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Non –Technical Summary

Introduction

SWS Environmental Services have prepared an Environmental Impact Statement (EIS) on behalf of AVR – Environmental Solutions Ltd. to submit as part of a planning application to Cork County Council and a waste licence application to the Environmental Protection Agency (EPA).

This is the Non-Technical Summary, Volume 1 of 2 of this EIS. The EIS was prepared as per the requirements set out in the Environmental Impact Assessment Regulations (EIA) [European Communities (EIA) Regulations, 1989] (SI No. 349 of 1989), and EIA Regulations [European Communities (EIA) Regulations, 1999] (SI No. 93 of 1999). The EIS was also prepared in accordance with the requirements of the Planning and Development Regulations, 2001 (S.I. No. 600 of 2001).

AVR – Environmental Solutions Ltd. propose to develop a Waste Recovery/Transfer and Sludge Drying Facility in the townland of Foxhole, Youghal Co. Cork. The site of the proposed development is located off the R634 (former N25 Cork to Waterford Road) adjacent to the existing Youghal Landfill and Civic Amenity Centre.

The area of the proposed development is zoned Industrial/Enterprise in the Cork County Development Plan, 2003. The existing site has Planning Permission (ref: S/00/7093) for “the construction of a waste transfer station” and also holds a Waste Management Permit (ref: CK(S) 23/03) for a “Waste Recycling Transfer Station”.

No significant difficulties were encountered during the preparation of this EIS.

This EIS is divided into three volumes:

EIS Volume 1: Non-Technical Summary,

EIS Volume 2: Main Report

EIS Volume 3: Appendices.

Waste handling will be in line with BAT Guidance Notes for the Waste Sector: Waste Treatment Activities, EPA, Draft November 2003. Best Available Technique (BAT) was used in the design of the proposed development and the EIS was prepared using national guidelines and regulations on the information to be contained therein.

The Cork County Development Plan 2003, National policy documents including Sustainable Development: A Strategy for Ireland, Making Ireland's Development Sustainable, Waste Management: Changing Our Ways, Preventing and Recycling Waste: Delivering Change,

National Climate Change Strategy, and Litter Action Plan, the Waste Management Plan for Cork County 2004 and the Sludge Management Plan 2000 were all reviewed as part of EIS preparation. This EIS has been undertaken having regard to the Environmental Protection Agency's 'Guidelines on the information to be contained in Environmental Impact Statements' (EPA, March 2002).

Public Consultation

A number of public organisations and special interest groups were consulted regarding the proposed development during the scoping of the project.

Need for the Proposed Development

As a Member State of the European Union (EU), Ireland's most significant waste policies were drawn up in the 1990's and were derived from laws, policies and strategies adopted by the EU. The proposed Waste Recovery/Transfer and Sludge Drying Facility promotes these aims and targets by assisting in diverting waste from landfill and in providing waste for recycling.

The Waste Management Plan for Cork County, 2004 reinforces Cork County Council's commitment to a system of waste management that will see the least amount of waste going to modern engineered landfills and that this will be achieved through the use of bring sites, civic amenity sites and material recovery and treatment facilities. The proposed Waste Recovery/Transfer and Sludge Drying Facility supports the principles and objectives of the Waste Management Plan for Cork County, 2004.

The Waste Management Plan for Cork County 2004, states that in 2002 there was approximately 130,000 tonnes of sludge type waste produced in Cork County and that reduction of sludge to landfill is an objective of both industry and the local authority. The proper introduction of EU directives on land spreading of sludge will mean that the current spreading of waste water treatment sludge will be limited. The proposed Sludge Drying facility will ensure that sludge is treated to current EU preferred methods and reduce the volume of sludge currently being landfilled.

The proposed sludge drying facility utilises a system of indirect drying. As non-hazardous sludge is part of the waste stream to be managed at the proposed facility the proposed development is in agreement with the policies set out in the Sludge Management Plan for Cork County 2000.

SEVESO

The proposed activity does not fall within the European Communities (Control of Major Accidents Hazards involving Dangerous Substances) Regulations 2000 (SI No 476 of 2000). The site does not fall under the SEVESO Directives (96/82/EC; 2003/105/EC).

Site Selection

The site was chosen based on the following:

- The policies and strategies of the Cork County Development Plan 2004 in establishing sustainable development,
- The policies of the Waste Management Plan for Cork County 2004,
- Road network and access,
- Land-use zoning,
- Utilisation of brownfield sites for further development,
- Adjacent to an existing landfill,
- Proximity to sources of waste.
- Selection of a location with Planning Permission for *the construction of a waste transfer station*,
- Selection of a location with a Waste Management Permit to operate a Waste Recycling/Transfer Station,
- Existing Planning Permission (ref: S/00/7093) for *the construction of a waste transfer station*,
- An existing Waste Management Permit (ref: CK(S) 23/03) for a "Waste Recycling/Transfer Station" at the site,
- Proximity to sources of waste.

