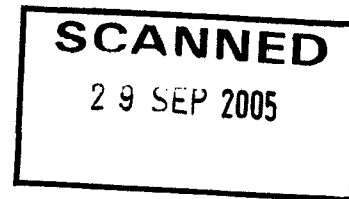




CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES

Our Ref.: Q2004/238/01/Ltr011/FM

Licensing Unit
Office of Licensing and Guidance
Environmental Protection Agency
Headquarters
P.O. Box 3000
Johnstown Castle Estate
Co. Wexford



15 July 2005

RE: Response to Article 12 compliance requirements for review of
Waste Licence Registration No. 145-2

Dear Sirs

Fehily Timoney & Company has been retained by Atlas Environmental Ireland Ltd to prepare a waste licence review for the above referenced licence in response to a letter issued by the EPA on 14th January, 2005.

With regard to the above document, please find herein, the following:

- One original, three hard copies and one digital copy of the Article 12 Compliance Requirements
- One original, three hard copies and one digital copy of the revised non-technical summary.
- One original and two copies of the transfer of a licence application form and supporting attachments
- A cheque for €5,000 for the processing of the application.

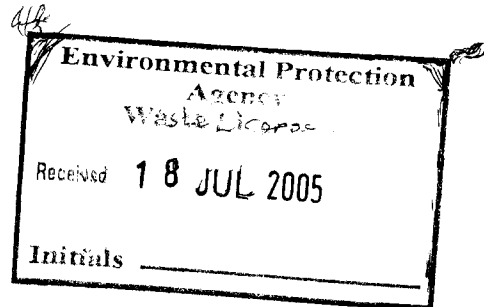
Please note that copies of drawings (drafted by Kavanagh Ryan & Associates) submitted with the planning application are enclosed.

Please contact the undersigned if you have further queries.

Yours faithfully

Jerome O'Sullivan

Jerome O'Sullivan
for and on behalf of **Fehily Timoney & Company**



Encl.

CORE HOUSE POULADUFF ROAD CORK IRELAND
TEL.: +353 21 4964133 FAX.: +353 21 4964464 E.MAIL: info@ftco.ie Web Site: www.fehilytimoney.ie

Directors: E. Timoney BE CEEng FIEI MICE MCIWEM RConsEI D. O'Sullivan BE CEEng MIEI RConsEI G. O'Sullivan BE CEEng FIEI RConsEI W. Quirke Dip Ag
Company Secretary: A. Keohane Associates: D. Egan BSc MSc O. Tierney BE CEEng MIStructE C. Mahony BE CEEng MEng Sc MIEI

Registered in Dublin, Ireland, Fehily Timoney & Co. Ltd. Number 180497 Registered Office: Core House, Pouladuff Road, Cork. VAT Registration Number: IE 6580497 D



ARTICLE 12 COMPLIANCE REQUIREMENTS
FOR
THE REVIEW OF WASTE LICENCE NUMBER 145-1

ORIGINAL

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Environmental Protection Agency	
Waste Management Division	
Received	18 JUL 2005
Initials	_____

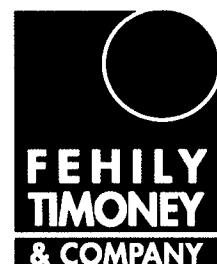
Prepared for:

Gleneden Trading Ltd
Raffeen Industrial Estate
Raffeen
Monkstown
Co. Cork

Prepared by:


Fehily Timoney & Company
Core House
Pouladuff Road
Cork

July 2005



ARTICLE 12 COMPLIANCE REQUIREMENTS FOR THE REVIEW OF WASTE LICENCE NUMBER 145-1

User is Responsible for Checking The Revision Status Of This Document

Rev. Nr.	Description of Changes	Prepared by:	Checked by:	Approved by:	Date:
C	Issue to Client	JO'S	DOS		14/07/05

Client: Atlas Environmental Ireland

Keywords: Waste oils, storage, transfer station, tank farm and bunding

Abstract: In November 2004 Fehilly Timoney & Company (FTC), on behalf of our client, submitted a waste licence review application to the Environmental Protection Agency (the Agency) to gain approval to broaden the waste categories/types and total tonnages that can be accepted at the Raffeen Facility. The Agency issued a notice under Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations requesting further information and clarification on a number of issues as outlined in correspondence dated 14th January 2005. This document, which is being submitted to the Agency, comprises our client's response to the Article 12 requirements.

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LIST OF ATTACHMENTS

Attachment B	Planning Application & Report
Attachment D	Infrastructure
Attachment F	Control & Monitoring
Attachment J	Accident Prevention and Emergency Response

LIST OF APPENDICES

Appendix 1	EPA Letter (14 th January, 2005)
Appendix 2	Internal layout of Gleneden Site at Raffeen Industrial Estate Drawing No. 2004-238-01 – Rev B 1: 2500 Licensable Area Map (2004-238-01-002 Rev B) Drawing No. 2004-238-01-002 - Rev B

PREAMBLE

This document is a formal response to an Article 14 letter issued in January 2005 by the Environmental Protection Agency seeking further information in respect to an application made for the review of Waste Licence 145-1.

The main body of this document addresses each specific question posed in the Agency's letter.

The text of Agency's request for specific information is typed in italics at the heading of each response.

Additional supportive and more information is given in attachments. These attachments follow the same order and naming system as the original waste licence review application submitted to the Agency in November 2004.

A copy of Article 14 letter issued by the Agency in January 2005 and two revised drawings are submitted in Appendix 1 and 2 respectively.

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1. INTRODUCTION

A waste licence application was submitted by Gleneden Trading Ltd. on 16th November 2004 to the Environmental Protection Agency (the Agency) for changes in the operation of a hazardous waste transfer station at Raffeen Industrial Estate, Monkstown, County Cork.

A notice was issued by the Agency on the 14th January 2005 in accordance with Article 14(2) (b) (ii) of the Waste Management (Licensing) Regulations, (S.I. No. 395 of 2004) requesting further information with respect to Article 12 of the Regulations. A copy of this letter is given in Appendix 1. A meeting was then held at the facility with Ms. Niamh O'Donoghue (EPA) on the 14th of March 2005 to discuss the response as drafted. This submission aims to take into account all the issues raised at the meeting in addition to those issues highlighted in the Article 14 notice.

This document comprises the appropriate Article 12 responses by the applicant.

The text of the Agency's request for additional information is typed in italics at the heading of each response. Some additional information relating to revisions of licensed operations have also been included under the appropriate headings.

In addition the applicant wishes to draw to the attention of the Agency some proposed changes to the internal lay-out of the existing building as was originally described to the Agency in the November 16th application. These include:

1 Atlas Environmental Ireland Ltd, the site operator, wishes to extend the existing building as per the submitted planning application (see Attachment B). The extension would help facilitate the relocation of their sister company Envirotech from their current location in Ballycureen Industrial Estate. The activities Envirotech engage in are not scheduled waste activities; they include the warehousing of wastewater treatment chemicals and associated materials in addition to the blending of specific formulations for customers. The waste activities and non-waste activities would be kept physically distinct from each other. The materials handled in the non-licensable activities would consist largely of non-hazardous materials including:

- Polyelectrolytes or coagulants
- Nutrient feeds (aqueous solutions of various nutrients, minerals and trace elements)
- Foam control chemicals (aqueous solutions or emulsions of vegetable oil, polyols, fatty acids and water)
- Odour Control Chemicals i.e. masking sequencing agents
- Activated carbon i.e. for odour, colour, taste removal;
- Water binding agents e.g. lime, calcium chlorides;
- Filter Aids – diatomaceous earth;
- Packaging materials e.g. IBCs, drums, containers etc.;
- Dosing pumps, and other equipment relating to waste water treatment.

The majority of activities involve the warehousing of the above materials in both packaged and bulk form. Packaged materials are stored in block, or on pallet racks, segregated according to their nature and banded appropriately (25% of liquid volume). In addition it is proposed to install five banded storage tanks for bulk storage of products (e.g. aluminium chloride, ferric sulphate, phosphoric acid and caustic solution);

Three blending tanks (agitated ~10m³ each) serve to blend together specific formulations of the treatment products for customers' specific requirements. Individual products are pumped into the blend tanks from either containers or from the bulk tanks. The mix is blended and then dispensed into drums or IBCs for storage or delivery to the customer.

It is important that the non-licensable activities do not attract conditions that would lead to a competitive disadvantage in this sector. While conditions relating to secondary containment are considered valid and appropriate, generic conditions relating to the non-licensable activities should be carefully considered by the Agency so as not to disadvantage unnecessarily these activities.

- 2 The seven dedicated bunded storage bays for the storage of pre-packaged (drums and other containers) waste shown originally in drawing number 2004-238-01-001 Rev A is now proposed to be reduced to three dedicated storage bays. The proposed change in the internal lay-out of the building is now shown in Appendix 2 (drawing number 2004-238-01-001 Rev B). The quarantine area has also been downsized and this is also shown in the new internal lay-out drawing.
- 3 The internal drawing (drawing number 2004-238-01-001 Rev A) originally submitted with the review application shows the three bulk tanks making up the tank farm and a stand-alone spillage retention tank (dry under normal operational conditions) being located within the main building. The applicant now wishes to locate the three waste oil storage tanks adjacent but outside the main building. Drawing numbers 2004-238-01-002 Rev B ('proposed licence boundary') and 2004-238-01-001 Rev B ('Floor plan of Gleneden premises at Raffeen Industrial Estate') illustrate these new proposals. The requirement for a spillage retention tank is not considered necessary as the bunding capacity now provided is adequate to present 110% or 25% capacity whichever is the greater.
- 4 As discussed with the Agency it is now not proposed to reduce the licensed area of the site from the existing area licensed. Thus the non-waste activities will be located within the licensed area. (The licensable area is outlined in red in Drawing No. 2004-238-01-002 Rev B).
- 5 In Attachment D.1(f) of the original review application submission the applicant stated that there were no plans to provide a laboratory facility on-site. The applicant now wishes to locate a laboratory on the first floor of the auxiliary building attached to the main warehouse building. The size and location of this laboratory are shown in Drawing No. 2004-238-01-001 Rev B (Internal layout of Gleneden Site at Raffeen Industrial estate). This laboratory will initially be to facilitate the non-waste activities although some waste related analysis may be carried out in the future (see revision to attachment D.1 (f) below). The laboratory operation is required to support the production operations and provides effluent analysis services (non-licensable activities).
- 6 All existing plant (i.e. the heat disinfection unit) has been safely decommissioned and packed and will be sent for off site storage.
- 7 The following table details revisions to original drawings

Drawing title	Original Reference	Revised reference
Internal Layout of Gleneden Site at Raffeen Industrial Estate	2004-238-01-001 Rev A	2004-238-01-001 Rev B
1:2500 Site Boundary Map	2004-238-01-002 Rev A	2004-238-01-002 Rev B

2. ARTICLE 12 COMPLIANCE REQUIREMENTS

The text of the Agency's request (as per the Article 14 Notice) for additional information is typed in italics as the heading of each response.

B3 Planning Authority

1. *Submit a copy of the planning application currently being processed by the Local Authority, include the Local Authority file reference number.*

A copy of the planning application currently being processed by the planning authority is attached as Attachment B. The planning file reference number is 05/1564.

2. Submit a letter from the Planning authority that an EIS was not required for the increase in waste quantities proposed for the site.

An EIS is not considered to be required for the application as the facility is primarily not a waste disposal installation, rather a waste recovery operation. All waste oils transferred through the facility (c.4,000 tons per annum) will be sent for recovery to the Atlas facility in Portlaoise (unless unsuitable). In addition other wastes including waste oil filters, used batteries, fluorescent tubes, waste cooking oil, and photographic wastes are also to be sent off site for recovery.

The site is currently licensed to accept and treat 1,600 tonnes of clinical waste per annum. It is now proposed to accept and bulk-up an extra 5,400 tonnes of waste (mainly waste oils but including used car batteries, used oil filters, fluorescent tubes, cooking oils and other similar wastes as appropriately licensed) per annum. The total waste to be accepted per annum, which Atlas is seeking permission for, will therefore, be 7,000 tonnes. The total daily waste to be accepted will not exceed 100 tonnes per day if it is envisaged that the daily waste will on average be 25 tonnes.

It does not require the preparation of an EIS. Under the provisions of Directive 74/442/EEC as amended by 91/156/EEC "recovery" means any of the operations provided for in Annex IIB of the Directive. This includes recycling and re-use of oil and other organic/inorganic materials or its exchange or storage for submission to any of the operations listed in this Annex. No changes are proposed to the scope of physico-chemical treatment process.

As the waste activity proposed is largely a transfer operation there are no process effluents to be discharged or any other significant emission that would necessitate such assessment. The proposed waste activity is plainly small scale and the wastes involved are of relatively low risk and well controlled.

The above reasoning has been submitted as part of the planning application to the Planning Authority. No decision has yet been received regarding the application.

3. Reassess table B7.1 of the application. Class 3.11 of the third schedule will be required for the blending or mixture of waste.

¶ This class of activity has now been included to facilitate the bulking up of hydrocarbon wastes for disposal. This would include interceptor liquids/sludges stored in the bulk tanks for off site disposal.

Table B.7.1 Third and Fourth Schedules of the Waste Management Acts 1996 to 2003

Waste Management Acts 1996 to 2003			
THIRD SCHEDULE		FOURTH SCHEDULE	
Waste Disposal Activities	Y/N	Waste Recovery Activities	Y/N
1. Deposit on, in or under land (including landfill).		1. Solvent reclamation or regeneration.	
2. Land treatment, including biodegradation of liquid or sludge discards in soils.		2. Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes).	
3. Deep injection of the soil, including injection of pumpable discards into wells, salt domes or naturally occurring repositories.		3. Recycling or reclamation of metals and metal compounds.	
4. Surface impoundment, including placement of liquid or sludge discards into pits, ponds or lagoons.		4. Recycling or reclamation of other inorganic materials.	
5. Specially engineered landfill, including placement into lined discrete cells which are capped and isolated from one another and the environment.		5. Regeneration of acids or bases.	
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.		6. Recovery of components used for pollution abatement.	
7. Physico-chemical 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 8 to 10 of this Schedule (including evaporation, drying and calcination).	Y	7. Recovery of components from catalysts.	
8. Incineration on land or at sea.		8. Oil re-refining or other re-uses of oil.	
9. Permanent storage, including emplacement of containers in a mine.		9. Use of any waste principally as a fuel or other means to generate energy.	
10. Release of waste into a water body (including a seabed insertion).		10. The treatment of any waste on land with a consequential benefit for an agricultural activity or ecological system.	
11. Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.	Y	11. Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.	
12. Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.	Y	12. Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule.	
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.	Y	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.	P

C 1. Site management and Staff details

As part of the recent group reorganization David Burke has now been appointed as the HSE Manager for the Cork facility. In the original application Caroline Holdwright was listed in this position however she now works in a commercial role. Although there are several trading names (Atlas, Envirotech and Shannon Environmental Services) these operate under a single company (Atlas Environmental Ireland Limited) with a single management structure.

Name	Position	Duties and Responsibilities	Experience /Qualifications
Declan Ryan	Managing Director	Responsibility for the development of DCC's Environmental division and overall management of Atlas Environmental Ireland's activities.	Managing Director of Atlas Environmental Over 15 years of engineering experience within oil industry; Over 5 years experience MD of several waste management companies (Atlas Ireland, Atlas Northern Ireland, Shannon Environmental Services).
Gareth Kelly	HSE Director	Environmental, Health and Safety policy and resources for the Environmental Division; Insurance Planning & Compliance Company Secretary	BA (mod) Science MSc Environmental Management (Industrial Pollution Control) Certificate in Health & Safety; 4 years Environmental Consultancy; 5 years management experience in Hazardous Waste Industry;
David Burke	Environmental, Health & Safety Manager	General management and co-ordination of Health, Safety and Environmental issues for the Shannon & Cork Sites	BSc. Science; MSc Environmental resource Management; 4 years Industrial experience; 3 years Environmental Consultancy;
Mathew Keogh	Operations Director	Responsible for management of Group Operations, Production and Engineering.	Diploma in Motor and Diesel Engineering. Diploma in Electrical Engineering. 20 years experience in Waste Management.
Martin Mitchell	Production & Quality Manager	Responsible for all day to day operations within the Cork facility including Environment, Health & Safety;	Certificate in Industrial Science; Diploma in Food & Technology 25 years experience in Chemical, Food and Wastewater industries as production manager.

D1. Infrastructure

1. *Provide detailed specifications on site security including perimeter fencing and gates.*

A standard palisade fence will surround the boundary of the site. The waste transfer building will be locked securely when the site is not in operation. An intruder alarm will be installed and connected to a security firm who will monitor the system 24 hours a day, seven days a week.

2. *Provide details of the plant required to provide a paper and cardboard shredding and bailing facility on site and provide information on their location within the facility.*

The site operator, Atlas, does not propose to offer a collection or disposal service for paper and cardboard waste to its customers. Therefore no paper and cardboard waste will be accepted on site. The only paper and cardboard waste on site will be that generated internally by the site office in the course of performing administration duties (i.e. photocopier boxes used to hold paper etc). This waste will be bailed together by a small unit and sent off site for recycling.

