in the area.
10. The site must be in proximity to counties in the Region where there are significant amounts of biodegradable waste arisings.

Based on the above, AES considered various locations. However the alternative chosen by AES (Irl) Ltd was the proposed site location at Portlaw which was found to satisfy all of the above requirements and will provide an optimum site location for the proposed composting and wastewater treatment processes.

3.2 ALTERNATIVE TECHNOLOGIES

A considerable amount of research on other types of composting systems on the market was conducted by AES in advance of preparing the EIS. The technologies considered include:

- Open air windrow composting;
- Aerated static piles;
- A number of in-vessel systems such as the VCU system;
- Enclosed hangars and
- Breathable membrane covers.

A number of odour abatement technologies were also considered and included biofilters, bioscrubbers and negative air pressure systems with abatement of extracted air.

It was decided that the Bedminster In-Vessel Composting System offered the best solution after considering the engineering, potential environmental emissions, and the financial implications of introducing such a system. The Bedminster composting technology is described in Section 2 of the

EIS. The Bedminster Technology and ancillary building, odour abatement technology were chosen on the basis that:

- The Bedminster system offers a fully enclosed in-vessel composting system where BMW will be treated, in line with the requirements of the ABP Regulations.
- The Bedminster technology is well recognised as a suitable system for treating BMW across Europe, Australia and the US.
- The Bedminster technology will ensure high rate composting of the BMW in an aerated environment during the first stage of composting. Following which the material will be matured in the aeration hall to produce a fully decomposed and stable compost product.
- The Bedminster systems allows for the screening of compost at intervals in the process to screen out contaminants that may be present.
- A fully enclosed building where waste reception and compost maturation, screening, refining etc. would take place would be required to prevent environmental nuisance in the area.

Odour abatement systems are necessary to prevent odour emissions to the environment.

After reviewing various options of odour abatement such as:

- The 'do nothing scenario';
- Practice good house keeping operations,;
- Utilise negative air pressure systems.

It was decided that a negative air pressure system within the building would be a necessary part of the overall design, where air will be extracted and then treated using a biofilter system. This degree of odour abatement offers a very high level of odour control and will prevent dour nuisance at the facility.

4 DIFFICULTIES ENCOUNTERED IN COMPILING THE REQUIRED INFORMATION

No difficulties were encountered in compiling the information. The vast majority of information about the site was available from the environmental impact statement carried out as part of the application for the Michell Ireland Ltd industrial facility and from the subsequent enforcement of integrated pollution control licence (IPC) Register No. 238, which was granted by the Environmental Protection Agency (EPA).

5 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

Class 6	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. This activity relates to the production of composted material not meeting specified compost quality requirements.
Class 11	Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule. 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.
Class 13	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. 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.

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

Class 2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes): This activity relates to the recycling of organic substances including composting and biological treatment of waste at the facility.
This is the Principal Activity	
Class 3	Recycling or reclamation of metals and metal compounds: This activity relates to the recycling or reclamation of metals and metal compounds prior to further recovery off-site.
Class 4	Recycling or reclamation of other inorganic materials: This activity relates to the recycling or reclamation of inorganic materials prior to further recovery off-site.
Class 13	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: This activity relates to the storage of waste prior to further recovery off-site.

6 QUANTITY & NATURE OF WASTES TO BE 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
Total		40,000

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
Total		60,000

7 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 compost 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.

8 PLANT, METHODS, PROCESSES & OPERATING PROCEDURES FOR THE ACTIVITY

8.1 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 will 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 60m long and 4.0m 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.

8.2 METHODS, PROCESSES & OPERATING PROCEDURES

8.2.1 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.

8.2.2 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.

9 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.

10 EXISTING ENVIRONMENT, EMISSIONS, MITIGATION MEASURES & LIKELY SIGNIFICANT IMPACTS

10.1 EXISTING ENVIRONMENT

Data was collated to identify and assess the main effects, which the proposed development is likely to have on the environment. Baseline monitoring for dust, bioaerosols and PM₁₀, volatile organic compounds, and bioaerosols such as *Aspergillus fumigatus* and Total mesophilic bacteria was conducted on site. A predictive Bioaerosol Impact Assessment which assessed the risks associated with bioaerosols in the vicinity of the proposed facility was carried out. An Odour Impact Assessment to determine the potential for odour impacts on the local area from the proposed facility was also carried out.

Some information about the site was available from the Environmental Impact Statement carried out as part of the application for the Michell Ireland Ltd industrial facility and from the subsequent enforcement of integrated pollution control licence (IPC) Register No. 238, which was granted by the EPA. Site visits also provided some information on the existing environment.

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.

8.2.2 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.

9 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.