Technology Selection

The selection of technology was based on Best Technology Available (BAT) including design to prevent impacts and nuisances during installation, commissioning and operations phases. The preferred chosen technology is thermal treatment using an indirect fully enclosed method of drying. The benefits of thermal treatment include:

- Proven in the field of industrial, pharmaceutical and municipal sludge drying nationally (sewage sludge) and internationally (all sludge types),
- High sludge volume reduction,
- Pathogen-free, sterile product,
- An end product with a market use,
- In-line with regional sludge management policy.

Site and Scheme Description

The proposed development on 3.54 acres consists of inter-alia;

- a waste recovery and transfer building;
- administration building and carpark;
- transformer/plant building and standby generator;
- boiler and woodchip storage building;
- sludge reception building;
- sludge drying building;
- waste water treatment plant including balancing tank;
- fire water storage tank;
- storm water retention tank;
- 1 no. weighbridge;
- 1 no. wheelwash;
- oil storage and bund walls;
- waste quarantine area;
- dried sludge discharge area;
- mobile dewatering plant;
- mobile fire fighting plant;
- hard standings;
- all boundary fencing and walls;
- all associated site works;
- and ancillaries.

It is proposed to manage 70,000 tonnes/annum of commercial/enterprise and industrial waste, 30,000 tonnes/annum of non-hazardous biological sludge from waste water treatment plants, 10,000 tonnes/annum of leachate and 500 tonnes/annum of washings.

Waste Recovery/Transfer Activities

The following plant and equipment will be used at the Waste Recovery and Transfer building:

- Materials Handling Grab,
- Dosing Intake Conveyor,
- Transfer Belt during phase 1 up to approximately 15,000 tonnes per annum,
- Trommel Drum Screen or similar during phase 2 when throughput tonnages increase beyond approximately 15,000 – tonnes per annum,
- Picking Station, Sorting Belt and Overband Magnet, fully air-conditioned with high lux fluorescent lighting,
- Infloor Conveyor to Compactor,
- Baler,
- Shredder,

- Woodchipper,
- Forklift or loading shovel.

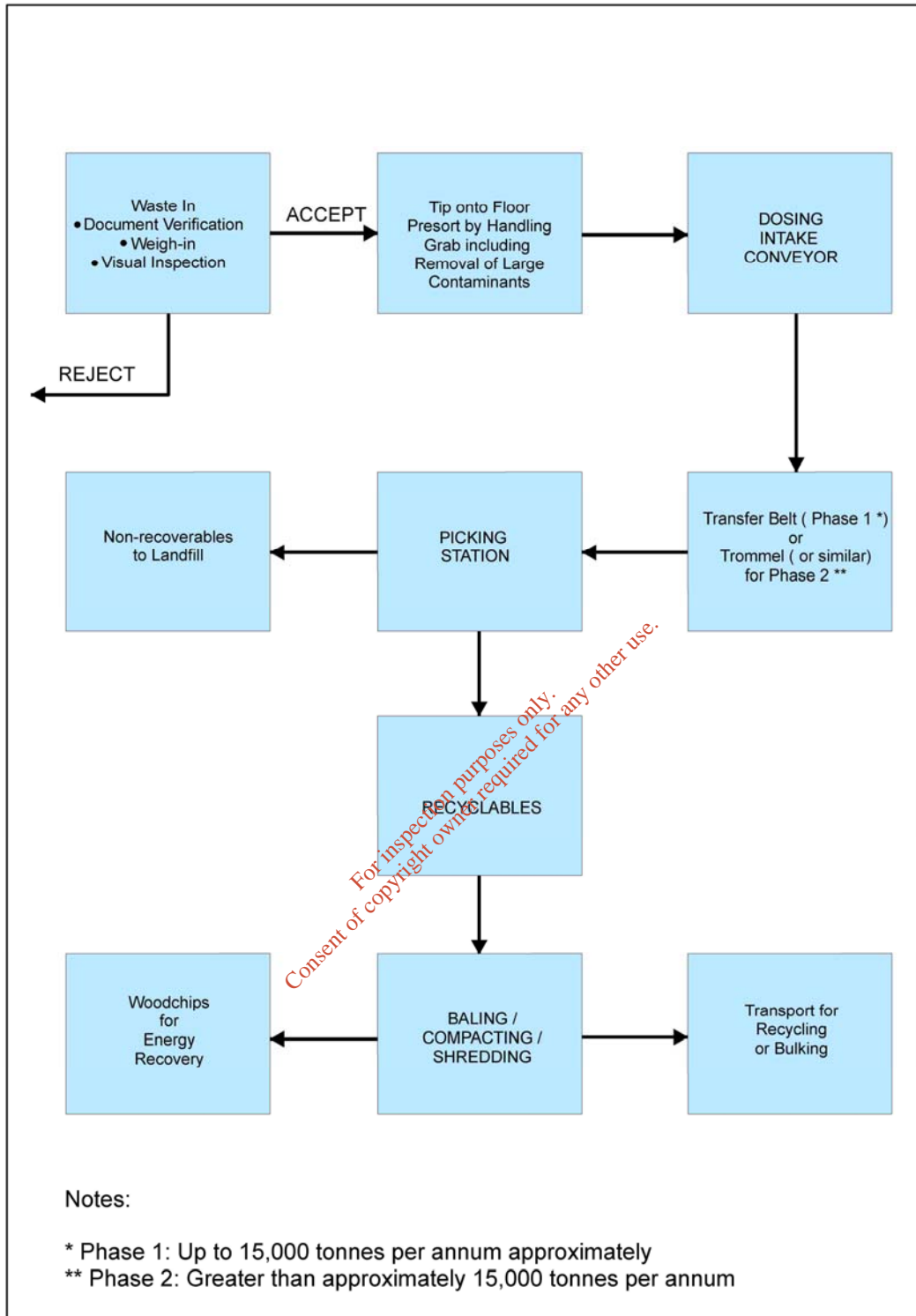
It is proposed to operate the transfer station from 07:30hours to 21:00hours Monday to Saturday inclusive for fifty weeks per year