3. *Provide details of the proposed location of the existing plant as listed in Attachment D.1(d) and how this will be accommodated within the confines of the capacity of the facility as indicated in drawing no. 2004-238-01-001*

The plant for the sterilisation of healthcare waste will be replaced by a smaller more compact unit with a proposed layout shown in drawing no. 2004-238-01-001 Rev B. The new unit works in a very similar manner to the current unit (see attachment D2 of original application) differing slightly in that it uses saturated steam to carry out sterilisation and facilitating temperatures of up to 150° C. No hot oil is required with the steam providing the indirect heat to the waste and effecting sterilisation. Attachment D(i)(d) has been revised slightly to reflect this. Attachment D2 details the plant operation in respect of the sterilisation plant. The existing HDU plant has been safely decommissioned and packed and will be moved off site for storage.

The entire working area of the HSU will be bunded with a dwarf wall (150mm high) around the perimeter of the building.

4. *Provide detailed specifications for all waste bulking, mixing, blending, storage and spill retention tanks on site including volumes, venting systems and bunding arrangements.*

There will be three above ground storage tanks on site. These will be vertical steel welded non-refrigerated mild steel storage tanks constructed to the internationally recognised standard BS 2654. Each tank will have a storage capacity of 54 m³. The three tanks will be sited adjacent and to the rear of the main (existing) building. A canopy roof will be fixed above the tanks to prevent rainwater entering the bunded area surrounding the tank farm. The walls of the building housing the tank farm will be largely open to allow for natural ventilation. The tanks will be painted externally to prevent corrosion. Internally there is no need for corrosion protection as the oil inhibits any significant corrosion. Bulk storage tanks will be light coloured to reduce the solar absorbency of the tanks. These measures ensure compliance with BAT.

The bulk tanks will solely be used for the bulking up of smaller volumes of waste oil delivered to the site. There will be no blending or mixing of different chemical solvents or other dissimilar solvents on site. The types of liquid waste to be stored in these tanks includes : waste hydraulic oils, waste engine, gear and lubricating oils, waste insulating and heat transmission oils, bilge oils, liquid fuel oil wastes and waste from transport tank or storage tank cleaning.

The tanks will be fitted with electronic level gauges and a separate high-high level alarm with an automated cut off through a SCADA system to prevent overfills. As such the level gauge acts as the initial high level alarm while the separate hi-hi level alarm acts as a back up device. The

overflow protection will be tested and calibrated on an annual basis to ensure continued operation. The proposal is to fit swan neck vents open to the atmosphere.

The bulk storage vessels will be located on an impervious surface (reinforced concrete) that is resistant to material being stored, with sealed construction joints within a bunded area with a capacity of 110% of the largest vessel. All pipes, hoses and connections for the bulk tanks will be resistant to the substances being stored. The 10% margin will act as a safeguard against incidents such as:

- Loss of total tank contents, for example due to vandalism or an accident
- Sudden tank failure or leaks
- Overfilling
- Containment of firefighting foam-water material

All pipes, hoses and connections for the bulk tanks will be resistant to the substances being stored. All such pumps, valves, coupling, delivery nozzles etc associated with the operation of a tank will be located inside the bund. All delivery connections to the bulk storage tanks will be located within the bunded area, and located internally. This tank will also be outside but will be isolated from the tank farm and under normal operation will be dry. Bund walls will be sufficiently accessible to permit inspection and for maintenance to be carried out.

Although outside the direct scope of licensing the bulk storage tanks for products (non-waste activities) will be separately bunded from the waste tanks, and will also incorporate the same safety measures (bunding, over fill prevention etc).

5. *Provide details of the infrastructure, storage location and capacity, which will be provided for the acceptance of contaminated soils, sludges and construction and demolition wastes at the facility ensuring that all proposed waste types indicted in Table H.1.2 is accepted for.*

The operators of the facility propose taking on-site 50 tonnes per annum of drummed contaminated (hazardous) soil and sludge waste material. The development will not cater for loose or bulk soils to be stored at the facility. Instead this contaminated material will consist almost entirely of small quantities of soil and stone that have been contaminated with oily substances. There will be no non-hazardous C&D waste accepted on-site. The bulk of the contaminated soil will be derived from oily liquid spills from small premises/domestic spills in the Cork region. Typically quantities taken in would be one-two drums per customer. This will form part of the comprehensive waste collection service the operator of this facility is intending to offer its main client base, small garages in the Cork Region.

All of this waste will be drummed/package appropriately before it is brought on site. No material will be stored loose. If the waste material and the packaging containing it are deemed satisfactory it will be stored in a dedicated storage area to await off-site transfer to another licensed facility for treatment and safe disposal.

The types of material making up this waste stream have already been listed in Table H.1.2 under the category 'Contaminated Soils'. These include:

- soil and stones with and without dangerous substances (EWC 17 05 03 and EWC 17 05 04 respectively)
- solid wastes from soil remediation containing dangerous substances (EWC 19 13 01), sludges from soil and groundwater remediation containing dangerous substances (EWC 19 13 03 and 19 13 05 respectively)
- bituminous mixtures containing coal tar and other tar product contaminants (EWC 17 03 01, EWC 17 03 02 and EWC 17 03 03 respectively)
- track ballast with and without dangerous substances (EWC 17 05 07 and EWC 17 05 08 respectively), dredging spoil with and without dangerous substances (EWC 17 05 05 and EWC 17 05 06 respectively),
- Aqueous liquid wastes and aqueous concentrates from groundwater remediation containing dangerous substances (EWC 19 13 07).

D.1 (f) Revision

In the initial review submission it was stated that there would be no laboratory facilities at the site however a laboratory is now proposed and will largely serve Envirotech (a separate trading name used by Atlas Environmental). Specific detail of the routine tests to be conducted at this laboratory is given in Attachment D1 (f).

D 2. Additional Information

Further to the meeting between facility management and the Agency on March 14th we can also provide the following additional clarification arising out of the discussions that took place. Detail of duty and standby storage capacities is given in Attachment D2.

E Emissions

1. *Complete Table E.1 (iv) detailing fugitive emissions to atmosphere on site in particular from both the bulking and mixing of waste oil and waste solvent.*

Bulking Operations

There will be no bulking, blending or mixing of solvents with waste oils at the proposed facility. The bulk tanks are only for the bulking of waste oils and other oil based liquids/interceptor liquids.

The tanks will only be used for the storage of waste oils and other low volatility, low vapour pressure and high flash point oily liquids. For example, the vapour pressure of lubricating/hydraulic/cutting oils is generally less than 0.1 kPa (and in some cases an order of magnitude less). For storage tanks with a composite pressure greater or equal to 1.0 kPa BAT calls for the use of pressure vacuum relief valves. However for the waste oils proposed the composite vapour pressure levels are well below this minimum. Swan-neck vents (open to the atmosphere) will be fitted to the storage tanks.

All oily waste containers (IBCs, drums and bulk tanks) will be stored in enclosed containers so fugitive emissions will be minimum. Some fugitive emissions may result from breathing losses from storage tanks and ISO road tankers however these will be minimal. Fugitive emissions may also result from major and minor spills. However all spills will be dealt with immediately and in appropriate manner. Fugitive emissions may also arise from laboratory operations. The main source of emissions from the lab will be via fume cupboard vents.

Laboratory Operations

As with the Ballycurreen laboratory, minor use of solvents is required as reagents for certain Envirotech related tests (e.g. testing for detergents), solvents are handled in one of two fume hoods. One fumehood extracts directly to atmosphere while the second draws air through an in-situ carbon adsorption unit and vents back into the laboratory. The face velocities of the two units are 1.5ms^{-1} and 0.4ms^{-1} , respectively. As such the emissions from the laboratory fume hoods are of relatively minor nature and therefore not considered to be significant. As the laboratory handles a variety of different materials it is not practical to give any relevant values for the type and volume of emissions as required in Table EI (iv) of the Waste Licence Application Form.

Healthcare Processing

The current license allows for the temperature monitoring locations for the inlet, mid point and exit point of the holoflite to be agreed with the Agency. The Erdwich unit has three temperature probes located at the top middle and bottom of the sterilisation vessel. It is requested that this condition continues to allow for the exact location of these to be agreed on installation. EP1 will continue to be located as per the existing licensed emission point. The air extraction has been increased as detailed in Table EI (iii) however the mass emissions are not to be increased from those currently permitted.

2. *Emissions from the storage of contaminated soils must be addressed in particular dust and leachate.*

The emissions from the storage of contaminated soil waste are considered to be negligible as all such waste will be stored in sealed drums/IBCs indoors and in locally and remotely bunded locations. Dust emissions are not considered to be a problem as these drums will be left sealed for the entire duration that they are in storage. All storage facilities are enclosed within the building.

TABLE E.1 (ii) MAIN EMISSIONS TO ATMOSPHERE (1 Page for each emission point)

Emission Point Ref. N ^o :	EP1
Source of Emission:	Process Flue Shaft
Location :	Roof of Main building
Grid Ref. (12 digit, 6E,6N):	174892E 064567N
Vent Details	
Diameter:	140mm
Height above Ground(m):	9.5m
Date of commencement:	On commissioning of new plant

Characteristics of Emission:

(i) Volume to be emitted:			
Average/day	11,000m ³ /d	Maximum/day	22,200m ³ /d
Maximum rate/hour	1850m ³ /h	Min efflux velocity	15m.sec ⁻¹
(ii) Other factors			
Temperature	30°C(max)	15 °C(min)	25°C(avg)
For Combustion Sources:			
Volume terms expressed as :	<input type="checkbox"/> wet.	<input type="checkbox"/> dry.	_____ %O ₂

(iii) Period or periods during which emissions are made, or are to be made, including daily or seasonal variations (*start-up /shutdown to be included*):

Periods of Emission (avg)	_____ 60 _____ min/hr _____ 12 _____ hr/day _____ day/yr
---------------------------	--

TABLE E.1(iii): MAIN EMISSIONS TO ATMOSPHERE

Chemical characteristics of the emission

(1 table per emission point)

Emission Point Reference Number: EP 1

Parameter	Prior to treatment ⁽¹⁾				Brief description of treatment	As discharged ⁽¹⁾					
	mg/Nm ³		kg/h			mg/Nm ³		kg/h.		kg/year	
	Avg	Max	Avg	Max		Avg	Max	Avg	Max	Avg	Max
Total Amines	N/A	N/A	N/A	N/A	Ceramic and carbon filters	1.7	3.5	0.0007	0.0014	2.4	5
TA Luft class III	N/A	N/A	N/A	N/A		220	659	0.09	0.30	320	1,000

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- Concentrations should be based on Normal conditions of temperature and pressure, (i.e. 0°C, 101.3kPa). Wet/dry should be the same as given in Table E.1(ii) unless clearly stated otherwise.

F Control and Monitoring

1. Supply information on the air filtration system proposed for the control of fugitive emissions of waste vapours from transfer activities.

No system is considered necessary as the fugitive emissions associated with the operation are negligible. The liquids to be handled comprise predominantly high flash-point hydrocarbons with a consequent low volume of fugitive emissions. All other wastes are packaged and not considered to be capable of generating significant fugitive emissions. Local ventilation will be provided through the installation of both high and low level perforated sheeting on side walls.

2. Supply information on proposals for the control and subsequent treatment of emissions from the bulking, blending and mixing of hazardous waste solvent, packaging contaminated with dangerous substances and contaminated soils. Submit proposals on any ventilation systems proposed and any subsequent treatment of exhaust air.

There is no bulking, blending or mixing of solvents with waste oils proposed. The bulk tanks are only for the bulking of waste oils and other oil based liquids/interceptor liquids. As already mentioned in Section E above, these have a low vapour pressure (<1 kPa) such that no treatment of exhaust air is required to meet BAT.

As the replacement plant for the HDU involves a different air emissions abatement equipment additional information relating to Section F has been included in Attachment F, see Table F1 and F2 below in relation to abatement, control and monitoring

TABLE F.1: ABATEMENT / TREATMENT CONTROL

Emission point reference number: EP 1

Control ¹ parameter	Equipment ²	Equipment maintenance	Equipment calibration	Equipment back-up
Differential Pressure	U tube manometer	Ensure tube is clean	Reset at zero differential pressure	Spare held on site
Filter integrity	Visual/olfactory assessment	Clean or replace as necessary	Not applicable	Spare filters held on site

Control ¹ parameter	Monitoring to be carried out ³	Monitoring equipment	Monitoring equipment calibration
Differential pressure	Continuous	U tube manometer	Reset at zero differential pressure
Filter integrity	Daily sniff test	Not applicable	Not applicable
Filter integrity	Weekly visual inspection	Not applicable	Not applicable

¹ List the operating parameters of the treatment / abatement system which control its function.

² List the equipment necessary for the proper function of the abatement / treatment system.

³ List the monitoring of the control parameter to be carried out.

TABLE F.2 : EMISSIONS MONITORING AND SAMPLING POINTS

Emission Point Reference No(s) : _____ EP 1 _____

Parameter	Monitoring frequency	Accessibility of Sampling Points
Total Amines	Biannually	Sampling ports located at ground level
TA Luft Organics class II	Biannually	Sampling ports located at ground level
TA Luft Organics class III	Biannually	Sampling ports located at ground level
Particulates	Annually	Sampling ports located at ground level

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H Materials Handling

1. Provide details of the 400 tpa of commercial waste indicated in Table H.1 (C)

This waste stream will consist of non-hazardous edible waste oils such as cooking oils that will be accepted from hotels, restaurants and other types of service outlets. These will be delivered to site in pre-packaged drums and will be stored in an appropriate storage bay area until a sufficient quantity is collected to transport off-site for safe treatment and/or disposal.

2. Resubmit Table H.1.2, EWC Codes must accurately reflect associated waste description. All waste types specified must be included in the relevant section of Table H.1 (C) when appropriate.

TABLE H.1 (C) WASTE TYPES AND QUANTITIES

WASTE TYPE	TONNES PER ANNUM (existing)	TONNES PER ANNUM (proposed)	TOTAL TONES (over life of site)
Household	0	0	0
Commercial	0	400	N/A ^(*)
Sewage Sludge	0	0	0
Construction & Demolition	0	0	0
Industrial Non-Hazardous Sludges	0	0	0
Industrial Non-Hazardous Solids	0	0	0
Hazardous *(Detail of the various proposed Hazardous waste streams are specified in Table H1.2)	1,600	6,600	N/A ^(*)

(Note (*): The proposed lifespan of the Waste Transfer Station should be considered indefinite and hence lifetime volumes are not applicable.

TABLE H.1.2 HAZARDOUS WASTE TYPES AND QUANTITIES

HAZARDOUS WASTE	DETAILED DESCRIPTION	TONNES PER ANNUM (Existing)	(TONNES PER ANNUM PROPOSED)
Waste Oil	<p><u>Oil Waste & Wastes of liquid fuels (except edible oils:</u></p> <p><u>13 01 – Waste Hydraulic Oils:</u></p> <p>13 01 01, 13 01 04, 13 01 05, 13 01 09, 13 01 10, 13 01 12, 13 01 13,</p> <p><u>13 02 – Waste engine, gear and lubricating oils:</u></p> <p>13 02 04, 13 02 05, 13 02 06, 13 02 07, 13 02 08</p> <p><u>13 03 – Waste Insulating and heat transmission oils:</u></p> <p>13 03 01, 13 03 06, 13 03 07, 13 03 08, 13 03 09, 13 03 10</p> <p><u>13 04 – Bilge Oils</u></p> <p>13 04 01, 13 04 02, 13 04 03</p> <p><u>13 05 – Oil/Water Separator contents</u></p> <p>13 05 01, 13 05 02, 13 05 03, 13 05 06, 13 05 07, 13 05 08</p> <p><u>13 07 – Wastes of liquid fuels</u></p> <p>13 07 01, 13 07 02, 13 07 03</p> <p><u>13 08 – Oil wastes not otherwise specified</u></p> <p>13 08 01, 13 08 02, 13 08 99</p> <p><u>16 07 – Waste from transport tank, storage tank and barrel cleaning (except 05 and 06)</u></p> <p>16 07 08</p> <p><u>05 01 – Wastes from Petroleum Refining</u></p> <p>05 01 03, 05 01 05, 05 01 17</p>	0	4,000

	<p><u>11 01 – Wastes from chemical surface treatment and coating of metals and other materials</u></p> <p>11 01 13, 11 01 14</p> <p><u>12 01 - Wastes from shaping & physical & mechanical surface treatment of Metals & Plastics (EWC 12 01s):</u></p> <p>12 01 06, 12 01 07, 12 01 08, 12 01 09, 12 01 10,</p>		
Oil Filters	<p><u>15 01 – packaging (including separately collected municipal packaging waste)</u></p> <p>15 01 10</p> <p><u>16 01 – Wastes from dismantling of end-of-life vehicles and vehicle maintenance</u></p> <p>16 01 07</p>	0	500
Asbestos	-	0	0
Batteries	<p><u>16 06 – Batteries & Accumulators</u></p> <p>16 06 01, 16 06 02, 16 06 03, 16 06 04, 16 06 05, 16 06 06</p>	0	240
Fluorescent Light Bulbs	<p><u>20 01 – Separately collected fractions</u></p> <p>20 01 21</p>	0	10
Contaminated Soils	<p><u>17 03 – Bituminous mixtures, coal tar and tarred products</u></p> <p>17 03 01, 17 03 02, 17 03 03</p> <p><u>17 05 – Soil (including excavated soil from contaminated sites), stones and dredging spoil</u></p> <p>17 05 01, 17 05 02, 17 05 03, 17 05 05, 17 05 07</p> <p><u>19 13 – Wastes from soil and groundwater remediation</u></p> <p>19 13 01, 19 13 03, 19 13 05, 19 13 07</p>	0	50

OTHER HAZARDOUS WASTE (APPLICANT TO SPECIFY)			
Clinical Healthcare Waste	<u>18 01 – Wastes from natural care, diagnostics, treatment and prevention of disease in humans</u> 18 01 01, 18 01 03, 18 01 04	1,600	1,600
Other Specified Wastes and Other wastes to be agreed with the Agency			600
Photographic Wastes	<u>09 01 – Wastes for the photographic industry</u> 09 01 01, 09 01 02, 09 01 03, 09 01 04, 09 01 05, 09 01 06, 09 01 07, 09 01 08, 09 01 10, 09 01 11, 09 01 12, 09 01 12, 09 01 13, 09 01 99		
Aerosols	<u>Wastes Organic Solvents, Refrigerants & Propellants</u> 14 06 02, 14 06 03		
ELV Components	<u>16 01 – Wastes from dismantling of end-of-life vehicles and vehicle maintenance</u> 16 01 12, 16 01 13, 16 01 14, 16 01 15, 16 01 99		
Non-liquid hazardous/contaminated wastes	<u>15 – Waste Packaging – Absorbents, wiping cloths, filter materials and protective clothing not otherwise specified</u> 15 01 10, 15 02 02, 15 02 03 <u>05 01 – Wastes from Petroleum Refining</u> 05 01 10, 15 02 02, 15 02 03		
Non- Hazardous Waste			
Cooking Oils	<u>19 08 – Wastes from wastewater treatment plants not otherwise specified</u> 19 08 09 20 01 – Separately collected fraction 20 01 25		
WASTE TOTAL		1,600	7,000

2a. The description and typical treatment given in Table H.3.2 must correspond to all waste listed in Tables H.1 (C) and H.1.2.