10 EXISTING ENVIRONMENT, EMISSIONS, MITIGATION MEASURES & LIKELY SIGNIFICANT IMPACTS

10.1 EXISTING ENVIRONMENT

Data was collated to identify and assess the main effects, which the proposed development is likely to have on the environment. Baseline monitoring for dust, bioaerosols and PM₁₀, volatile organic compounds, and bioaerosols such as *Aspergillus fumigatus* and Total mesophilic bacteria was conducted on site. A predictive Bioaerosol Impact Assessment which assessed the risks associated with bioaerosols in the vicinity of the proposed facility was carried out. An Odour Impact Assessment to determine the potential for odour impacts on the local area from the proposed facility was also carried out.

Some information about the site was available from the Environmental Impact Statement carried out as part of the application for the Michell Ireland Ltd industrial facility and from the subsequent enforcement of integrated pollution control licence (IPC) Register No. 238, which was granted by the EPA. Site visits also provided some information on the existing environment.

Details considered included that for:

- Air (dust, odours, bio-aerosols, noise, and litter) – typical rural environment;
- Climate e.g. wind direction and rainfall;
- Cultural and archaeological heritage - no recorded archaeological features;
- Flora and fauna - two species of plants (Greater Pond Sedge and Opposite-leaved Pondweed), which are rare in Ireland were found;
- Human beings – no house within 250m of the proposed facility;
- Traffic – number of traffic movements;
- Soils, geology and groundwater - 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;
- Landscape – screening and tree planting required for the construction of the Michell Ireland facility have been implemented and are now matured;
- Surface water – discharge consents and emission limit values are given in the IPC licence granted to Michell Ireland;
- Materials assets - there are private residences, an orchard and farms in the vicinity of the proposed facility. The site is accessed by the R680, which is a regional road. Services at the site include water (groundwater supply), electricity, telephone and gas. Existing buildings at the site include a factory, which was previously used by Michell Ireland and this building will be modified and used for the proposed composting of waste. A wastewater treatment plant is located adjacent to the Michell Ireland factory;
- Interrelationships – the data for the above has been used to assess interrelationships.

Further details on some of these aspects were included in the reply for a request for information from Waterford County Council and also in Section 32 of the EIS.

10.2 POTENTIAL EMISSIONS & LIKELY IMPACTS

Potential emissions and likely impacts include:

10.2.1 Air (Odour, Dust Bioaerosols)

Odour Monitoring Ireland conducted an Odour impact assessment to determine the potential odour impact of the proposed facility on the local area. The report concluded that there would be no significant odour impact in the vicinity of the plant during its operation.

Odour Monitoring Ireland conducted Dust deposition monitoring at the site. They concluded that total depositional dust concentrations levels are within the EPA recommended levels for Dust and that the proposed facility should not have an impact on total depositional dust concentrations, due to the mitigation measures outlined in the EIS (Section 3.1.1.3), including waste activities to be carried on indoors.

A bioaerosol impact assessment is provided within Appendix 1 of the reply to the request for Further Information by the Council. It is concluded that the proposed facility will not cause any bioaerosol impact at the nearest resident. Details are provided with respect to workers safety.

10.2.2 Climate

The nearest resident is over 250m from the facility. This together with proper facility management, and the fact that waste activities will be carried on indoors should ensure climate interaction does not give rise to a significant impact.

10.2.3 Cultural and Archaeological Heritage

No recorded archaeological features;

10.2.4 Flora and Fauna

Roger Goodwillie carried out a terrestrial flora and fauna impact study. The report concluded that since the project is located in the existing buildings there will be no change in the land use of the open areas described above and essentially no impact on the present flora and fauna. The quality of effluent released (to the estuary) will be subject to licence by the EPA and will not have detrimental effects. Any enrichment of the field drains, from whatever source, will lead to greater growth of vegetation but is unlikely to result in further floral change. Water movement is to the north, away from *Groenlandia* sites on adjacent land.

Continued growth of the broad-leaved trees will result in a diversification of bird and animal life on the overall site and, in time, some development of a woodland flora.

The factory and paved area where the proposed facility will be located already exist. Michell Ireland Ltd operated a tannery at the facility up to 2004. This included discharge consents under the IPC licence for treated effluent and storm water to the River Suir. Uncontaminated surface water will continue to be collected in a sump and tested regularly before being released to the River Suir to ensure that it does not exceed quality limits. Any surface water that exceeds these limits will be sent to the wastewater treatment plant.

10.2.5 Human Beings

The location of all residential houses within 500m of the proposed facility is shown in Figure 1 of the Landscape and Visual Assessment Report attached in **Appendix 5** of the additional information sent to the Council. The potential impacts the proposed facility could have on the community were assessed in terms of:

- Agriculture
- Agri-food industry
- Tourism
- Property Values
- Quality of life

It was found that there would be no significant impact on either of these once all mitigation measures of environmental nuisance were fully implemented at the proposed facility. Mitigation measures for environmental nuisances are discussed in the EIS and the additional information document sent to the Council.