It is proposed to operate the sludge drying facility on a continuous basis 24hours per day, seven days per week, and fifty weeks per year.

It is proposed to accept waste from 07:30hours to 21:00hours Monday to Saturday inclusive for fifty weeks per year.

The process description at the Waste Recovery and Transfer building is presented in diagrammatical format.

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Waste Recovery and Transfer Process Description

Sludge Drying Activities

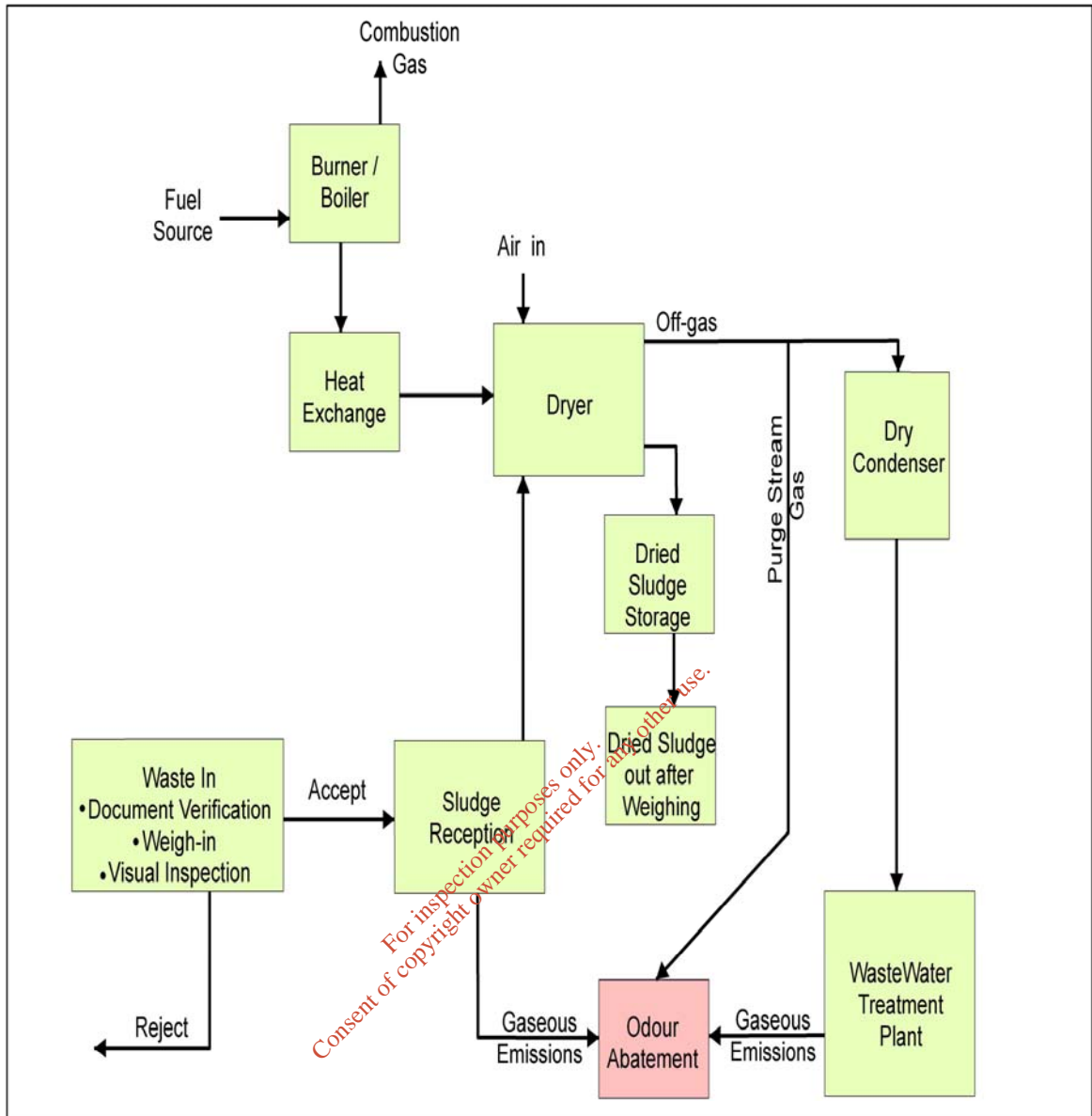
Wet sludge (with a minimum Dry Solids (DS) content of 10%) on arrival at the facility will be weighed and randomly sampled for analysis. The wet sludge is then tipped into sludge reception bins (covered with hydraulic lids and gratings) in the fully enclosed Sludge Reception building. The sludge is then pumped to a dosing/mixing bin that controls the flow of sludge into the dryer. The dryer is heated using a totally indirect method of heating; various energy sources are available to operate the dryer including biomass (woodchip) and light diesel oil. The dryer will be insulated, except at the ends, to minimize heat loss, thus reducing energy usage and provide for very safe working conditions.