Table H.3.2

WASTE TYPES	DESCRIPTION	TYPICAL TREATMENT
Waste Oil	<ul style="list-style-type: none"> Hydraulic oils Chlorinated/non-chlorinated emulsions Waste engine, gear and lubricating oils Insulating and heat transmission waste oils Bilge Oils Solids/sludges from oil/water separators Oil from oil/water separators Waste fuel oils, diesel and petrol fuels. 	Bulk-up and send for off-site recovery
Oil Filters	Element Type and cartridge	Filters sent off-site for recovery
Batteries & Accumulators	<ul style="list-style-type: none"> Lead batteries Ni-Cd batteries Mercury-containing batteries Alkaline batteries Other batteries & Accumulators 	Bulk-up/repackage. Send off-site for recovery
Fluorescent Tubes	Fluorescent Tubes	Bulk-up/repackage. Send off-site for recovery
Construction and Demolition wastes (Contaminated Soils)	<ul style="list-style-type: none"> Soil (including excavated soil from contaminated sites) stones and dredging spoil. Bituminous mixtures and tarred products. Solid wastes and sludges from soil remediation. Liquid, solid and sludge waste from groundwater remediation 	Store for off-site removal and recovery or disposal

Clinical Healthcare Waste (as previously licensed)	Healthcare risk waste (Note 1) <ul style="list-style-type: none"> • Category A types 1, Infectious Waste, 1.1 General, 1.2 Microbiological cultures, 2 Biological and 3 Sharpes • Infections laboratory wastes having been autoclaved 	Sterilise on site and dispose of off site or store for off site disposal
Photographic Processing	<ul style="list-style-type: none"> • Water-based & solvent based developer and activator solutions • Bleach solutions and bleach fixer solutions • Photographic film and paper Single-use cameras containing batteries	Bulk-up/repackage. Send for off-site recovery
Aerosols	<ul style="list-style-type: none"> • Used aerosols (paint, lubricant, etc) 	Store for recovery/disposal off site
ELV components	<ul style="list-style-type: none"> • Brake fluids, • transmission fluids, • antifreeze • airbags, • bumpers • shock absorbers 	Store for recovery/disposal off site
Non-liquid hazardous/contaminated wastes	<ul style="list-style-type: none"> • Contaminated clothing, • Used absorbents, booms, • protective gear, wiping cloths, • oily solids, greases, • oily packaging etc 	Bulk-up/repackage. Store for off-site dispatch to recovery/disposal facility
Cooking oils	Used cooking oils	Bulk up for recovery off site.

Note 1 – Classification based on “Segregation, packaging and storage guidelines for Healthcare Waste”, 3rd Edition 2004 produced by the Department of Health & Children. Healthcare wastes not acceptable for treatment in the sterilisation plant include:

- Anatomical waste
- Processed blood products
- Infections brucellosis- type waste
- Chemicals and pharmaceuticals
- Cytotoxic wastes
- Radioactive waste
- Laboratory waste containing genetically modified organics

3. Clarify storage capacity and location for all waste types listed in Attachment D.1 (g) against the resubmitted Table H.1.2. Assess storage proposed against the BREF reference document on Best Available Techniques on Emissions from Storage and the EPA Guidance Note on Storage and Transfer of Materials for Scheduled Activities.

There will be three dedicated banded storage areas (CK01, CK02 and CK03) as well as a banded quarantine area housed indoors within the existing building for all packaged waste (e.g. sealed drums/IBCs etc). Healthcare wastes will be stored in CK1 although a sufficient banded staging area adjacent to the HDU will generally be sufficient for the volumes proposed. The quarantine area will be used for the temporary storage of defective packaged waste (See drawing 2004-238-01-001 Rev B).

(Please note: In the review application submitted to the Agency on Nov 16th 2004 it was stated that the internal design of the waste transfer station would include seven dedicated bays for drum/IBC storage).

A description of the waste types that will be stored in each bay area is given in Table 1.0 below. While the classes of waste are identical for both CK1 and CK2 these are separately banded to prevent possible acidic leakages (wet cell batteries) mixing with alkaline leakages (photographic). CK 3 then acts as a flammable liquid store and used aerosol store. Some waste aerosols may also be classed as flammable although the majority are non-flammable.

Table 1.0: Details of the packaged waste type to be consigned to each Storage Bay Area

BAY NUMBER	DESCRIPTION OF WASTE TO BE STORED IN DEDICATED BAY
CK01	Acidic corrosive waste (Class 8, e.g. batteries), healthcare waste (Class 6.2) and non regulated wastes (e.g. cooking oils, fluorescent tubes and End-of-Life Vehicle (ELV) waste components).
CK02	Basic (Alkaline) corrosive waste (Class 8, e.g. photographic waste), flammable solid (Class 4.1 – non-liquid oily wastes) and non regulated (e.g. cooking oil, fluorescent tubes, ELV wastes).
CK03	Flammable liquids (Class 3 e.g. mixed fuels), used aerosols and non-regulated (e.g. cooking oils, fluorescent tubes, ELV wastes).

Should additional waste storage areas be required these will be designed and constructed to contain such waste. All specified engineering works drawings needed to construct this compartment within the bay will be submitted to the Agency for approval prior to the commencement of such work.

Refrigerated storage will be provided to store any healthcare waste requiring refrigeration in the event of a process delay/breakdown over 72 hours as previously agreed under the existing license.

The dimensions of both the CK01 and CK02 storage areas are 10.5 m x 4.465 m. The dimensions of CK03 and the quarantine area are 7.4 m x 4.634 m and 2.5 m x 4.634 m respectively.

Drums and containers will typically be delivered to the facility on wooden pallets and the pallets will be unloaded by forklift trucks. Any damaged pallets will be replaced on arrival and not transferred into storage. Transfer of damaged pallets may lead to other pallets being stored on top, resulting in further damage and possible collapse of the stack.

A total of 72 pallet spaces will be provided in both CK01 and CK02 storage bays. CK03 will accommodate 45 pallet spaces and the quarantine area will have a capacity for 16 pallet spaces. This storage capacity is calculated on the assumption that the pallets are triple stacked with adequate space given for inspection purposes.

As already mentioned in Section 1.1.4 above, there will be three above ground bulk storage tanks. These will be vertical steel welded non-refrigerated mild steel storage tanks constructed to the internationally recognised standard BS 2654. Each tank will have a storage capacity of 54 m³. The tanks will be painted externally to prevent corrosion. Internally there is no need for corrosion protection as the oil inhibits any significant corrosion. These measures ensure compliance with BAT. A roof canopy will be fixed above the tanks to prevent rainwater entering the bunded area surrounding the tank farm. The walls of the building housing the tank farm will be largely open to allow for natural ventilation.

As also mentioned in Section 1.14 above the bulk tanks will solely be used for the bulking up of smaller volumes of waste oil delivered to the site. There will be no blending or mixing of different chemical solvents or other dissimilar solvents on site. The types of liquid waste to be stored in these tanks includes : waste hydraulic oils, waste engine, gear and lubricating oils, waste Insulating and heat transmission oils, bilge oils, liquid fuels oil wastes and waste from transport tank or storage tank cleaning.

The BREF Reference Document on Best Available Techniques on Emissions from Storage recognises in section 5.1.2 that "*operational losses do not occur in storing packaged dangerous materials*". The only risk of emission to the environment occurs where the packaging encasing the solid material becomes accidentally damaged or pierced. All packaging to be used at the proposed development will be UN-approved drums/containers etc. All packaging arriving on site will be left intact unless inspection deems the packaging to be damaged or degraded. In such instances the contents may be temporarily stored in the quarantine area to await repackaging before storage or to await recollection by the delivery courier.

The Agency's Guidance Note on Storage and Transfer of Materials for Scheduled Activities states that "*the most common type of retention facility is the open topped bund, though closed vessels or tanks can also be used*". The operators of the proposed waste transfer facility at Raffeen intend to safeguard against spillages using both local and remote open topped bunding. Based on each pallet presenting 1,000 liquid storage (i.e. extremely conservative) secondary containment to the required 25% level will be provided. The local bunds within the building (CK-01, CK-02 and CK-03) will alone not provide the full 25% bunding capacity. They only provide sufficient secondary containment for minor spillages associated with leaking or damaged drums. Full bunding to the recommended 25% is provided through the combination of the local bunds (CK-01 and CK02 have 7,000 litres each and CK-03 allowing 5,000 litres retention) and the remote bunding provided by the bunded floor area of the entire warehouse. In reality a large quantity of the wastes have little or no liquid content.

Wet cell batteries are generally only 10% liquid by weight while fluorescent tubes and non-liquid oily wastes which would not require liquid retention of 25%. Thus the provision of bunding has been calculated very conservatively as not all pallet spaces will be IBCs and thus present less than 1,000 litres (e.g. 4 x 200 litre drums, 1 battery box with approximately 120 litres of liquid etc.) with additional backup provided by the remote building (bunded floor area).

At the Raffeen facility each of the packaged waste storage areas will be individually bunded with a 150 mm high reinforced concrete wall on three sides and a 150 mm high ramp at the entrance to each bay area. This will ensure any material spillage will be contained at the source. The bunds walls and floor will be constructed of reinforced concrete designed to a recognised

engineering code (BS 8110: Structural use of concrete –code of practice for design and construction). Joint sealant will ensure that the entire bund unit can contain all liquid spillages. As an additional safeguard the entire floor area of the warehouse will be remotely banded this will ensure that any spillage run-off will not escape outdoors.

A sloping floor together with a corner sump cast in the floor slab of each storage bay area will serve to concentrate minor spills into a smaller area to facilitate manual clean-up. Each sump will be designed to be impermeable to the stored materials and be subjected to programmed engineering inspection (normally visual, but extending to water testing where structural integrity is in doubt).

Spill kits containing materials such as leak-sealing putty, oil or chemical absorbents and personal protective equipment (PPE) will be stored on-site. These will be located both near and remote from the storage area (in case during an event it is not possible to reach the equipment near the storage containers). All site staff will be trained in the use of this equipment.

A containment ramp of height 150 mm will cross the entrance to all of the storage areas. This will act as a physical containment barrier to any spillages occurring within the banded storage area but still permit easy entry to the bay area by forklift trucks taking packaged waste to and from the area.

The Agency's Guidance Note on Storage and Transfer of Materials for Scheduled Activities states in Section 11.2 that *"the environmental considerations with a spillage of solids are not so much the loss of material but the ability of the solid to react with the moisture present, such as rainwater, and form solubility by-products that are potentially hazardous to the aquatic environment"*. Within the in-door solid storage areas the solid waste will be contained in sealed drums/containers etc and adequately contained by local and remote bunding and so reaction with moisture in the air is unlikely to be a problem in normal operating conditions.

In summary the proposed storage arrangements can be demonstrated to comply with the requirements of the Agency's Draft BAT guidance as follows;

- The proposed storage facilitates the separate storage of incompatible wastes.
- The storage areas are constructed of concrete and fire proof cladding which is an incombustible material
- The main structure of the building is fire protected
- The storage areas have an impermeable surface (sealed concrete)
- Passive ventilation is provided at both high and low levels through the provision of perforated side sheeting.
- Bunds are constructed in accordance with BS 8007 and the EPA's guidance document.
- Bunding will provide 110% or 25% containment whichever is the greater
- Pipes and valves will be located within the bunds
- The tankfarm will be roofed so as to prevent rainwater ingress
- Drainage from bunds will be collected separately (ie within the bunds)
- Procedures are in place to control the acceptance and storage of waste
- Risk assessments and monitoring of exposure to workers will be carried out regularly
- Bund integrity will be tested on commissioning and regularly as part of licensing

For healthcare waste the following will also apply;

- All healthcare wastes will be handled in UN approved containers
- Personnel will wear suitable PPE although no direct handling of healthcare wastes will be involved.
- Wastes are transported in fully enclosed vehicles with locked doors
- Infectious wastes are clearly labelled
- Operational procedures are in place for dealing with accidents, incidents and spillages
- A quarantine area is provided for leaking containers
- All waste storage areas will be suitably marked and labelled
- Risk assessments and monitoring of exposure to workers will be carried out regularly, with immunisation programmes operated for both Hepatitis B and tetanus.

4. *Supply information on waste acceptance techniques to show they comply with EPA BAT Guidance note for Waste Transfer Activities for all waste types accepted on site. This information should deal with waste compatibility and confirmatory testing particularly regarding the proposal to bulk up and mix waste solvents and oil. The facilities ability to store waste in terms of both volume and type during the testing/compliance process should be addressed in the response.*

The with EPA BAT Guidance note for Waste Transfer Activities relates largely to waste destined for landfill and its leaching behaviour. The majority of wastes handled at the facility are for recovery or energy recovery and this type of characterisation is not relevant. However a number of different levels of waste acceptance control are operated as follows:

Level 1 - Pre-Collection Characterisation - No waste consignments are accepted onto the facility without prior notification from the customer. Firstly, the customer contacts Atlas Environmental by telephone (or fax) asking for a quote or requesting a collection. At this point details regarding the waste type(s) and quantity etc. are exchanged. This is a relatively simple task for the waste proposed to be accepted at the Raffeen facility (e.g. waste oils, batteries fluorescent tubes etc.) and no analysis is normally required. If the customer wishes to avail of the service provided by Atlas then his collection is put on a schedule list. On occasion some wastes (eg waste oils, from new customers or where contamination is suspected) analysis may need to be carried out prior to acceptance. Currently this would be carried out at the Portaoise facility but may in future be carried out at the proposed facility's laboratory.

Level 2 - Collection Verification - The vast majority of waste collections are carried out by Atlas Environmental vehicles and drivers (although in some cases a permitted haulier may be used). The driver will then carry out an inspection of the wastes to be collected at the customer's premises and ensure that it conforms to the waste as described in the accompanying documentation. All waste consignments must be accompanied by documentation describing the physical and chemical composition, hazard characteristics, and incompatible substances and handling precautions. The driver will not accept wastes that are not permitted to be accepted at the facility. Therefore the bulk of the waste characterisation work will have taken place at premises of the customer. This means that acceptance procedures when the waste arrives at the site should serve to confirm the characteristics of the waste. This should minimise the time the vehicle delivering the waste is kept waiting.

Level 3 - On Site Verification - When the waste is delivered to the facility the site operator will check the waste consignment to ensure that it is as described on the accompanying paperwork and that it is acceptable at the facility. This is only a brief visual check of wastes or the labels on the waste packaging. Any damaged, corroded or unlabelled drums or other containers will be put in a banded quarantine area and dealt with appropriately.

At this point all packaged wastes are bar coded. This unique number facilitates a record of:

- The location of each drum/IBC or other container making up the consignment
- The duration of storage
- The chemical identity of the containers contents and
- The hazard classification of the consignment

A computer tracking system will "follow" the waste during its acceptance, storage and removal off-site for treatment and disposal. This will enable site staff to identify where a specific waste is in the facility at any one time.

There will be no blending or mixing of different chemical solvents with waste oils on site. The types of liquid waste to be stored in the bulk tanks include: waste hydraulic oils, waste engine, gear and lubricating oils, waste insulating and heat transmission oils, bilge oils, liquid fuel oil wastes and waste from transport tank or storage tank cleaning. As these waste oil materials are all of a similar chemical composition there is no likelihood of an explosive or hazardous chemical reaction occurring upon mixing. This negates the need for compatibility testing to be carried out on site. Much of the solid waste to be brought on site will consist of items such as sealed containers holding fluorescent bulbs, batteries and aerosol canisters etc. These items are easily recognisable and will not require any confirmatory tests to be carried out.

Once a waste oil has entered bulk storage, the tracking of individual wastes will not be feasible. However, records will be maintained to ensure sufficient knowledge is available as to what wastes have entered a particular tank. For bulk liquid wastes, stock control will involve maintaining a record of the route through the process, whereas drummed (packaged) waste control will utilise the individual labelling of each drum to record the location and duration of storage.