10.2.6 Traffic

Trafficwise carried out a traffic impact assessment and concluded that traffic movements to and from the facility will not give rise to an impact. The report is included with the additional information response to Waterford County Council.

10.2.7 Soils, Geology and Groundwater

Geotechnical and Environmental Services (GES) Limited investigated the site in order to sample and analyse soil and groundwater at the facility. The additional information response to Waterford County Council contains the results from these independent investigations at the site. GES undertook two distinct investigative campaigns, Groundwater in late 2004 and Soil in 2005; their reports are appended in the aforementioned report.

It was found there was no indication of significant impact on the groundwater or soil at the site from previous activities [Tanning] on the proposed site.

10.2.8 Landscape

A landscape and visual assessment was undertaken in June 2005. This component of the EIS is intended to assess the existing environment, examine and evaluate the implications of the proposed scheme in terms of subsequent landscape character and visual alterations to the local environs. For the purposes of the landscape and visual impact assessment the study area is confined to the visual envelope for the proposed scheme. A summary of the predicted impacts on the receiving environment is given below.

During construction the proposal will have a *negative to neutral impact* in the temporary to short term. As with any construction of this scale there will be a degree of high visibility due to the processes involved in construction. These include the clearing of tarmac to make way for new structures and carparking, these actions will be highly evident in the short term from a variety of locations, especially from the northwest, due to the elevation of surrounding lands and along the R680.

During operation of the facility there will be a *neutral to positive impact* in the long term. due to *mitigation* continuously maturing woodland and landscape planting will yield a *positive landscape impact* on the surrounding environs, increasing the ecological and aesthetic value of the existing site.

10.2.9 Surface Water

A surface water assessment report was conducted to determine the impact the proposed facility could have on the River Suir. This is included in **Section 1.7** of the response to request for additional information from the Council. The report concludes that there should be no additional impact from the discharge of treated effluents.

10.2.10 Materials Assets

Material assets are generally considered to be the physical resources in the environment which may be of either human or natural origin. The object of the assessment of these resources is to identify the impact of the proposed development on all residential properties, orchards or farms within 500m radius of the facility as requested by Waterford County Council.

The proposed site was visited in June 2005 by RPS MCOS and all properties (commercial and residential) and agricultural and non-agricultural land were mapped.

An assessment of the potential impacts on orchards, agricultural land and property values was carried out. It was concluded that there would be no significant impact.

10.2.11 Noise and Litter

The EIS concluded that due to the enclosed nature of the building there would be no significant impact in relation to noise and litter at the proposed facility.

10.2.12 Interrelationships

A number of interrelationships can exist e.g. air emissions and climate. These have been considered in the foregoing and it has been concluded that they should not give rise to a significant impact.

10.3 MITIGATION MEASURES

Good management and operational practices will be implemented at the facility. A number of mitigation measures were proposed to prevent any significant impact arising out of the construction and operation of the proposed facility. Some of these are given below. For more information refer to section 3 of the EIS and the additional information submitted to the Council.

Measures that should ensure the activity does not give rise to significant impacts include:

- All waste operations will be carried on indoors;
- The buildings at the facility will operate under negative air pressure;
- All process air will be extracted and piped through biofilters;
- Treated effluent and uncontaminated surface water run-off will be required to meet existing emission limit values set at the site;
- Fuels will be stored in appropriate bunded areas;
- Staff with appropriate skills to operate and manage the facility will be employed.

10.4 LIKELY SIGNIFICANT IMPACTS

With the implementation of the measures identified above and throughout the EIS it is unlikely that activities at the facility will give rise to a significant impact.

11 PROPOSED ENVIRONMENTAL MONITORING

The following monitoring is proposed taking into consideration site specific details and waste licences granted for similar type waste facilities. Locations of monitoring points and frequency of monitoring are provided. Monitoring locations are shown on Figure A.3.

Media	Location (Grid Reference)	Monitoring Frequency
Dust Deposition	D1 (S4715 1773)	Three times a year ^{Note 1}
	D2 (S4711 1791)	Three times a year ^{Note 1}
Noise	N1 (S4715 1773)	Annually
	N2 (S4711 1791)	Annually
Biofilter	Biofilter (S4724 1787)	See Section 4.2.1 of EIS
Surface Water Discharge	EW2 (S4751 1836)	See Section 4.2.2 of EIS
Meteorological Monitoring	Onsite (S4715 1773)	See Section 4.2.3 of EIS
Treated Effluent	EW1 (S4751 1836)	See Sections 4.2.2 & 4.4 of EIS
Compost quality monitoring	Final Compost	Monthly - See Section 4.3 of EIS

Note 1 Twice during the period May to September.

For inspection purposes only.
Consent of copyright owner required for any other use.