The drying process creates steam; which is carried via the off-gas duct to the scrubber/separator or similar type plant, where it is condensed. Any fine particulate matter is returned to the dryer and the condensed effluent is sent to the hooded waste water treatment plant where it is treated to according EPA effluent discharge limits. Purge stream off-gas, volatile organics evaporating from the hooded waste water plant and odours from the sludge reception bin will be treated by a standalone biofilter.

The dried sludge is received onto a discharge conveyor and transferred to a product cooling conveyor, and indirectly cooled. The product with a moisture content of less than 10% is then screened to separate the fines, which are returned by the fines conveyer to the front of the dryer. The end-product is a sterilised granulate.

This facility will run on a 24 hour basis 7 days a week including holidays. It will be shut down for maintenance.

The process description for the sludge drying facility is:



Sludge Drying Process Description

GEOLOGY AND HYDROGEOLOGY

Existing Environment

Though the limestones of the Youghal syncline are considered a major or regionally important aquifer (GSI, 1994) and they are classified as amongst the most productive in the country, due to the coastal location of the site, the risk of saline intrusion to the groundwater, limits its potential for potable use (GSI, 1994). Groundwater in the area, therefore, is not likely to be considered suitable for extraction.

Impacts during Construction

The geotechnical site investigation report describes the subsoils as sandy/gravelly clays; as such these materials have little economic value. Some made ground is present on the site and during construction/excavation works it is proposed that this material be removed as required to the adjacent landfill operated by Cork County Council

Impacts during Operation

The site is not intended to deal with hazardous materials or putrescible waste. Therefore, potential contamination during the operation of the facility should be minimal. Furthermore the hardstanding area of the site will divert surface water run-off and all storm waters will be collected and monitored prior to discharge.

Impacts during Decommissioning

The main potential impact associated with the decommissioning of the facility would pertain to where contaminants had been stored on-site. Potential contaminants to be stored on-site will include fuels such as light diesel oil, which will be contained in bunded areas. The operator of the site has prepared a Decommissioning Plan. Therefore the control and management of the facility during decommissioning means that any potential risk is reduced.

Mitigation Measures

Impacts during Construction

It is intended to use this soil/overburden for landscaping purposes on-site.

Impacts during Operation

A quarantine area will be established on-site to temporarily store such materials should they unintentionally arrive on-site, thereby controlling, preventing and managing any potential risk. The entire operational area of the site will be concreted. This measure should protect the sub-surface from any potential contamination. Surface run-off will be directed from the site with the installation of hardstanding throughout the facility. Run-off from all site surfaces will

be collected and monitored, thereby further reducing the pollution potential of the site. Process ad foul water will be treated prior to discharge.

Impacts during Decommissioning

All care will be taken during decommissioning, to ensure that potential contaminants will not be released from the site.

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AIR

Existing Conditions

Baseline dust, dour and gaseous emissions are well within permissible allowable levels.

Impacts Assessment

Construction Phase

It is expected that the construction phase will last a total of approximately 1 year and due to the scale of the development and short term earth moving activities, any impact on air quality will be minimal.

Operations Phase and Mitigation Measures

Dust

Activities at the proposed facility have the potential to generate dust in the loading and treatment of waste. However, as operations will be conducted indoors, dust generation will be prevented at source and thus impacts are considered minimal.

Odour

The proposed facility will treat waste from commercial and industrial sources. The absence of any significant quantities of putrescible organic waste due to segregation by the producer will ensure that odour impacts any minimal.

The Sludge Drying building will be operated as a closed housed system to contain any generated dust. Dust potential from wet sludge is considered non-existent. The system is designed to prevent fugitive emissions. Proper housekeeping, maintenance and management of the sludge drying building will ensure that dust generating activities are limited.

Any dusts generated from combustion plant and vehicles on site will be minimised by regularly following effective maintenance and operation procedures. Staff operation and awareness training is proposed to ensure procedures are correctly followed. Regular cleaning and inspection of the site is essential to control dust levels.

A 2m buffer zone around the site together with a 1.85 - 2m high palisade fence will minimise the transfer of generated dust to neighbouring sites.

Any dust generated by boiler equipment and standby generator will be well within proposed ground level concentrations as directed by the draft TA Luft 2002 guidelines and SI 271 of

2002 Air Quality Standards (Refer to Air Quality Data and Modelling Report). Therefore no mitigation measures are required.