5. *Provide details on the proposed transfer and handling of solids with reference to the BREF Reference Document on Best Available Techniques on Emissions from Storage and the EPA Guidance Note on Storage and Transfer of Materials for Scheduled Activities.*

Section 11.2 of the Agency's Guidance Note on Storage and Transfer of Materials for Scheduled Activities states that the "*environmental considerations with a spillage of solids are not so much the loss of material but the ability of the solid to react with the moisture present, such as rainwater, and form solubility by-products that are potentially hazardous*". At the proposed development at Raffeen there will be a very low risk of solid spillages contacting with water as all storage facilities are in-doors. All solid wastes will be individually packaged with no storage of loose solids. Furthermore all storage areas will be on hard-standing and localised bunding will ensure that spillages are contained in the immediate area. All solid spillages will be dealt with immediately by trained operatives.

There will be minimum handling of the solid packaged waste on site. If such waste is deemed adequately packaged it will be unloaded from the delivery vehicle at the in-door delivery location by a fork-lift truck. The fork-lift will deliver the packaged waste directly to a designated storage bay within the building where it will reside before forwarding off-site for safe treatment/disposal. All loading and unloading operations will be carried out within the building. The entire floor space where the fork-lift will operate will be bunded to prevent the escape of spillages outside the confines of the building should a drum/container accidentally fall while in transit to/from the storage bay. In such a case the spillages would be cleaned up immediately.

6. *Provide details of methods and control proposals for dealing with the proposal to accept packaging contaminated by dangerous substances.*

The type of contaminated packaging that will be accepted and stored at the proposed facility will consist of sealed waste drums/containers containing empty oil cans and other items such as oily cloths, rags, gloves and other oil stained protective clothing and equipment from garages. Other non-liquid oily wastes that will be accepted include booms and absorbents etc.

7. *Supply information on weather the facility intends to wash tankers and drums following waste delivery and submit proposals for dealing with this wash water.*

There will be no washing facilities provided on site. All empty drums/containers and IBCs will be shipped to other licensed facilities (including Portlaoise and Shannon) for thorough washing so that the containers can be recycled for further use. The liquid residue remaining in delivery tankers after unloading of waste oils may on occasion be rinsed with hot water (pressure water) and pumped to the same bulk tank.

Washing of containers used in the transport of Healthcare wastes (yellow wheelie bins) will operate upon recommencement of the processing of healthcare wastes. These containers do not directly contain waste but rather wastes in other containers (yellow bags), thus this wastewater has the characteristics of normal sanitary wastewater. As with the previous license any such washings will be disposed of through discharge to the on-site sewage treatment plant.

J Accident Prevention and Emergency Response

1. *Assess the adequacy of the fire fighting equipment on site taking account of the volumes and types of waste stored. Carry out a risk assessment to determine if the activity should have a dedicated firewater retention facility.*

Fire Fighting Equipment Assessment

Flammable atmospheres are not likely to occur at the proposed Raffeen facilities as the vast bulk of waste oil are not classified as flammable liquid. All waste oil to be stored on site will have flashpoints well in excess of 61°C. All waste liquids in bulk storage will have high flash points and are not therefore classified as flammable. These tanks are separated from the drum storage areas by 90 minute fire rated cladding thus reducing the potential for any fire to spread. In addition the general construction of the waste storage areas helps prevent fire spread (i.e. concrete and fire rated cladding). Thus any fire is likely to be confined locally. Only minimal storage of low flashpoint liquids is proposed (mixed fuels e.g. petrol mixed with diesel). The proposed volume of mixed fuels to be stored on site at any one time would be 2,000 litres. The remainder of other wastes stored on site are not classed as flammable and do not pose a significant risk. In the unlikely event of a fire or explosion at the Raffeen the fire alarm would sound automatically (heat & smoke detectors) and the emergency response procedure put into action.

In the event of a fire on site it will be fought with foam as water is not a suitable media for combating hydrocarbon based fires. For small localised fires, hand held foam extinguishers will be provided in pairs (to allow for failure of one unit) at strategic locations on site, and in particular surrounding the flammable storage area. A water and dry powder extinguisher will be provided in the office and canteen areas. A portable foam making machine will also be kept on site to deal with larger fires. This unit will be permanently located in close proximity to the flammable storage area to act as first response to a major fire while emergency services are making their way to the facility. This will be maintained ready for use within five minutes of a fire being identified on alarm activation.

The particular type of foam that will be used has yet to be decided upon (based on discussion with the Fire Authority) but it is likely to be protein-based foam rather than synthetic foam. The protein based foam is far less toxic to the environment than the synthetic type. The type of foam chosen will also need to have a fast extinguishment time. The level of foam usage will be dependent also on the method of delivery.

The use of fixed foam systems operate at lower foam application rates than manual fire fighting resulting in less foam being used to achieve extinguishment.

The contaminated foam – water solution remaining after a fire has been quenched will be contained on site by the local bunds (in the case of a small-scale fire) and the remote bunds in the case of a large scale fire. The contaminated foam-water will be pumped to the spill retention tank or IBCs and will be taken off-site for safe disposal.

There are two fire hydrants also located externally within the site boundary in addition to another one located at the facility entrance for use by the emergency services if required.

Firewater Retention Risk Assessment

A firewater risk assessment has been carried out (See Attachment J) which indicates that the facility does not require a dedicated firewater retention facility as sufficient retention is provided by the proposed facility design. Although not required the assessment has included within its scope the non-licensable activities of the facility in addition to the licensable activities.

Further to the meeting between facility management and the Agency on March 14th we have included additional information regarding accident prevention and emergency response, operational procedures and communication and training in Attachment J.

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Attachment B

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**CORK COUNTY COUNCIL
COMHAIRLE CHONTAE CHORCAÍ**

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Receipt No.	
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Date	
Plan. Ref. No.	

COMMERCIAL/INDUSTRIAL PLANNING APPLICATION FORM

Type of Permission Sought

A. Permission

B. Permission for Retention

C. Permission consequent on the Grant of Outline Permission

X

In the case of C above, please state Planning Authority Register Reference Number and date of grant of outline permission _____

PART 1 DETAILS OF APPLICANT(S)

- (i) Name of Applicant(s) **Atlas Environmental Ireland**
- (ii) Address of Applicant
 - Clonminam Industrial Estate**
 - Portlaoise**
 - Co. Laois**
- (iii) Correspondence Address
 - McCutcheon Mulcahy**
 - 2/3 Crawford Business Park**
 - Proby's Quay**
 - Cork**
- (iv) Telephone No. **(021) 4313712** Fax No. **(021) 4328008** E-Mail **info@mcimplanning.com**
- (v) If Applicant is a company -
 - (a) Name of Company Directors
 - Declan Ryan, John O'Reagan, Kevin Murray,**
 - Michael Nolan, Mathew Keogh, Thomas Davy,**
 - Gareth Kelly**
 - (b) Registered address of company and Reg. No.
 - Reg No.: 317186**
 - Clonminam Industrial Estate, Portlaoise, Co Laois.**
 - (c) Date of Incorporation
 - 16th December, 1999**
 - (vi) Name of person acting on behalf of applicant
 - (a) Address
 - McCutcheon Mulcahy**
 - 2/3 Crawford Business Park, Proby's Quay,**
 - Cork**
 - (b) Telephone No. **021 4313712** Fax No. **021 4328008** E-Mail **info@mcimplanning.com**
 - (ix) State name, address and telephone number of person who prepared plans and drawings.
 - Kavanagh Ryan & Associates limited,**
 - Unit 48, The Egan centre, Dargle road, Bray, Co.**
 - Wicklow**
 - 01-2765661**

Signature of person acting on behalf of applicant

Signature
For Atlas Environmental Ireland (applicant)

Qualification

15 March 2005
Date

15 March 2005

PART 2 DETAILS OF PUBLIC NOTICES AND FEE

- 1. Newspaper notice
 - (i) Name of newspaper **Irish Examiner**
 - (ii) Date of publication **Tuesday 15 March 2005**
- 2. Date on which Notice was erected on site **Tuesday 15 March 2005**
- 3. The amount of fee enclosed and the basis for calculation
 - €3.60 * 1642 sq m (Class 4) + €80 (Tank Farm: Class 13)**
 - Total = €5991.20**
 - Note: No change to existing 100 sq m ancillary offices*

PART 3 DETAILS OF PROPOSED DEVELOPMENT

- 4. Nature and extent of development
 - a) change of use of 722 sq m of existing hospital/clinical waste recovery and treatment facility building, as permitted under P.A. Ref 02/5250 and EPA Waste Licence 145-1, to use as waste recovery, treatment and transfer facility for hazardous and non-hazardous waste, including hospital/clinical waste; b) construction of 798 sq m extension (height 12.75m) to rear of existing building, for light industrial use, including 148 sq m roofed tank farm; c) construction of 2 storey, 270 sq m extension (height 7.84m) for associated laboratory office use, to adjoin existing office area (100 sq m) on front elevation; and, d) associated site development works**
 - 5. Location, townland or postal address of land or structure concerned **Unit 9, Raffeen Industrial Estate, Raffeen, Monkstown, Co. Cork**
 - 6. Did you have formal pre-planning discussions regarding this development?
If so, please state with whom and date
 - Yes No
 - Informal pre-planning with Kevin Irwin 9/12/04 & 7/3/05**
 - 7. Interest in land or structure (please tick appropriate box)
 - (a) Owner Yes No
 - (b) Leasee Yes No
 - (c) Contracted to Purchase Yes No
 - 8. Date of Purchase, if applicable **N/A**
 - 9. Name and address of owner (If not applicant)
 - Atlas Environmental Ireland**
 - Clonminam Industrial Estate**
 - Portlaoise,**
 - Co Laois.**
- Where the application relates to a building or buildings indicate :-
- (i) Gross floor space of building(s) in sq.m. : **1742 sq m (existing + extension)**
 - (ii) Gross floor space of building(s) existing on site, if any, in sq. m. **822 sq m (existing)**
 - (iii) The number of houses (if any) to be provided **n/a**
- 10. (i) Description of buildings and materials used in them:-

	Nature	Colour
(a) Floors	(a) Concrete.	Natural

- (b) Walls and Partitions
- (c) Roof

- (b) Blockwork/studwork. White
- (c) Metal decking to match existing. Green

(ii) Nature and colour of proposed external facing materials:-

- (a) Roofs
- (b) Front Walls
- (c) Side Walls
- (d) Rear Walls
- (e) Road boundary walls
- (f) Other boundary walls

- (a) As above
- (b) Match existing
- (c) Match existing
- (d) Match existing
- (e) Existing bund.
- (f) Galvanised Pallisade fencing as required
- (g) Not applicable

(g) Buildings other than main buildings

Details of Proposed Development – Description of Building and Materials

Q.10 (i) & (ii)

Part of Building	Provision of Fire Resistant Construction	Reference
Structural Frame, Beam or Column (Portal Frame)	Fire resistance is provided to the steelwork in the following forms. Where the steel frame aids the stability of the walls and/or form part of a wall with a requirement for fire resistance to fulfil space separation and boundary distances. It is surrounded by a minimum of 100mm of blockwork. Alternatively an intumescent paint is provided to the steelwork where required. Refer to Section B4-Space Separation.	BRE Report - Guidelines for the construction of fire resisting structural elements - Table 1
Loadbearing Wall.	All loadbearing walls are constructed of 215mm solid blockwork. Locations include: compartment walls between the office/admin area and the handling area; walls with boundary conditions see section B4 (see Drawing No. 98-099-02 & 03).	BRE Report - Guidelines for the construction of fire resisting structural elements - Table 1
External Walls.	All external walls constructed of 215mm solid blockwork where required. Walls with boundary conditions are covered here. Refer to Section B4 (see Drawing No. 98-099-02 & 03) – Space Separation.	BRE Report - Guidelines for the construction of fire resisting structural elements - Table 1
Compartment Wall.	All compartment walls constructed of 215mm solid blockwork. Compartment wall exists between the office/admin area and the handling area (Drawing No. 98-099-02 & 03).	BRE Report - Guidelines for the construction of fire resisting structural elements - Table 1
Enclosure to protected corridor (which is not a compartment wall)	The enclosure to the protected corridor within the office/admin area. (Drawing No. 98-099-02 & 03). Minimum 100mm solid blockwork.	BRE Report - Guidelines for the construction of fire resisting structural elements - Table 1
Compartment Floor	The compartment floors over the office/admin area and the boiler house have a fire rating of 60 minutes to maintain the integrity of the compartment between it and the handling area. The pc slab over the office/admin area is to have such a fire resistance.	

11. For applications for material change of use or for the retention of any such material change of use, please state
 (a) The existing use

(b) The proposed use

(c) Nature and extent of any such proposed use

Clinical/healthcare waste treatment facility

Waste recovery, treatment and transfer facility for hazardous and non-hazardous waste, and light industry

See item 4 above

12. State special reasons (if any) for the selection of this particular site.

Industrial site. Established permission for waste activity.

13. Has planning permission been obtained on site in last 5 years. If so, please quote Register No.(s).

Original Permission: S/99/2257
 Governing Permission: S/02/525
 Extension: 03/6118 (not built)

14. Does the development comprise or is it for the purposes of an activity in relation to which an:

(a) Integrated Pollution Control Licence

(b) Waste Licence

is required?

Yes	_____	No	<u> X </u>
Yes	<u> X </u>	No	_____

15. Is the development of a class prescribed in Schedule 5 to the Planning Regulations, 2001 requiring the preparation of an Environment Impact Statement?

(If yes, an EIS should accompany this application)

Yes	_____	No	<u> X </u>
-----	-------	----	--------------

16. Is the Development within a Strategic Development Zone?

Yes	_____	No	<u> X </u>
-----	-------	----	--------------

17. Is the development located on land zoned residential or residential and other uses or within the development boundaries of towns and villages as zoned in the County Development Plan?

Yes	_____	No	<u> X </u>
-----	-------	----	--------------

If yes, please submit one of the following :

(a) a copy of the certificate granted under section 97 of the 2000 Act exempting the applicant from the Housing Strategy's Scheme for Social and Affordable Housing Under Part V of the Act.

(b) If a Certificate has not been issued, a copy of the application for same under Article 48 of the 2001 regulations.

(c) Your proposals for compliance with any conditions which may be attached by the Planning Authority under Section 96(2) requiring the provision of housing referred to in section 94(4)(a) (Social and Affordable Housing).

N.B. The details required under Items 11-21 may be submitted on a separate schedule

24. Intended use of buildings with details of process including raw materials and products
- Waste Recovery, treatment and transfer unit
See EPA application non-technical summary and planning consultant's report attached**
-
25. Details of all emissions, e.g. smoke, odours, noise, dust, etc. and proposals for control.
- See Non-Technical Summary of EPA Licence Review and Planning Report**
-
26. Details of all liquid effluents and solid wastes and disposal methods including method of disposal and/or treatment of sewage.
Any industrial effluent arising from site operations (ie washings, spillages etc) will be stored in drums or the spill retention tank prior to transport offsite for licensed treatment or disposal.
- General effluent arising on-site will go to the foul sewer system. This will be connected to an on-site package aeration treatment plant.**
-
27. If connection to surface water and foul sewer is required then size and description and gradient of drains must be shown on plans.
- N/A**
-
28. How supplied with water?
(for non-industrial purposes)
- Mains**
-
29. (a) Estimated No. of Employees
(b) Estimate of traffic likely to be generated
- (a) 12
(b) 20 to 30 more traffic movements daily than currently experienced in the area.**
-
30. How supplied with water-process and cooling. Method of disposal of cooling water with temperature details etc. Daily water Requirements.
- Mains water a/c cooling water to foul sewer.**
-
31. Energy/Power supply. Give details.
- ESB
Electricity consumption: approx 500 – 750 kWhr per working day**
-
32. Storage of materials/products. Give details of open and covered storage proposed.
- Approx 500 cu.m covered tank storage.**
-
33. Do you own any of the land which adjoins abuts or is adjacent to the site?
- Yes _____ No **X** _____
-
34. If yes, have you outlined it in blue on the site location maps submitted?
- Yes _____ No _____



McCutcheon Mulcahy
ENVIRONMENTAL PLANNING CONSULTANTS

2/3 Crawford Business Park,
Proby's Quay, Cork.
t. + 353 (0) 21 4313712
f. + 353 (0) 21 4328008
e. info@mcmaplanning.com

The Secretary
Planning Department
Cork County Council
Model Business Park
Model Farm Road
Cork

10 March 2005

Application by Atlas Environmental (Ireland) for Permission for a) change of use of 722 sq m of existing hospital/clinical waste recovery and treatment facility building, as permitted under P.A. Ref 02/5250 and EPA Waste Licence 145-1, to use as waste recovery, treatment and transfer facility for hazardous and non-hazardous waste, including hospital/clinical waste; b) construction of 798 sq m extension to rear of existing building, for light industrial use, including 148 sq m roofed tank farm; c) construction of 270 sq m extension for associated laboratory office use on front elevation; and, d) associated site development works, at Unit 9, Raffeen Industrial Estate, Raffeen, Monkstown, Co. Cork.

Dear Sir / Madam,

We act on behalf of the applicant, Atlas Environmental (Ireland) who wishes to apply for planning permission for the above development. That part of the site which accommodates the proposed waste recovery and transfer facility will be subject to a Waste Licence, currently under review by the EPA.

We enclose a cheque for €5991.20.

1.0 Introduction

The national healthcare waste tender was awarded to only one company in Ireland. Due to this change in market conditions it is not possible at present for Gleneden Trading Ltd to continue with its plans to operate a clinical/healthcare waste treatment facility at Unit 9 Raffeen Industrial Estate. Gleneden has therefore sought a review of its current Waste Licence 145-1 with the EPA, in order to facilitate plans by Atlas Environmental (Ireland) to operate a waste recovery and transfer facility from this site.

The new waste activity proposed will occupy that part of the existing building originally permitted under P.A. Ref. 02/5250 (not the extension later permitted under 03/6118). A new waste licence will apply to this part of the site. The proposed extension is for light industrial use. This proposed light industrial use comprises the warehousing of wastewater treatment chemicals in addition to the blending and formulation of these chemicals for customers (Local Authorities & Private Industry operating Waste Water Treatment Plants and Potable Water Plants). This use is to be relocated from the Ballycurreen Industrial Estate, where it is currently operated by Atlas' sister company Envirotech. The proposed non-waste activities would be completely segregated from the waste activities being carried out in separate units within the proposed development.

The current Envirotech facility in Ballycurreen operates a laboratory associated with their existing activities. It is proposed to relocate this to the facility through the extension of the existing office buildings. The laboratory will also support the proposed waste activities by offering a means of analysis for waste oils delivered to the site. All laboratory effluents will be directed to a retention tank for offsite disposal. In the event of a sewer connection becoming available it would be the intention to avail of this through a trade effluent discharge license.

It appears from the planners reports attached to applications 02/5250 and 03/6118 and from the conditions attached to the latter, that a permission for any change of use from one form of waste activity to another, or from waste activity to light industry is required. It is on this basis that the current planning application is made.

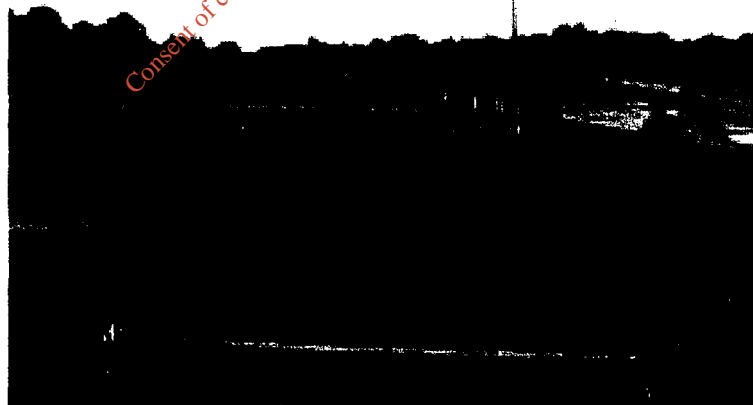


Fig 1. View of site and exiting 'Unit 9' building (02/5250) from west.

2.0 The Nature of the Proposed Use

2.1 Existing, Permitted and Proposed Floor Area Breakdown

	Area of warehousing (sq.m)	Area of offices (sq.m)	Total	Plot ratio
Existing Building	722	100	822	0.15
<i>Permitted extension PA 03/6118</i>	585	-		
Proposed extension + tank farm	650 + 148	270	1068	
Proposed total	1520	370	1890	0.35
<i>Permitted total</i>	1322	100	1422	0.26

2.2 722 sq m of existing building for Waste Activities (Change of Use)

Waste Licence Registration 145-1 permits the collection, storage and treatment (using a non-burn method) of hazardous healthcare waste at Unit 9, Raffeen Industrial Estate, Raffeen, Monkstown, Co. Cork. (P.A. Ref. 02/5250)

Gleneden, the Waste Licence holder, has applied to the EPA to change the terms of the licence to allow for the acceptance, bulking-up, temporary storage and onward shipment off-site of waste oils and other hydrocarbon containing materials. Atlas Environmental Ireland (Atlas) will be responsible for the proposed activity, dealing in waste oil and other small-scale hazardous wastes.

Due to current unfavourable market it is the intention of the applicant to suspend the processing of hazardous clinical waste on site. All plant equipment connected with the treatment of clinical waste will be decommissioned, dismantled and placed in off-site storage. While it is not proposed to operate this process in the short term Atlas wish to retain the potential to recommence this process if market conditions change from the current position. Thus the permission sought also includes reference to the use of the building for the treatment of clinical/healthcare waste.

The new proposed waste related activities at the facility will entail accepting, holding and bulking up hazardous and non-hazardous wastes and the onward shipment of the waste to licensed recycling/ recovery or disposal facilities. The materials to be handled and stored at the proposed development would consist of a variety of water treatment aids and non-hazardous substances including:

- Nutrient feeds (Aqueous solutions of Nitrogen, Phosphorous, Potassium and other mineral salts);
- Coagulants and flocculants,
- Polyelectrolytes or polymers,
- Corrosive liquids - acids and bases for pH adjustment;

- Foam Control Chemicals
- Odour Control Chemicals i.e. masking sequencing agents;
- Activated Carbon i.e. for odour, colour, taste removal;
- Water binding agents e.g. lime
- Packaging materials e.g. IBCs, drums, containers etc

The principal elements of the development will comprise:

- A main warehousing unit to be used for the receiving and storage of waste materials, mainly hazardous waste.
- A spillage retention tank
- A tanker parking/inspection area
- Welfare facilities and ancillary offices
- Incoming waste inspection & dispatch assembly area
- Car parking

The activities proposed on the site do not themselves lead to the production of wastes. The only waste that would possibly be treated on site would be healthcare waste for which the licensee currently holds a waste licence. It is not however proposed to operate this process in the short term, as mentioned above.

The normal operating hours of the facility will be 7:00am to 9:00pm Monday to Saturday. Special deliveries e.g. waste oils from ships or as a result of an emergency call-out to spillages, may occur occasionally outside those hours. Obviously, it is not possible to predict when such deliveries might occur.

Article 12(1)(f) Classes of Activity (Waste Management Act 1996 to 2003)

The activities proposed will comprise both waste disposal and waste recovery.

The waste disposal activities proposed (under the third schedule of the Waste Management Act) are the same as currently permitted:

- Class 7:** Physio-chemical treatment not referred to elsewhere in the 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 8 to 10 of the Schedule (including evaporation, drying and calcination)
- Class 12:** Repackaging prior to submission to any activity referred to in the preceding paragraph of this Schedule.
- 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 was produced.

The new waste recovery activities proposed are described under the 4th Schedule of the Waste Management Act:

Class 13: Storage of waste intended for submission to any activity referred to in the preceding paragraphs of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

The principal activity at the site will be Class 13 of the Fourth Schedule (Recovery Activities). All waste oils transferred through the facility (c.4,000 tons per annum) will be sent for recovery to the Atlas facility in Portlaoise (unless unsuitable). In addition other wastes including waste oil filters, used batteries, fluorescent tubes, waste cooking oil, photographic wastes are also to be sent off site for recovery.

The site is currently licensed to accept and treat 1,600 tonnes of clinical waste per annum. It is now proposed to accept and bulk-up an extra 5,400 tonnes of waste (mainly waste oils but including used car batteries, used oil filters, fluorescent tubes, cooking oils and other similar wastes as appropriately licensed) per annum. The total waste to be accepted per annum, which Atlas is seeking permission for, will therefore be 7,000 tonnes. The total daily waste to be accepted will not exceed 100 tonnes per day it is envisaged that the daily waste will on average be 25 tonnes.

2.2 Proposed 1,068 sq m extension for light industrial use (Non Waste Activities), including 270 sq m laboratory office and 148 covered tank farm, to replace permitted 585 sq m extension (03/6118)

In addition to the waste activities outlined above, Atlas proposes to relocate the existing operations of their sister company (Envirotech) to the application site. Envirotech currently operates out of Ballycurren Industrial Estate. Envirotech's activities are largely warehousing of wastewater treatment chemicals in addition to the blending and formulation of these chemicals for customers (Local Authorities & Private Industry operating Waste Water Treatment Plants and Potable Water Plants). The non-waste activities would be segregated from the waste activities being carried out in separate units within the proposed development.

Raw and Ancillary Materials

The only raw materials to be used are drums, pallets etc. used to safely pack products/waste before dispatching the waste off-site for recovery or disposal.

Mains water is utilised in the blending and formulation of certain Envirotech Products. The water usage amounts to 5m³ per day (5-6 days a week). An additional 1m³ is envisaged for washing/cleaning activities that may arise.

Electricity, gas and fuel consumption will be minor.

3.0 Plant, Methods, Processes, Abatement and Operating Procedures Plant

The existing plant equipment will be dismantled and safely stored off-site.

The plant required for conducting the proposed waste operations (i.e. handling, storage and off-site dispatch of waste oil materials) at the facility will consist of a pump, a pressure washer, forklifts and a storage tank farm.

The storage tank farm would consist of 9 tanks (~50m³ each). The tank farm would be roofed but open at the sides to permit adequate ventilation but protect the area from precipitation and the potential generation of contaminated surface water.

- Three of the tanks would be associated with the proposed waste activity of the facility and used to store waste oils/oily waters and would be banded separately.
- One tank would act as a combined spill retention tank and provision of additional secondary containment for firewater retention is this is required under the reviewed Waste License. As such this tank in itself acts as a bund rather than a storage tank.
- The other 5 tanks would be used to store bulk chemicals associated with Envirotech and would be banded separately.

The plant associated with Envirotech's operations (non waste) consists of an air compressor, pallet racking, storage/blending/formulation tanks (3 no. tanks housed within the main warehouse) and associated pumps. In addition the waste and non-waste activities will share the use of 2 forklifts at the site.

4.0 Methods, Processes and Operating Procedures

4.1 Waste Activities

Only properly labelled and authorised waste will be received at the facility. Waste will be accepted at the plant from fully licensed and registered carriers only. All authorised transport personnel will be fully trained in regulated ADR (Hazchem) requirements.

Deliveries of incoming waste will be scheduled to facilitate prompt unloading and storage of material. Once a consignment arrives at the facility it will be directed to the waste inspection area. All documentation will be checked. All tankers or containers will be visually checked for leaks. Rejected loads will be returned to the site of origin or quarantined on-site. Once accepted, loads will be directed to the appropriate storage bay area or storage tank.

Every drum, box and container etc. is given an individual barcode, which is clearly attached to two sides of the container. An "Incoming Waste Form" is then completed which records the drum number, the waste type, the drum type, the storage area, the UN number, the condition of the drums and if necessary the weight. If re-drumming is required this will be noted and recorded in the waste variation form.

Once quantities of various wastes have been accumulated to a manageable quantity they will be shipped off-site either in road tankers or in pallets.

There is no land filling of waste directly associated with this proposal.

4.2 Non-Waste Activities

Deliveries of products for warehousing will be received and unloaded into the proposed warehouse for storage. Dispatch of materials will act in a similar manner with products loaded by forklift on to vehicles for delivery to customers. All the materials/products stored or handled are generally non-hazardous although some storage of acidic and basic (i.e. corrosive) and small quantities of flammable materials (e.g. IPA) are required. Such wastes are suitably segregated and stored with secondary containment to provide adequate control of their hazards. All loading and unloading of bulk (tankers) liquids will be carried out in contained areas within the proposed building.

Blending and formulation of specific products is carried out whereby the various constituents of the product are pumped into a blend tank and mixed together prior to being repackaged into IBCs or other containers as appropriate. These are then stored within the warehouse ready for dispatch to the customer when required.

5.0 Potential Impacts:

5.1 Waste/Chemical Emissions:

The most important technology used on site will be bunded. This means that if a tank or container is ruptured its contents will be held in a sealed secondary tank/bund. This provision of secondary containment will apply to all wastes and non-waste liquids stored at the facility. As such all entrances and exits will be ramped and an internal dwarf wall constructed around the internal surface of the external wall to provide a liquid retaining structure. In addition the storage tanks will be bunded by means of a separate poured concrete structure to a volume of 110% of the largest tank or 25% of the entire storage capacity whichever is the greatest.

All waste movements onto and off the site will be in enclosed vehicles. All waste handling, re-packaging, bulking and storage will be carried out within the confines of the existing building.

5.2 Noise/Vibration:

All loading/unloading of waste and bulking up of waste will take place within the building and will not give rise to significant adverse noise/vibration impacts. Noise/Vibration impacts may arise from operational plant and traffic to and from the site. Such noise/vibration is not expected to exceed current traffic noise levels experienced in the vicinity of the N28. The proposed development will add 20 to 30 more traffic movements daily in the Raffeen area compared with the previous level.

5.3 Dust:

Materials handling, re-packing and bulking-up may give rise to some minor dust emissions (the vast majority of materials are not dust generating). The only bulking of waste is where waste oils are pumped from the collection tanker to the bulk storage tank. No waste repackaging is carried out unless a container needs to be repackaged due to leakage or poor integrity. However, all such operations will take place under the enclosed conditions of the existing and proposed buildings.

5.4 Odours:

The materials/waste received at the facility will not give rise to significant odours due to:

- Wastes handled not being significantly odorous (waste oil, batteries, used filters, fluorescent tubes, cooking oil etc).
- The quick turnaround times for waste entering and leaving facilities
- The storage of materials/waste in sealed containers and tanks.
- No food or putrescible waste being accepted on site
- Non-waste materials handled not giving rise to odours (as demonstrated currently in Ballycurreen Ind. Estate where no complaints have ever been received).

Apart from waste oils, most containers will not be opened on site, only stored prior to transportation off site to approved recycling or disposal outlets.

5.5 Surface Water:

There will be no discharge of any effluent to surface water from the proposed facility. Surface/Storm water emissions will arise during periods of precipitation only. Surface water run-off from the existing external yard and existing roof are to remain unchanged. The new warehouse and hardstanding areas are to discharge to a new soakaway. For calculations and details for the new soakaway area see Documents 1 & 2, Appendix A.

With the future development of surface water infrastructure at the adjacent site, surface waters may be diverted to such infrastructure.

5.6 Sewage discharge:

There will be no sewer discharge from the proposed use. The toilet/domestic type sewage is treated on site. The existing treatment facility has sufficient capacity to accommodate the proposed increase in working population. See Document 3, Appendix A.

5.7 Other:

The proposed activities will also have no impact on climate, cultural heritage, ecology, human beings, hydrogeology or landscape.

The Need for a Waste Recovery and Transfer Facility

Changing Our Ways, a waste policy statement produced by the Department of Environment and Local Government, 1998, which forms the basis of waste management planning in Ireland, encourages the regionalisation of waste management, a reduction in the reliance on landfill and greater participation by the private sector in waste management. The proposed development will facilitate the achievement of these aspirations.

The proposed use conforms to *Cork County Council's Waste Management Plan, 1999* which promotes the principles of 'Polluter Pays', 'Shared Responsibility' and waste and cost minimisation with regard to waste management.

The proposed development will deal largely with hazardous and specialist wastes and facilitates a better service capability than the company can offer currently. Currently, collections of waste oils and other wastes have to be delivered directly to Portlaoise involving long transfer timeframes. The proposed development will allow a local collection service operated by smaller vehicles backed up with bulk transfer to Portlaoise on separate vehicles.

EIA Requirement

The primary use proposed involves waste recovery and transfer. It does not require the preparation of an EIS. Under the provisions of Directive 74/442/EEC as amended by 91/676/EEC "recovery" means any of the operations provided for in Annex II B of the Directive. This includes recycling and re-use of oil and other organic/inorganic materials or its exchange or storage for submission to any of the operations listed in this Annex.

As the waste activity proposed is largely a transfer operation there are no process effluents to be discharged or any other significant emission that would necessitate such assessment. The proposed waste activity is small scale and the wastes involved are of relatively low risk and well controlled.

Where any physico-chemical treatment of hazardous wastes is to be re-activated, the tonnage to be handled would not exceed 1,600 tonnes per annum, which is significantly below the threshold set down under Item 11 of Schedule 5, Part 2 of the Planning Regulations. This use has already been permitted on the site under P.A. Ref. 02/5250.

Planning Context

The site is located within an area identified as an "established industry and enterprise area". The zoning objectives for such sites include provision for waste management activities, including waste treatment and recovery. (See Zoning Map 26, Volume 4. See also ZON 3-13 – ZON 3-16, Chapter 9, Volume 1)

The site within which Unit 9 is located has a governing permission for 9 no. light industry/warehousing units (99/2257). Apart from Unit 9, no other development has yet taken place on site. It is not possible therefore to

determine whether the site will eventually become characterised by small to medium industrial and warehousing units. However, as this Permission is due to wither in July 2005, this scenario is now unlikely. The proposed use is therefore considered to be in conformity with the Development Plan objectives for the site.

Unit 9 currently has its own governing permission for a clinical/healthcare waste treatment facility (02/5250). Given the conditions attached to the permission it appears necessary to make an application for a change of use from one type of waste activity to another. It is considered that the proposed change of use, however, remains broadly consistent with what is currently permitted on the site (02/5250 & 03/6118). Further, as the permitted use is not considered to come under the Class 4 category (light industry) of the Planning and Development Regulations 2001, it appears necessary to make an application for any change of use back to light industry, notwithstanding the governing permission which applies to the wider industrial estate.

As the principle of light industry was previously accepted for the overall site, and more recently the principle of waste activity at Unit 9 has been established, we consider that the proposed changes of use should similarly be acceptable, and in accordance with the proper planning and sustainable development of the area. As evident from the floor area breakdown in the table above (section 2.1), the proposal will not result in a significantly increased floor area to that already existing and permitted. It is not considered that the proposed use will result in significant intensification of use of this site.