Gaseous Emissions

Vehicles and plant associated with materials handling and the incoming waste material provide the only source of gaseous emissions at the Waste Recovery and Transfer building. Gaseous emissions levels are negligible. Sludge will be stored in a specially designed sludge reception building. The wet sludge will be pumped directly into the enclosed system.

The dried granular sludge has a very low odour potential and will be stored in closed silos and containers.

Excess process water and gas purge streams from the Sludge Drying Facility will be sent directed to the hooded wastewater treatment plant. Gaseous emissions from the hooded Waste Water Treatment plant will be treated by the standalone odour abatement technology.

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WATER

Existing Environment

The Blackwater catchment is one of the largest in the state, draining an area in excess of 2,000km³. The Upper Blackwater Estuary shows decreased oxygen levels. Below this area, oxygen levels are increased, even though oxygenation is disturbed throughout the lower estuary and it then recovers fully by the Inner Youghal Bay.

Nitrogen and phosphate concentrations are somewhat elevated in the Upper Estuary under freshwater conditions. However, under saline conditions the Lower Estuary concentrations of these parameters are reduced to background coastal levels in Inner Youghal Bay.

Chlorophyll concentrations are overall elevated in both the Upper and Lower sections of the Estuary.

The breaching of these criteria levels classifies both sections of the Blackwater Estuary as eutrophic however; this classification does not appear to extend into the waters of Youghal Bay. Consequently, under the Urban Waste Water Treatment Regulations (S.I No. 254 of 2001 & 91/271/EEC) the Upper and Lower Blackwater Estuary are classified as Sensitive Areas.

Improvements in the municipal waste water treatment schemes, as well as, the reduction in the landspreading of sludge and the introduction of the Nutrient Management Plans in this area, should lead to a reduction in pollution levels in the river and its tributaries in the future.

Impact Assessment and Mitigation Measures

Storm Waters

Surface water runoff from paved and roofed areas will be collected via the site drainage system. The entire site shall be bunded using kerbing to prevent the uncontrolled escape of storm water. Four Class One type oil and grit interceptors or similar will be installed with a 120m³ Storm Water Retention Tank with a monitoring well so that contaminates and or spilled hydrocarbons.

A sluice valve will control discharge of the storm waters to the outfall via the Youghal Town Council sewer network. The monitoring well will ensure that discharges are within acceptable emission limit values, again these limits will be set by the EPA in agreement with Youghal Town Council. In the event on an incident with potential for contamination of surface waters (e.g. spillage), the sluice valve will close preventing any discharge from the site.

Foul Waters

These waters shall be collected in the site foul water system and transported to the waste water treatment plant for treatment.

Process Waters

The only process water on-site shall be the final effluent from the waste water treatment plant. This effluent shall be monitored so that it is within the emission limit values set by the EPA. Monitoring shall be carried out at a frequency, to be specified by the EPA. The impact of the plant output on the river flow rate is negligible and therefore does not require mitigation.

Fire Waters

In the event of an incident, for example a fire, the potential contaminated waters will be collected through the storm water drainage system with the entire site acting as a large bunded area using the raised kerbing as an extra backup measure. Fire water will be stored in the Firewater Retention Tank. Any spent fire water will then be treated at the waste water treatment plant.

Bunds

There are a number of bunded areas at the proposed development and include the following:

- Fuel storage area,
- Quarantine area,
- Standby generator pad.

All these bunds will be tested for integrity and a discharge valve will be installed to pump out any contaminated water and hydrocarbons to be treated at an EPA approved facility.

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NOISE

Existing Environment

The primary noise sources in the area are mobile vehicles including haulage vehicles and private cars utilising the civic amenity site and NCT centre. The noise environment would be typical for locations situated near major transport routes.

Overall, the average daytime Leq of 54dB(A) measured onsite was lower than the average daytime Leq of 66dB(A) measured at the nearest noise sensitive resident. This is due to traffic noise and the close proximity of the nearest noise sensitive location to the R634. During night time hours the noise levels are reduced, however levels are still quite elevated with an average Leq of 50dB(A) due to traffic noise.

Impact Assessment and Mitigation Measures

Impact during the Construction Phase

The nearest dwelling (noise sensitive location) is over 180m from the site boundary. Noise levels at this distance were calculated from the sound power data assuming the plant would be operating at the nearest point of the boundary to the sensitive receivers. Construction equipment will not generally operate at the boundary of the site.

Combined Impact of the Operation

The noise contribution from the facility, at the nearest noise sensitive location can be obtained by summing the individual noise contributions from the above elements. The increase in noise level from the facility at the nearest noise sensitive location is 31 dB(A) during daytime and 22dB(A) during night time.

The overall noise level, at the nearest noise sensitive location, can be predicted (BS 4142 1997 Method of Rating Industrial Noise affecting Mixed Residential and Industrial Areas) using the noise level contribution from the facility and the measured background noise levels at the nearest dwelling house.

The noise generated by the proposed development at the nearest dwelling house is predicted to be more than 10dBA below the existing background noise levels; therefore there will not be any significant impact at the nearest noise sensitive location.

VIBRATION

Some construction activities such as driving piles can give rise to considerable levels of ground vibration. However, at the proposed development flight augured piles will be used instead of driven piles. Therefore no adverse vibration effects are anticipated.