Summary and Conclusion

The proposed activity is broadly consistent with the governing permission at Unit 9, Raffeen Industrial Estate (02/5250) and subsequent permission 03/6118. The proposed development is also consistent with the current zoning of the site as 'established industry/enterprise'.

The wider site currently has a governing permission 99/2257. The planning reports and conditions attached to this permission appear to allow scope for a wide range of industrial activities including those for which an environmental licence may be required. The proposed use would therefore be consistent with the potential uses of other permitted units within Raffeen Industrial Estate

The proposed development should be acceptable in principle to the planning authority, assuming the necessary amendment to the waste licence is procured.

We look forward to a favourable decision from the planning authority.

Yours sincerely,

Eleanor Mac Partlin
McCutcheon Mulcahy

APPENDIX A

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Consent of copyright owner required for any other use.

DOCUMENT 1

Kavanagh Ryan & Associates Limited. PLANNING DESIGN AND CONSTRUCTION CONSULTANTS. Unit 48, The Egan Centre, Dargle Road, Bray, Co. Wicklow. Telephone: (01) 276 5661/2 Fax: (01) 276 5663		ITEM CALCULATION SHEET	
PROJECT: Soakaway design for extension at Glenedan Trading limited, Rafeen industrial Park, Monkstown, Co. Cork.		SHEET: 1 OF: 1 BY: KR	JOB NO.: C04109
		DATE: March 05	

Information:

From previous planning applications for the site:

Percolation rate: Planning application S/99/2257 provides a recent percolation test for the site. Soil percolation rate for the site is **1.39E-05 m/s**.

Maximum rainfall: Planning application PA 03/6118 provides recent rainfall calculations. Maximum rainfall for the site is **39.8 mm** for a storm duration of 360 mins.

The total impermeable area of the new hardstanding and building extension **1610 sq.m**.

Calculation:

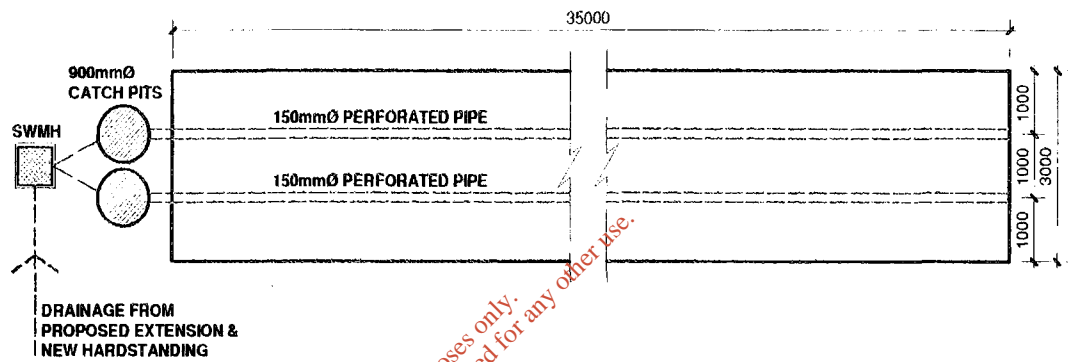
Description	Calculation	Result
Total rainfall over 360 min period.	$(1610 \times 39.8) / 1000$	64 m ³
Proposed soakaway dimensions.	35m (Length) x 3m (width) x 1.5m (Effective depth).	
The internal surface area of the proposed soakaway to 50% storage depth.	$(35+3) \times 2 \times 1.5/2$	57 m ²
Outflow	$57 \times 1.39E-05 \times 360 \times 60$	17.1 m ³
Required effective storage. (inflow-outflow)	64 - 17.1	46.9 m ³
Actual effective storage.	$35 \times 3 \times 1.5 \times 0.3$	47.25 m ³

Therefore required size of soakaway is **35m (Length) x 3m (width) x 1.5m (Effective depth)**.

DOCUMENT 2

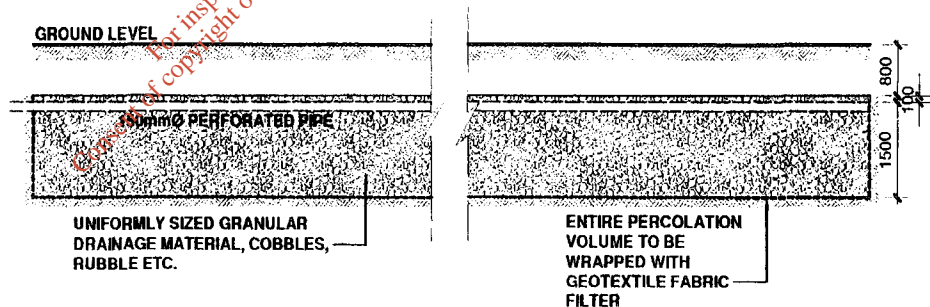
NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT KAVANAGH RYAN & ASSOCIATES DRAWINGS AND SPECIFICATIONS.
2. ALL DIMENSIONS TO BE CONFIRMED. DO NOT SCALE DRAWING.



DRAINAGE FROM PROPOSED EXTENSION & NEW HARDSTANDING

PLAN



SECTION

client	Extension to Existing Building at Glenedan Trading Ltd., Rafreen Ind. Park, Monkstown, Co. Cork.	scale	1:100.
		date	Mar. '05.
title	New Soakaway Details.	drawn	A.C.
		drawing no.	Glen-9.
© Drawing is Copyright		www.kavanaghryan.com	

no.	revision.	date

Kavanagh Ryan & Associates.
 Unit 48, The Egan Centre,
 Dargle Road, Bray, Co. Wicklow.
 Tel. 2765661/662. Fax. 2765663.
 E-mail. kmryan@eircom.net

Enviropak



Simon Allen Environmental Services, Boreen, Monaghan, Co. Louth, Ireland
Tel: 0459 041000 Fax: 0459 041001
E-mail: enquiries@enviropak.ie

17th Floor, 12-18, St. Vincent Street

1400205
Mr. Kevin Ryan
Kavanagh Ryan & Associates Limited,
Unit 48 The Fagus Centre
Dargle Road,
Hray,
Co. Wicklow

Re: Gleneden, Monkstown, Ringsaskilly, Co. Cork.

Dear Mr. Ryan

In response to your inquiry dated Wednesday, February 16, 2005, please find the following:

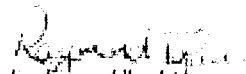
For a commercial development with 14 staff or 14 x 0.03 kgs BOD in 60 l of effluent/day = 0.42 kgs BOD in 840 l of effluent/day and additional loading of 2000 kg of detritus material 300 l/day giving a total daily loading of 0.42 kgs BOD in 1140 l of effluent/day

As the Enviropak domestic unit is capable of handling a Hydraulic Load of 1,940 l/day and an Organic Load of 48 kgs per day, it is more than adequate to accommodate the increase of staff at Gleneden, Monkstown, Ringsaskilly, Co. Cork.

The minimum separation distances as to the Table 4 of the EPA Waste Water Treatment manual 2000 for single houses must be strictly adhered to.

Should you require any further information, please do not hesitate to contact me

Yours Sincerely,


For Simon Allen Ltd



POLLUTION CONTROL ENGINEERS

Simon Allen Environmental Services

Attachment D

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Attachment D1(d)

The plant required for conducting the sterilisation of healthcare wastes consists of the following:

- Hydraulic lift
- Feed system
- Shredder
- Waste conveyor system
- Buffer tank (agitated)
- Sterilisation Vessel (with jacket for steam heating)
- Steam generator
- Waste conveyor (treated waste)
- Air filtration system
- Process control system
- Enclosed compactor

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Introduction

The existing sterilisation plant has been removed and is being stored off site awaiting sale. The unit has not been used to process waste since installation at the facility and hence did not require any special decommissioning procedures.

It is proposed to replace the disinfection plant with a new sterilisation system based on the same principle manufactured by the German company Erdwich. The model proposed is an Erdwich – Waste Sterilisation System Twin-ster 2500 capable of processing a maximum of between 250 and 300 kg of waste per hour. Drawing 2004-238-01-001 Rev B shows the proposed location and layout of the plant at the facility. Figure D2.2 shows the process flow while diagram D 1 outlines the plant operation.

Overview of the Process:

This system has been designed for the sterilization of clinical waste, waste from animal research and human genetics research. The facility to regulate the process temperature and the duration of the process ensures that all infectious organisms (bacteria, including mycobacteria, fungi, parasites) are killed. The fully automated system process with electronically monitored process control and management guarantees a secure operation of the system.

The specific waste to be processed is provided in packaged form and fed into the system using reusable waste containers. The lift and tipping device is designed for receiving waste containers of 120 – 1100 litres. The container is pushed into the lift and tipping. Afterwards, the full container is lifted hydraulically for loading the waste into the funnel. When lifting the lift and tipping, the funnel lid is opened simultaneously.

During the feed process, the single-shaft shredder installed below the feed funnel is not in operation. Then the lift and tipping device is lowered, the funnel lid closes and the shredder is started. By means of the hydraulic vertical press integrated in the funnel, the waste is continuously fed into the cutting gear of the shredder. The sieves installed below the shredder ensure the waste is reduced to particles of predetermined size of about 25x25mm. During this process, the waste is rendered unrecognisable and small containers are opened and can therefore readily be accessed in the sterilization tank by the vapour.

The solid and any liquid traces are directly transferred to a screw conveyor and discharged into the buffer tank with a agitator which is mounted centrally. Excess fluids which have not been raised by the feed screw are pumped into a level controlled collecting container and are then pumped during each sterilizing process into the sterilizer by a fluid pump directly or, if necessary, into the buffer tank. The operation cycle of the single-shaft shredder depends on the level in the funnel. When the material in the funnel has been processed, the lift and tipping device is enabled for the next feed process.

The buffer container is also monitored by a level control and cuts off feeding into the shredder as well as the shredding unit itself if the set maximum fill level has been reached. As soon as the sterilizer has ended the process it signals that it is empty, the shredded material is fed from the buffer container by the high speed screw conveyor via an air lock equipped with a sliding gate.

When this sterilizer is filled, the feed screw switches off and the sliding gate located at the entry of the chamber is closed. The shredding unit is re-activated and material can be prepared into the buffer tank until needed. By intermediately buffering the shredded material, the sterilization chamber can be filled safely and quickly and minimising the filling time.

The sterilizer is now heated by means of vapour generated by the vapour unit, until the predefined sterilization temperature is reached (min 121°C). The sterilization is carried out under exclusion of air, by means of the fractional vacuum process. By alternating vacuum and vapour pressure phases, air, especially inclusions of air, which delay the heat transmission (vapour into sterilization material) are safely removed. In addition, to ensure optimal conditions, during the entire process, the material is

safely removed. In addition, to ensure optimal conditions, during the entire process, the material is continually agitated by the stirring device integrated into the sterilization chamber. The processing cycle involves initially heating up the sterilisation vessel so the pressure increases with the increasing temperature. This is momentarily released and vented back into the buffer tank and absorbed into the incoming unprocessed waste. This quick change in pressure creates a fractional vacuum which helps dissipate any air inclusions or pockets. In addition the waste material situated in the buffer tank is preheated prior to sterilisation for efficiency and any vapours condensed into the waste matrix.

Subsequent to this and only after expiration of the required sterilization time and temperature (121°C for a minimum of 15 minutes), the relaxation phase is activated, where the pressure within the sterilizer is equalised. The process line is completely enclosed from the hopper to the discharge conveyor, extraction is carried out at three points (input hopper, surrounding housing and discharge conveyor). The extracted air (from the hopper, housing and discharge) passes through a ceramic filter which removes particulates and condenses any remaining vapours which are then also returned to the buffer tank. The air then passes through a carbon filter before venting to atmosphere. Material build up within the filters can itself be sterilised using the sterilisation plant.

After the treatment, the sterilized waste is conveyable and its volume reduced considerably (~80-90 %). The vapour units not only serve to heat the sterilizing unit to the required temperature, but to support the sterilizing process by vaporization cycles to thermally disinfect the system before maintenance, repair and disassembly works.

Process Control

The entire process is monitored and controlled by means of a programmable logic control system (PLC). Malfunctions are indicated acoustically, via strobe lights and are displayed at the operator panel. The process temperatures are continually recorded in order to provide a verification of the executed sterilization process. These are recorded electronically and available for inspection at all times, records will be held for three years. Temperature is monitored at three points within the sterilisation chamber, (top middle and bottom) to ensure effective sterilisation.

If the temperature falls below the required process temperature on any of the three probes, the system automatically stops in order to prevent any non-sterilized waste being conveyed. The system resets and only allows discharge if the required retention time and maintenance of the required temperature have been met. Enclosed overleaf as figure D1a is a Environment Agency sterilisation validation test carried out on an identical unit operating in Stafford England. Sterilisation must achieve a 6 log reduction of Bacillus Subtilis or Bacillus Stearotherophilus spore forming bacteria in challenge tests.

Ongoing monitoring and verification of the treatment process is proposed as follows:

Residence time:	every batch is electronically recorded
Temperature:	continuously monitored and recorded with every batch Temperature verification strips inserted into waste stream daily
Processed waste size	Visual inspection
Biological activity	Challenge test against Bacillus spores, each batch Random samples of treated waste to be tested biannually

On initial installation of the plant a commissioning report will be submitted to the Agency for agreement prior to the commencement of waste treatment. This will include for the operation of pilot trials to ensure the efficacy of treatment prior to full scale treatment.

Figure D2a

Our ref: 04/03/04/VS-1
Your ref:
Date: 4 March 2004



Mr S Kirkby
 Clinical Waste Management Ltd
 Crooked Bridge Rd
 Stafford
 Staffs
 ST16 3NE

Dear Stewart

SPORE STRIP VIABILITY TESTING

Thank you for your patience whilst waiting for receipt of these test results. Please find tabulated below the results for the analysis of the spore strips submitted from your process. I'm pleased to report that there was indeed no recovery of live test organism from the samples that you submitted from test charges completed on 29th January 2004.

Methodology Employed.

Test Organism: *Bacillus Stearothermophilus*
 Test strips were delivered to the laboratory after processing by the client in sterile containers. The strips were aseptically dissected and transferred to test media (Dextrose Tryptone Broth) and incubated for up to 7 days at 56(± 2)^oC. Samples were then examined for the presence of acid and turbidity indicating growth of bacteria in the media.

Results

Test Item	Replicate	Result
Reference Control Strip	Replicate 1	Bacterial Growth
	Replicate 2	Bacterial Growth
	Replicate 3	Bacterial Growth
Test Charge No 1 29/01/04	Replicate 1	No Bacterial Growth
	Replicate 2	No Bacterial Growth
	Replicate 3	No Bacterial Growth
Test Charge No 2 29/01/04	Replicate 1	No Bacterial Growth
	Replicate 2	No Bacterial Growth
	Replicate 3	No Bacterial Growth
Test Charge No 3 29/01/04	Replicate 1	No Bacterial Growth
	Replicate 2	No Bacterial Growth
	Replicate 3	No Bacterial Growth

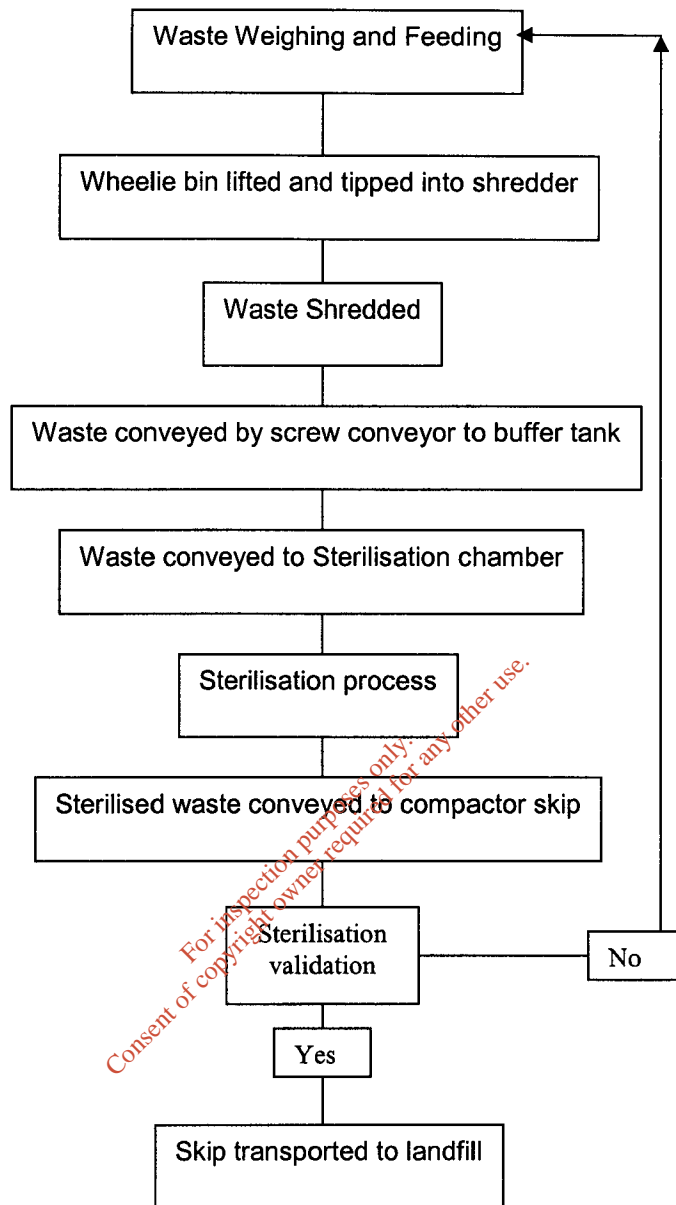
Cont'd.



**ENVIRONMENT
 AGENCY**

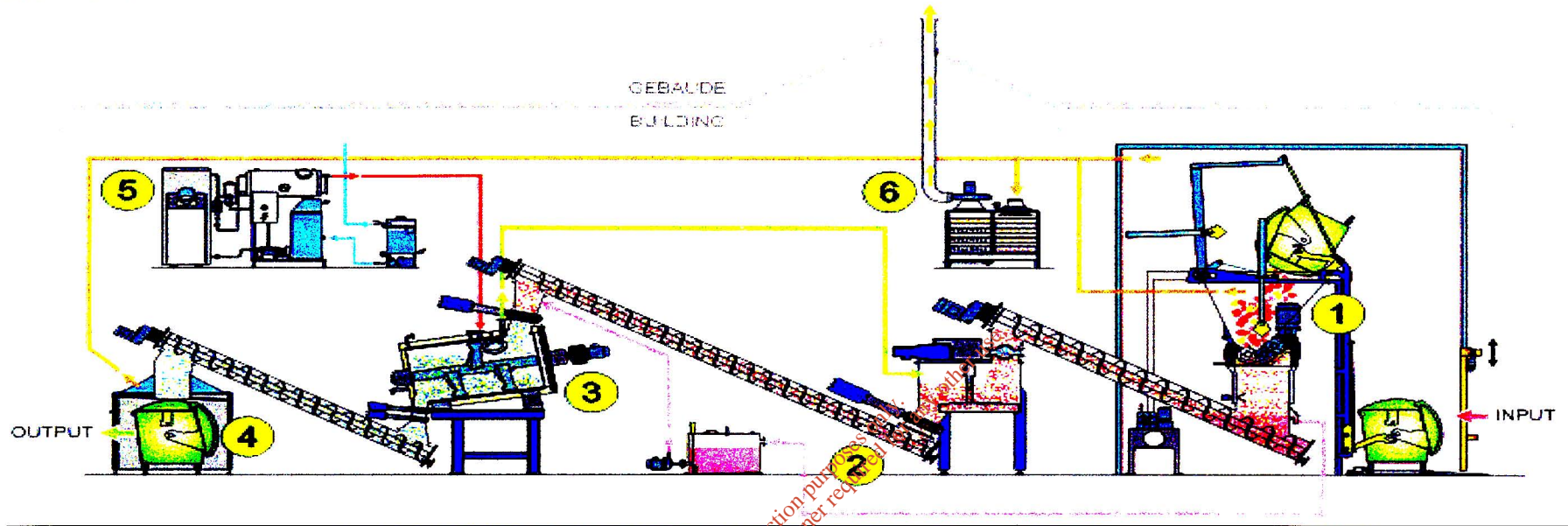
Environment Agency
 Leeds Laboratory, Olympia House, Geklerd Lane, Geklerd Road, Leeds, LS12 6DD
 Tel: 0113 244 0191 Fax: 0113 231 3116 Web Site: <http://www.environment-agency.gov.uk>
 If you do not see commercial information results contact us.

Figure D 2.2 Flow Diagram of Sterilisation Process

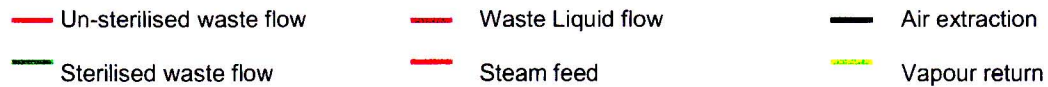


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Diagram D 1



1. Wheelie bin loading, tipping and waste shredding;
2. Buffer tank, containing shredded waste awaiting sterilisation (agitated);
3. Steam jacketed, rotating sterilisation chamber;
4. Discharge system (shown into wheelie bin, however compactor skips will be used)
5. Steam Generator;
6. Air filtration system;



Description of the plant components

Housing

The housing consists of a sandwich-panel-system with alu-coated PUR elements for the whole area of the lift and tipping device inclusively the shredding unit with integrated, electrically secured quick-travelling gate.

It is equipped with a closed bottom and all necessary connections for the added units.

Lift-tilt device

The lift-tilt device is flange mounted at the front of the frame and is driven hydraulically. It is equipped for receiving of waste containers of max. 1100 litre capacity (MGB) and waste bins of minimum 120 litres by means of a comb and arm rack assembly.

Technical data:

Receiving device	Comb and arm rack receiving device (DIN 30700 and DIN 30740)
Lifting force	500 kg
Feed tipping angle	135 degrees
Drive	hydraulic
Power rating ca.	4.0 kW

Funnel

The feed funnel is made of stainless steel and provided with an inspection door. The fillcapacity is sufficient for the contents of an 1100 litre wheelie bin. The transition to the reduction equipment is a sealed sliding fit construction, allowing a rapid separation from the reduction equipment when inspection work has to be carried out. In the upper region of the funnel is a steam connector, for the purpose of steam cleaning surfaces which have come into contact with the process materials, prior to the carrying out of service work.

Technical data:

Funnel volume ca.	1150 lt.
Feed opening	1350 x 1650 mm
Steam connector	DN 20

Funnel lid with vertical press

The funnel lid is also made of stainless steel. Integrated into the lid there is a vertical press mechanism which feeds the waste material to the cutting equipment and prevents the waste from building pile-ups which can lead to jams. The press has a hydraulic drive. The entire perimeter of the lid has a profiled elastic seal for sealing between lid and funnel.

Technical data:

Press range ca.	980 mm
Drive	hydraulic
Pressing power:	1000 kg
Power rating ca.	4,0 kW

Shredding equipment

The single shaft reduction equipment, with its compact construction, uses a rotor stator technique. The sieve segments, mounted underneath, can rotate on a central frame and guarantee a pre-defined particle size of the reduced materials. The reduction equipment is driven by an electric motor. For maintenance purposes the reduction equipment can be moved aside by means of a frame which can be flange mounted, to provide better access. To secure against overloading or the influence of foreign bodies, the reduction equipment is fitted with a maintenance drive.

Technical data:

Mechanical drive with reduction gear, full independent electronically managed control system, and sieve baskets which can be manually swung aside.
Cutting equipment access opening ca. 900 x 600 mm

Knife shafts	1
Total no. of knives	30
Knife diameter	315 mm
Knife width	30 mm
Shaft diameter	80 mm
Rotation speed	37 rpm
Drive power (two motors)	22kW
Maximum sieve hole size	30 mm

Intermediate funnel

The intermediate funnel is made of stainless steel and mounted beneath the reduction gear. It provides the link between the reduction gear and the feed screw.

A built in level control switch reports the fill level continuously, thereby directing the period for which the reduction equipment is running.

In the upper portion of the intermediate funnel is a steam connector for the purpose of steam cleaning surfaces which have come into contact with the process materials, prior to the carrying out of service work.

Technical data:

Funnel volume ca.	180 litre
Feed opening ca.	750 x 650 mm
Steam connector	DN 20

Screw feed (shredder – buffer tank)

The screw for feeding the material to the buffer container is made in the form of a stainless steel pipe screw. The screw speed is set to correspond to inclination and length of the screw segment, in order that material with a high fluid content can be fed. This screw is located beneath the intermediate funnel, and securely fixed to it by means of a sealed flange coupling. Drive is provided direct to the screw by a geared motor. In the upper region of the feed screw there is a steam connector for the purpose of steam cleaning surfaces which have come into contact with the process materials, prior to the carrying out of service work.

Technical data:

Feed length ca.	5000 mm
Screw Ø ca.	400 mm
Steam connector	DN 20
Drive	Mechanical
Power ca.	1,1 kW

Buffer container

The buffer container is a round container with stirring device made of stainless steel. The material is fed in via an opening in the lid of a diameter of 400 mm. The stirring device is driven indirectly via a chain drive. The drive of the stirring device is equipped with a reversing mode.

Beneath the discharge, a slide system is flange mounted. The fill level is monitored by means of an ultrasonic sensor.

Technical data:

Container volume ca.	1500 l
Container diameter	1500 mm
Container height ca.	2600 mm
Steam connector	DN 20
Drive of stirring device	Chain drive
Power rating ca.	1,1 kW

Discharge screw (buffer tank to sterilizer)

The screw for discharging the material from the buffer in the sterilizer is made in the form of a stainless steel pipe screw. The screw speed is set to correspond to inclination and form of the screw segments, in order that material with a high fluid content can be fed. This screw is located beneath the buffer tank and securely fixed to it by means of a sealed flange coupling. Drive is provided direct to the

screw by a geared motor. In the upper region of the screw there is a steam connector for the purpose of steam cleaning surfaces which have come into contact with the process materials, prior to the carrying out of service work.

Technical data:

Conveying length ca.	6500	mm
Screw Ø ca.	350	mm
Steam connector	DN 20	
Drive	Mechanical	
Power ca.	5,5	kW

Gate system – Feed

The gate system is in the form of a blade and is made from stainless steel. A suitable function monitoring system provides for operational safety. A pneumatic drive is provided.

Technical Data

Size	DN 300
Drive	Pneumatic

Sterilizer (process chamber)

The sterilizer is a cylindrical container, tipped from the horizontal and made from stainless steel. It is provided with a jacket for the purpose of steam heating. It is equipped with all necessary process and safety connectors, safety valve, inspection window and heat insulation. The integrated screw stirring device, with a special spiral arrangement at the stirrer itself, serves to provide defined material movement and residue free emptying of the process chamber.

The process chamber is produced according to the TRD (German technical regulations for steam vessels) directive and tested by the TÜV (German technical control Board).

Technical data:

Usable volume ca.	800 litre
Total volume ca.	1200 litre
Chamber diameter ca.	940 mm
Length ca.	2400 mm
Operational pressure	2.4 bar
Max. operating temperature	150° C
Power ca.:	4,0 kW

Gate system – Discharge

The gate system for discharging material is constructed in the form of a gate area with two clearing blades made from stainless steel. The space between the gates is raised to the necessary temperature for sterilization by means of steam during the sterilization process, thus ensuring a secure separation of "treated" and "untreated" material. A suitable function monitoring ensures safe operation. A pneumatic drive is provided.

Technical data

Size	DN 200
Drive	Pneumatic

Discharge screw

The screw for discharging the material from the sterilizers is made in the form of a stainless steel pipe. The screw speed is set to correspond to inclination and form of the screw segments, in order that material with a high fluid content can be fed. This screw is located beneath the sterilizer and securely fixed to it by means of a sealed flange coupling. Drive is provided direct to the screw by a geared motor.

Technical data:

Conveying length ca.	3800	mm
Screw Ø ca.	350	mm
Drive	Mechanical	

Power ca. 5,5 kW

Discharge container

Beneath the discharge screw, after the sterilizer, is located an enclosed compactor skip. This has a flexible hood shrouding the discharge point into the compactor to ensure all the material enters the compactor chamber.

Fluid pump

A fluid pump in a stainless steel housing is provided for the purpose of pumping excess liquids from the collecting container, which cannot be raised using the feed screw. When a certain fill level has been reached, the fluids are pumped directly into the sterilizer and that during each sterilization process or, if necessary, into the buffer silo.

Technical Data:

Pump capacity ca. 150 – 375 litre
Drive Mechanical
Power ca. 0.75 kW

Steam system

The steam system consists of a vapour unit equipped with heating coil, protection against dry running as well as firing device.

The vapour unit is switched on or off according to the required steam volume.

Technical data:

Steam generating capacity related to 100° feed-water 600 kg/h
Thermal output 393 kW
Efficiency < 91 %
Maximum permissible operational pressure 10 bar
Working pressure max. 8 bar

Pressure piece made of boiler tubes mounted as a heating coil
Automatic steam device with double air insulation
Inclusively safety control
Heating up time ca. 3 minutes

Automatic steam – heating coil system, protection against dry running as well as firing device are type-examination tested and certified in line with module B of a pressure machine test according to directive 97/23/EG.

Water treatment unit (softener)

This water treatment unit is a ready-to-use installation of all components for supplying the steam generator. It consists the feed water tank with indirect heating, pumps, water softening, necessary valves and internal connection. This unit is installed directly near the steam generator.

Technical data:

Dimensions HxWxD ca.: 1100 x 1000 x 1900 mm
Raw water connection: 1"
Power ca.: 1,5 kW

Combination filter

The combination filter made of stainless steel is equipped with a drawer system. Owing to three different filter media, the exhaust air extracted by the fan is treated prior to discharge (see attachment F also).

Technical data:

Housing dimensions HxWxD ca. 1300 x 1350 x 780 mm
Filter media Ceramics

	Activated carbon
	Zeolite
Output ca.	1,1 kW
Flow rate ca.	1800 m ³ /h max

Plant control system

The plant is equipped with a switch cabinet which not only allows for the free programming of the control system (PLC) but also incorporates an operator panel (with a Windows based user interface) and user controls, e.g. switches, buttons, emergency button. Faults as collective messages, or, as the case may be, as separate fault messages for individual components, are noted in the OP and presented in visual form.

All electric motors are fitted with overload cut-outs. All other electrical components are protected with the necessary form of fusing.

The following types of operation time can be read from the integrated elapsed hour meter:

- Total power-on time of the plant. (Control system power)
- Total on time of the process chamber.
- Running time of the reduction equipment.
- Temperature recording system.

During use, process temperatures and parameters are continuously monitored. This parameters are archived by an electronic recorder.

This evidence can be read out by a memory card or an interface connection. The resulting report with the chosen time axis gives information about the sterilization which has been carried out.

Surface treatment

For assemblies made of stainless steel:	Sand blasted,
For assemblies made of steel:	2 component primer and surface paint.

Insulation

For heat conducting components:	Mineral wool – 100 mm thick, covered with laminated aluminium sheeting (removable for maintenance work) Armaflex HT tube insulation 22 mm
---------------------------------	--

Maintenance

Maintenance will be as per the manufacturers instructions see attachment D2.1. The system incorporates an electronic diagnostics system which can be remotely accessed via modem to provide service support.

A full set of critical spares will be held on site including:

- Shredder blades
- Critical valves
- Sensors
- Bearings
- Shredder seals

Electrical consumption

Rolling gate	ca.	0,37	kW
Hydraulic for lift-tilt device and vertical press	ca.	4,0	kW
Shredding equipment	ca.	26,0	kW
Fluid pump	ca.	0,75	kW
Feed screw	ca.	0,75	kW
Buffer container stirrer system	ca.	1,1	kW
Screw discharge buffer tank	ca.	5,5	kW
Sterilization tank	ca.	4,0	kW
Screw discharge sterilizer	ca.	1,5	kW
Steam generator	ca.	3,0	kW
Water treatment unit	ca.	1,5	kW
Feed-water pump	ca.	0,75	kW
Filtering system	ca.	1,1	kW

Technical Data:

Machine type:

TWIN-STER 2500

Sterilization temperatures:

124 °C to 150 °C – variable

Waste sterilization time:

at least 20 min – variable to up to 90 min.

Throughput rate approx.:

150-250 kg/hr - depending on compound of waste

Noise generation during operation:

78 dB(A) max

Feed hopper:

- capacity approx.

0,5 – 1,1 m³ variable

Force feeder:

- vertical in funnel lid

hydraulic ram

Shredder:

- drive power

2 x 11 kW

Sterilizator (process chamber):

- useable volume approx.

1200 ltr.

- operating pressure approx.

2,4 bar

- operating temperature max.

150 °C

Steam system:

- types of fuel:

fuel oil, natural gas

- steam performance approx.

400 kg/h

- operating water supply

max. 3 bar

Size and Weight

Overall length (depending from the layout) ca.: 10.000 mm

Overall width (depending from the layout) ca.: 9.000 mm

Overall height (funnel lid closed) ca.: 5.000 mm

Overall height (funnel lid open) ca.: 5.800 mm

Total weight approx.: 18.000 kg

Electrical supply

Maximum power load approx.:

80 KVA

Average power-consumption app.

38 – 45 KW/h (depending on the material)

Voltage:

400 V, 50 Hz 3 ~ N/PE

Minimum fusing: 3 x 125 A

Water supply

Nominal diameter - supply water line: 1 ¼"
Nominal pressure max. - supply water line: 3-6 bar
Nominal diameter -waste water line: DN 100

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Attachment D1 (f)

As such the laboratory operation is primarily for non waste activities although certain waste related tests (e.g. microbiological, water content of waste oils and flashpoint testing) may be carried out in the future, currently these tests are carried on arrival at our Portlaoise facility. Water content analysis requires minor use of trichloromethane (30ml) and methanol (10mls) per sample equating to 6 litres and 2 litres annual usage per year if these tests were carried out on site. Flash point testing does not require any reagents. As such the quantities involved if these tests are carried out in the future are considered minor.