Plant and equipment is not expected to give rise to any vibration during the operations phase. Therefore it is not expected that vibration during the operations phase will impact on any adjacent building.

CLIMATE

Existing Environment

The long term weather patterns in this location reflect regional weather conditions of the South-Munster Area which is dominated by low-fronts from the west and south west during winter. During the summer more settled conditions prevail. For localised weather conditions meteorological measurements from nearby weather stations were consulted.

Impact Assessment and Mitigation Measures

No impacts are anticipated. Therefore, no mitigation measures are required.

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FLORA AND FAUNA

Existing Environment

There are no National Heritage Areas (NHAs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs), wildfowl sanctuaries, Ramsar sites, Nature reserves or National Parks within the site boundary.

The site is located adjacent to the Blackwater River cSAC no. 002170, Blackwater River and Estuary pNHA no. 000072, Blackwater Estuary SPA no. 4028, and within 300m of a Ramsar site (Blackwater Estuary, Ireland 7IE028).

The site is located in Landscape Character Area no. 35 Youghal Bay (Composite Mosaic and Marsh Estuary), as mapped in the 2003 Cork County Development Plan. The landscape character is Type 2: Broad Bay Coast.

No tracks, traces or other signs of mammalian activity were observed at the site. Species that are likely to inhabit the site include the Brown Rat, Pygmy Shrew and Field Mouse. It is probable that foxes and rabbits (*Oryctolagus cuniculus*) also occur in the area. The site does not provide potential roosts for bat species. The common frog (*Rana temporaria*) was not observed at the site. Due to current vehicular movements at the site, it is unlikely that frogs reside here. During the site survey transect, a total of 44 birds of 14 species were recorded. 27 birds of 8 species were observed within the site itself. A further 17 birds of 10 species were observed within the vegetated site boundaries.

Finally consultation with the local National Parks and Wildlife Ranger corroborates that the site is not of great importance for birds, in regard to that of the surrounding habitats (P. Smiddy, pers comm). It is therefore considered unlikely that the loss of habitat within the proposed development site will have a negative impact on bird populations or habitat diversity of the surrounding areas.

Impacts on Flora and Fauna

The entire site will be cleared of existing vegetation. This will lead to the permanent and complete loss of existing habitats at the site. The habitats present at the site are not considered to be of high ecological value and are not listed as priority habitats in the Habitats Directive.

The main potential impacts for mammals occurring at the site will be the loss and fragmentation of habitat, and disturbance. Currently the habitats may provide feeding and residence opportunities for mammals (although no evidence of mammal setts or burrows was

found). Loss of habitat will permanently remove these opportunities. Increased human activity at the site will deter mammals from using the site.

These impacts are not considered to be a significant negative impact because they will be localised and minimal. It is predicted that the local animal species will adapt to the change in their local environment, through either avoidance of the development site or restriction of their usage of the site. Mammals can move to another location which has similar habitat types.

Mitigation

It is recommended that specified areas be used to dispose of excavated material and that all waste and unused building materials be removed from site. Vegetation from the surface should be stockpiled and used to resurface bare ground along road edges and disturbed areas.

Any landscaping programme for the developed site should use native tree and shrub species, both to maintain the ecological integrity of site within the wider environment and to provide potential habitat for local fauna.

While the existing habitat within the site itself is considered of low conservation value, the developer should take into account where possible, the Wildlife (Amendment) Act 2000 Section 46, amending Section 40 of the Wildlife Act, 1976 with regards to the timing of vegetation removal and habitat destruction.

To reconcile for the destruction and removal of existing habitats, it is recommended that the landscape design includes hedgerow planting and management that involve the use of native species that are in line with those species present in the surrounding area. Hedgerow planting will also act as a buffer zone, (e.g. to reduce disturbance) between the development and the surrounding areas.

An aquatic survey was carried out to determine what if any impact the discharge to outfall would have – no sensitive species were recorded during this survey and discharge will not adversely impact on the aquatic receiving environment.

CULTURAL HERITAGE

Existing Environment

The study of the three editions of OS maps did not reveal any features of archaeological significance on or near the site of the proposed development. There are no references to any features of archaeological significance that might be affected by the proposed development. The field inspection covered the entire site and did not reveal any features of archaeological potential.

Impacts and Mitigation Measures

The combined desktop, literary and field inspection did not reveal any previously unrecorded features of archaeological significance on or near the site of the proposed development.

It is recommended that a licensed and experienced archaeologist monitor the removal of all topsoil prior to construction of this development. The archaeologist will examine all deposits revealed during the course of excavations and, where possible, determine a date and context for any archaeological features that may emerge.

The developer must report the discovery of any archaeological features to DOEHLG and facilitate and fund both their investigation and recording.

Any artefacts uncovered during the course of excavation must be reported to the Duty Officer of the National Museum of Ireland.

LANDSCAPE

Existing Environment

The area of the proposed development is zoned Industrial/Enterprise in the Cork County Development Plan 2003.

The overall visual impression of the site is a brown field site with a complex of built anthropogenic structures such as high metal fencing and posts, telephone and electricity poles, Youghal Landfill and Civic Amenity Centre, the NCT Centre, Foxhole IDA Industrial Estate and Foxhole Business Park incorporating Millennium Court office buildings.

The site occupies a very low-lying elevation, as it is enclosed to a significant extent by the confluence of rivers that surrounds it. Elevations changes across the site are negligible in comparison to the surrounding landscape. The site can be seen from the N25 scenic particularly in Waterford section directly opposite the site. However the Youghal Landfill and Civic Amenity Centre is the focal point of this fragmented landscape.

Site Aspect is south facing with the minimal sloping degree of 0-1. Therefore, site exposure is greatest on the eastern and southern side of the site, across the Blackwater Estuary and Youghal Bay.

The Cork County Development Plan 2003, supports the Landcover classification as the site is located in an area zoned for industrial and enterprise development.

Agricultural practices such as tillage, grasslands and forestry dominate the landuse patterns of the hills.

Impact Assessment and Mitigation Measures

The proposed development will form a linear block between the NCT Centre and the Youghal Landfill and Civic Amenity reducing the visual impact of the existing developments.

A Landscape Masterplan and detailed planting specifications for the proposed site was prepared and the proposed planting is based on the recommendations of Cork Rural Design Guide published by Cork County Council.

Much of the roadways in the vicinity of the site (i.e. N25 and R634) are well screened by the presence of hedgerows. Therefore the proposed development is not significantly visible from roads. Intermittent views may occur. These will be further obscured by the proposed landscaping measures at the site.

The R634 from Youghal Town to the N25 was also assessed to determine potential visibility. The commercial/industrial developments at Foxhole are clearly visible from this location. The absence of any screening on the northern side of these structures renders them highly visible. However, screening of the proposed development from these buildings and from the tree planting detailed in the Landscape Development Report will reduce the visual impact of the development significantly.

The sky is predominately cloudy and grey for the majority of the yearly climatic conditions therefore it is recommended that the buildings in the proposed site will have a 'goose-wing grey' colour to harmonise with the natural background sky.

Finally, the proposed development will be on a scale with existing structures in the Foxhole area. It will form a linear block between the NCT Centre and the Youghal Landfill and Civic Amenity reducing the visual impact of the existing developments.

TRAFFIC

Existing Environment

Traffic data collected as part of the Traffic section of the Environmental Impact Statement (EIS) prepared by Fehily Timoney & Company on behalf of Cork County Council in May 2003 for the *Intensification of Use of Youghal Landfill* shows an annual average daily traffic (AADT) volume of approximately 5,496 vehicles per day of which 22% were heavy goods vehicles (HGV's). This equates to the removal of 48% of the total predicted 2003 traffic (i.e. using a growth factor of 3.5% per annum) on this portion of the R634 if the Youghal Bypass had not been built.

It can be assumed that most traffic accessing this road are visiting Youghal Landfill and Civic Amenity Site as the NCT Centre generates low volumes, likewise Youghal Shipping uses the lands adjacent to the landfill rarely.

Impact Assessment and Mitigation Measures

The proposed development will increase the growthed AADT 2004 figure of 5,688 by an AADT of 42.12 in terms of HGV's, the number of car movements is negligible. Therefore the proposed development generated traffic will not have any significant impact on the surrounding road network. In fact it can be stated that the proposed facility at Foxhole, Youghal will not result in any significant impact on traffic flows along the adjoining roads due to the opening of the N25, Youghal Bypass.

The geometry of the T12 does not facilitate two-way movement for HGV's, though it did historically. However this was removed by Cork County Council due to illegal camping activities and fly tipping. Cork Council created two lay-bys. As part of the planning conditions granted for the *Intensification of Use of Youghal Landfill* by An Bord Pleanala Cork County Council is required to upgrade the road to facilitate further two-way movement of HGV's.

Construction Phase

As the impact is considered negligible during the construction phase, no mitigation measures are required other than good construction practice and site housekeeping.

Operations Phase

The primary mitigation measure will be the upgrade of the T12 connecting the site to the R634, Cork County Council will have to complete these works by 2006 as part of the planning conditions granted for the *Intensification of Use of Youghal Landfill* by An Bord Pleanala.

It is also proposed to introduce additional mitigation measures, which will include the following:

- Staggering of deliveries/collections to/from the proposed facility, this limits the number of HGV's on the surrounding road network, at any one time,
- Instructing all vehicles travelling to the site from outside Youghal town will access the site off the N25 Youghal Bypass,
- Segregated Service and Vehicular access in the interest of safety,
- Implementing a traffic management plan to prevent congestion and queuing in the local environs.

Sustainable Modes of Transport

Pedestrian and cycle modes are high in the pyramid of sustainability and will be accommodated fully at the proposed development, by means of bicycle racks and a pedestrian entrance into the facility. The bicycle racks will be located in a well lit, secure area near the Administration building.

Car Parking

There is sufficient parking for both staff and visitors. This is also conforms to the Car Parking Standards in Appendix IV of the Cork County Development Plan 1996. This will ensure that over spill onto the public road occurs.

HUMAN BEINGS

Existing Environment

The 2002 Census contains the latest available employment statistics in the Town Council Area. The single largest employment sector in Youghal is the Manufacturing Industries. This sector has most likely decreased greatly since the census was compiled due to the closures of a number of factories.

Impact Assessment and Mitigation Measures

The main areas of concern with respect to the potential effects of the development on the human environment are air quality impact, noise impact, ecological impact, visual impact traffic impact and impacts associated with decommissioning of the facility. These impacts are presented under their various headings above. Other potential impacts include: health and safety impacts to employees and locals, potential impacts on tourism and socio-economic impacts.

Health and Safety considerations for employees were given merit at the design stage of this facility. These considerations include ventilation in the picking station at the Waste Recovery and Transfer building. Part of the design and scoping process for selection of the indirect method of sludge drying was the safety and environmental controls that could be put in place as preventative control measures rather than mitigation measures.

Operations during the lifespan of the facility will be conducted inline with the relevant legislation and implementation of the site Health and Safety Plan and will be overseen by the Health and Safety Manager.

Hazardous materials will not be stored on-site. Only diesel oil and waste will be stored on site. Both of which will be stored securely.

MATERIAL ASSETS

Existing Environment

The site of the proposed development is located within commutable distance to a number of significant towns in the Cork County region. At the time of the last census (2002), unemployment was running at low levels in Youghal. However, by February 2003, two of the town's major employers had announced closures. Therefore, there is most likely a good supply of labour presently available in Youghal. In terms of transportation, Youghal is well serviced by roads. The N25 National Secondary Route from Cork to Waterford serves the town. This route is also a designated Euroroute E30; thus it is part of the officially designated European network of roads, which represent the core of the transport system throughout Europe.

Decommissioning Plan

A Decommissioning Plan has been prepared to ensure that the proposed facility is shut down and decommissioned in a safe and environmentally sound manner.

Impact Assessment and Mitigation Measures

Economic Impact

It is estimated that the construction phase of the proposed development will bring up to 30 jobs to Youghal. Throughout the operational phase, a minimum of 17 persons will be employed at the facility. Spin off industries associated with the proposed development may also produce jobs in the form of cleaning services, catering providers, etc.

Existing Infrastructure

It is proposed that the site will have its own waste water treatment plant. Therefore, there are no impacts expected to the existing sewage infrastructure. There is no negative impact expected to other infrastructure in the area, which has been planned with industrial development in mind.

Transport Infrastructure

The proposed development is located adjacent to the Youghal by-pass. Therefore, there are no negative economic impacts anticipated for the town of Youghal related to vehicular movements to and from the site. This represents a positive impact for the area.

Proximity to the existing landfill will ensure that any waste contaminants that may have to be disposed of can be done in close proximity to the site without generating excessive traffic on the roads.

Property Values

The area of the proposed development has been zoned by the planning authority as Industrial/Enterprise. Also, there is little evidence to suggest that adjacency to a well managed waste management facility negatively impacts on house prices.

Tourism

The Cork County Development Plan 2003 states as an aim the desire, *to promote development in Youghal with regard to its coastal setting and its special recreational, heritage and marine tourism functions*. With this in mind, the Department of Arts, Sport and Tourism (DAST) was consulted during the Public Consultation Stage, along with other relevant parties.

A landscape assessment was conducted to investigate the impact of the proposed development on views and prospects in the Youghal area. This assessment concludes that the visual impact of the proposed development on the surrounding environment will be minor to negligible. This is due to the fact that the site will be well screened by trees and other developments in its vicinity such as the Millennium Court office buildings at Foxhole Business Park, the NCT centre and Youghal Landfill. The site will therefore be in harmony with the other buildings in this industrial and commercial zoned area.

Natural Resources

The facility of the proposed development will reduce the volume of waste requiring disposal in the Cork Area. The Waste Recovery/Transfer Facility will promote recovery and recycling. The Sludge Drying Facility will reduce sludge volumes currently being exported and landfilled.

These measures represent a positive impact on natural resources and are in keeping with sustainable development practices.

INTERACTION OF THE FOREGOING

Environmental Impact Assessment (S.I No. 349 of 1989; S.I. No. 93 of 1999) states that not only are the impacts on the individual elements of the environment to be considered, but so too are the interactions between those elements.

Table 1.1 illustrates the interaction of impacts assessed for this project.

	Geology	Air	Water	Noise	Climate	Flora & Fauna	Cultural Heritage	Land-scape	Traffic	Human Beings	Material Assets
Geology			✓			✓		✓			
Air				✓	✓				✓	✓	
Water					✓	✓					
Noise									✓	✓	
Climate		✓	✓								
Flora & Fauna	✓		✓								
Cultural Heritage								✓		✓	✓
Land-scape	✓						✓			✓	✓
Traffic		✓								✓	✓
Human Beings		✓		✓							
Material Assets									✓	✓	

Table 1.1 Impact Interaction Matrix

Finally this EIS provides the community, government, non-government bodies and other interested parties with information regarding the existing environment, potential impacts associated with the proposed development during the construction and operation phases, and any mitigation measures required to ameliorate these impacts.