Routine tests conducted at the laboratory in relation to our commercial services include:

- Specific Gravity
- Caustic Strength Titrations
- Free and Total Chlorine
- Ammonia
- Nitrate
- Nitrite
- Total Nitrogen
- Total Phosphorus
- Orthophosphate A and B
- Phenols
- Chemical Oxygen Demand
- BOD
- PH
- Sulphate
- Sulphide
- Surfactant
- Conductivity
- Total Hardness
- Calcium Hardness
- M- Alkalinity
- Suspended Solids
- MLVSS
- Nitrotox
- Polytox
- Metal analysis
- Oil Fats and Grease

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The analytical equipment currently in use includes:

- Dionex
- FT Infra Red
- Muffle Furnace
- HACH Spectrophotometer
- Balance
- Atomic Absorption
- pH Meter
- Dissolved Oxygen Meter
- Conductivity Meter

The proposed laboratory to be constructed at the facility will be modelled on the existing laboratory in Ballycureen. The lay-out of the proposed laboratory will incorporate two fumehoods (as does the existing laboratory in Ballycureen – see emission section E below). The proposed internal lay-out of the laboratory is shown in drawing 2004-238-01-001 Rev B . All contaminated washings and effluents generated through laboratory operations will be discharged to an IBC for appropriate disposal off site. Only hand washing and sanitary effluents will be discharged to the package treatment plant.

In relation to the validation of sterilisation by the sterilisation unit external laboratory facilities will continue to be used (e.g. Labcheck) as previously agreed. Future in-house testing (on site laboratory) may be considered in consultation with the Agency.

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Attachment D2

Duty & Standby Capacity

Waste Transfer Operations

In relation to the capacity of the site to accept waste deliveries there are a number of contingency measures available to ensure adequate continuity of service. As the facility is largely a transfer station the main limiting factor is considered to be the availability of space at the final destination facilities and speed of throughput. In addition the provision of two forklifts allows for the breakdown of one without significantly affecting our capacity to operate.

Sufficient storage capacity will always be available at the proposed facility because once significant quantities of waste have been amounted it will be transferred to their appropriate treatment/disposal facility. In most cases this will either be our sister facilities in Shannon and Portlaoise. In other cases direct exporting of the waste to an appropriate facility will be carried out under TFS. As such the capacity of the facility is only limited by the availability of capacity at these external facilities.

It is envisaged that approximately 25 tonnes on average will be delivered to the facility per day. The proposed storage areas for packaged waste have a capacity to store a maximum of 189 tonnes (or pallet spaces) of waste with an additional 150 m³ for bulking waste oils/hydrocarbons. As such there is capacity for approximately 13.5 working days acceptance if no wastes were removed from the site.

The facility in Portlaoise has excess capacity for processing waste oils and thus there is no issue with the availability of processing or storage space. It is envisaged that as soon as there is full loads of waste oil (28,000 – 30,000 litres of waste oils) that these will be collected for transport to Portlaoise. It is envisaged that up to 90,000 litres a week of waste oil/hydrocarbons will be transferred through the facility. This is all currently being transported directly to Portlaoise and thus there is established capacity available for this waste. Therefore up to three shipments of waste oil/liquids off site would be required.

The packaged wastes are also readily transportable to their appropriate treatment/disposal facilities. The facility will allow small collection vehicles to regularly service our customers while larger vehicles (e.g. 40 foot articulated curtain siders) will transport the waste from the facility to the appropriate treatment/disposal facility. It is envisaged that up to three collections per week would be required to transfer the collected waste to its appropriate facility.

In the unlikely event that there is no storage capacity at the facility wastes could either be redirected for transport directly to one of our sister plants (Shannon or Portlaoise). These EPA licensed facilities have much larger storage capacities than the proposed facility. In addition as the penultimate contingency measure, customer collections could also be suspended for several days without causing any significant environmental risk.

Healthcare Wastes

Contingency arrangements for Healthcare wastes will continue to operate as previously agreed with the Agency under the existing license. These will be supplemented by an agreement with another licenced healthcare waste processor, Ecosafe to provide treatment capacity at their licensed facility in Dublin (Ref 54-2_ should be necessary (See Attachment D)



Unit 1a Allied Industrial Estate,
Kylemore Road, Dublin 10
Telephone: (01) 623 9135
Facsimile: (01) 623 9136

e-mail: services@ecosafesystems.ie
www.ecosafesystems.ie

8th July, 2005

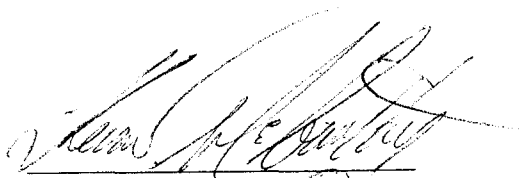
Mr. Gareth Kelly,
Atlas Ireland,
Unit 9,
Raffeen Industrial Estate,
Monkstown,
Co. Cork

Dear Gareth,

Further to our meetings and subsequent telephone conversations, we wish to confirm our agreement to handle Healthcare Risk Waste at our facility on your behalf. The waste will be processed in accordance with the terms of our EPA licence 54-2.

We look forward to being of service.

Yours sincerely,


Kevin McCarthy
Commercial Director

Attachment F

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Air extraction and Filtration system (Helathcare Processing)

The details are provided as follows. In addition please see also revised table F 1.

The filter system is a three stage process as shown in fig. STS-13-1 .

During operation, the filter system extracts air /aerosols from the funnel area and discharge area. The extracted air is purified by the filter system and then released back to the atmosphere.

The filter media listed below are composed to form an effective filter system, which features long service life and the facility to easily clean the filter media.

The first chamber is equipped with:

- 4 Filter baskets with **ceramic rolls**

The second chamber is equipped with:

- 3 Filter baskets with **activated carbon**,
- 1 Filter basket with **Zeolite** (Metasorb)

The filter baskets are all covered with a filter mat, which intercepts coarse particles (fluffs etc.).

The crude gas is fed to the first chamber (containing 4 ceramic filters) . The vapour condenses and the condense liquid is dissipated to the integrated floor tub, thus reducing odour. Condensed vapours are returned to the buffer tank for processing.

In the second chamber (3 activated carbon and 1 zeolite), odour and other pollutants pollutants are systematically, absorbed prior to discharge.

The filter housing is designed as a two-chamber three stage system.

Housing with floor tub, filter baskets for the housing of the filter media and entry fittings are made of high-grade steel. Two large front doors facilitate the access for maintenance purposes.

The degree of pollution of the filter media is indicated by the differential pressure gauge.

The differential pressure is influenced by the installed air extraction system (site specific ducting).

The actual differential pressure will have to be determined and documented after the equipment has been fitted with the filter elements.

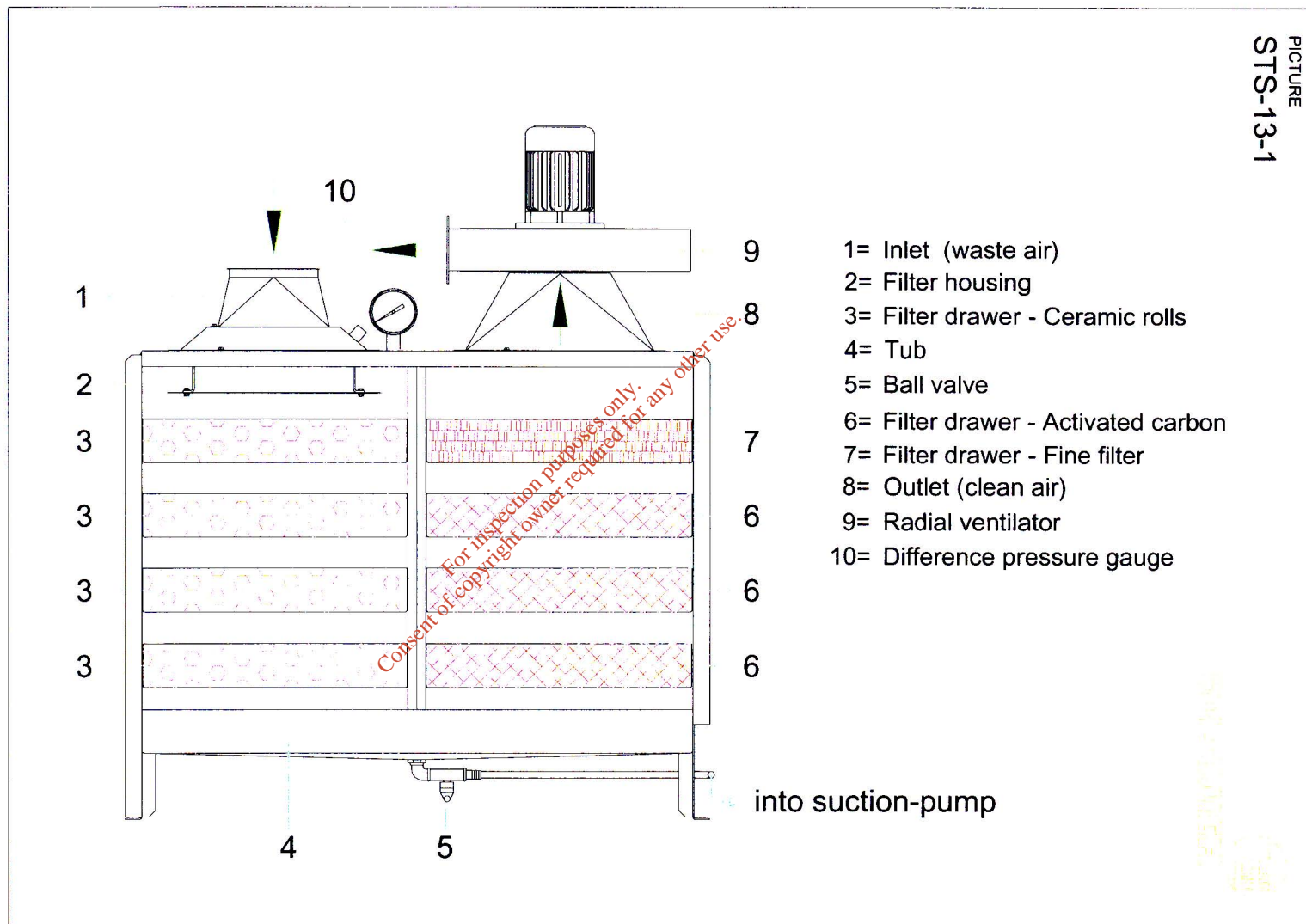
Once the differential pressure exceeds 10 mbar, the filter media must be replaced.

The filter media can be cleaned and reprocessed (fig. STS-13-1; items 3 and 7).

The filter medium (fig. STS-13-1 item 6) is replaced after saturation (The contaminated filter medium can be shredded and disinfected in the equipment).

Assembly / subassembly	Description
13-1 Filter unit	8 Filter baskets - dimension approx.: L=700 B= 600 H=100 – material 1.4301 Filter media: 1. – 4. filter basket – ceramic rolls (a 30 lt.) 5. – 7. filter basket –activated carbon (a 30 lt.) 8. filter basket – Zeolite (a 30 lt.)

PICTURE
STS-13-1



Attachment J

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In order to prevent incidents arising Atlas will operate a combined Environmental, Health & Safety Management system, including the following elements:

Incident & Accident Prevention

Incident and accident prevention is an inherent part of the management style operated by Atlas. As such prevention is managed by the initial identification and assessment of hazards posed taking into account the precautions in place or proposed. If the risk is still considered high then additional measures are considered so as to reduce the risk to a satisfactory level.

The main accident scenarios identified at the facility include:

- Release of a dangerous substance
 - Containment failure – drum rupture or rusting
 - Impact by vehicle or other object
 - Operator error
- Fire
 - Ignition following release of flammable liquid
 - Self combustion
 - Arson
 - Electrical faults
 - Hazardous activities – welding, cutting, smoking, battery charging
 - External events – lightning, adjacent fire
- Explosion
 - Following a fire
 - Spills of incompatible materials/flammable substances;

The proposed facility design and operational management has been designed so as to incorporate adequate precautions so as to minimise the risk posed to the environment and also personnel.

The management system (as operated at our other licensed plants) also includes for continual hazard identification, systematic assessment and management of the identified hazards to reduce the risk to acceptable levels. Thus any changes in facility design or operation is subject to an assessment to ensure adequate precautions are put in place.

Operational Procedures

The EHS management system also incorporates documented standard operating procedures that help ensure the safe management of activities carried out on the site. Documented procedures relating to the control of certain activities at the facility include:

- Waste Acceptance
This procedure controls the types of waste acceptable at the facility to prevent inappropriate wastes arriving at the facility.
- Waste Labelling, Storage & Segregation
A formal storage plan is operated to ensure waste containers are labelled and packaged appropriately. In addition the procedure details how to segregate appropriately different classes of waste so as to minimise the risk involved by their storage
- Permit to Work
This procedure controls hazardous activities such as welding, cutting, construction work and other hazardous activities to ensure these works are adequately controlled and do not cause incident;
- Control of Contractors (including visitors)
This control procedure ensures contractors are suitable inducted regarding control measures at the facility.
- Preventative maintenance
This is a preventative maintenance procedure to ensure that relevant plant and equipment is maintained to ensure correct and efficient operation.

- Management of change
Any significant changes to the facility, processes or the addition of new equipment is assessed under this procedure to ensure that all risks are identified (both health & Safety and Environmental) and appropriately assessed and controlled.
- Incident & Accident reporting
Incidents and accidents if they occur are logged and assessed for corrective action. Any corrective action identified is then tracked to ensure its completion. Near miss incidents are also recorded to maximise good HSE management.
- Housekeeping inspections
Inspections are carried out regularly to inspect storage, house keeping, leaks/spillages etc and ensure appropriate measures are taken to remedy any faults identified.
- Fire Extinguisher operation & maintenance
Fire equipment is inspected regularly and a service contract in place for its maintenance.
- Emergency Response Plan
This plan outlines the procedures to follow when a major incident occurs on the site; while certain incidents can be dealt with by onsite personnel certain incidents (Fire, major spillage) include the Emergency Services;

The activities on site will be subject to regular scheduled HSE audits to ensure their correct operation and validity. Subsequent to audits any corrective actions identified are documented and tracked to ensure the necessary remedial measures are put in place.

Communications & Training

The company operates an effective communications programme to keep employees fully informed regarding the hazards posed from both an Environmental and a Health & Safety perspective.

A HSE Committee will also be formed to facilitate employees bringing their concerns in relation to Health, Safety and Environmental matters to the formal attention of management. The HSE committee is attended by both elected representatives of the employees and management. Minutes are maintained of these meetings and the progress made in relation to the issues raised. In addition communication is assisted through electronic means (email & an electronic HSE management system currently being implemented) and the use of notice boards. Minutes to all HSE committee meetings are posted on the notice board.

Training forms an integral part of the HSE management at the facility. All personnel go through a combined HSE induction programme on recruitment. Comprehensive training will be provided to all personnel involved in the management and handling of wastes and chemicals, depending on their role and responsibilities. This can include:

- Environmental Awareness (including Waste License requirements)
- Chemical hazard awareness
- Spill response and cleanup
- Forklift operation
- Waste Acceptance
- Storage & segregation of materials
- Use of fire extinguishers
- Confined space entry
- Use of breathing apparatus
- Incident & Accident Reporting

FIREWATER RISK ASSESSMENT REPORT

FOR

GLENNEDEN TRADING Ltd.,
Raffeen Industrial Estate
Raffeen
Monkstown
Co. Cork.

Waste Licence Registration no 145-1

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1.0 INTRODUCTION

This Firewater Risk Assessment Study was carried out as part of the review of Waste Licence no 145-1, Gleneden Trading Ltd. The study was carried out in accordance with the following documents:

- EPA (Draft) GUIDANCE NOTE TO INDUSTRY ON THE REQUIREMENTS FOR FIRE-WATER RETENTION FACILITIES (1995)
- IPPC Draft Reference Document on BAT on Emissions from Storage. Draft dated July 2003.
- EPA DRAFT BAT GUIDANCE NOTES FOR THE WASTE SECTOR: WASTE TRANSFER ACTIVITIES April 2003.

It is intended to modify the facility somewhat (as outlined in the application for licence review) with a view to extending the scope of licensed activities and also to incorporate non-waste, non-licensable activities (blending operations). In addition, healthcare waste treatment will be suspended pending developments in the market. This firewater retention risk assessment has been carried out in respect of the licensable waste activities. However, for completeness all potential sources (licensable and non-licensable) of firewater contamination have been considered.

The principal features of the site will include the following: •

- **Site:** One building surrounded by an access road with car park area adjacent to the office area (SSW). The main entrance is at the North West corner of the site. The site is located within an industrial area and is zoned for industrial development.
- **Tank Farm Area:** A Tank Farm Area will be located at the eastern side of the building, housing bulk tanks. The area will incorporate 3 separately bunded areas. Eight bulk tanks will be located there in total. Of these, 3 no. 54 m³ tanks will contain waste oils/hydrocarbons. The maximum volume of liquid which can be stored in each is 50 m³ (plus 4m³ ullage). These three tanks will be bunded to a capacity of 56 m³. Four 50 m³ tanks will hold raw materials associated with the blending operations and

will be banded to a capacity of 56 m³. The remaining tank with capacity of 50m³ will be banded to 55.5m³ and a 2,500 litre diesel fuel tank will also be stored in this bund.

- **Unloading Area:** An Unloading Area within the building will comprise a banded floor (17.5 m³ capacity), three dedicated storage bays for the storage of hazardous wastes and a quarantine bay. Each bay will be locally banded and will be separated by low level walls of approx 150mm high. Each bay (CK1 to CK3 and Quarantine Bay) will slope towards a 300 litre sump to facilitate cleanout.
- **Healthcare Waste Treatment Area:** The Healthcare Waste Treatment Area within the building will comprise healthcare waste treatment plant and a banded floor (57,846 litre capacity). Some blending process materials may be stored here pending improvements in the healthcare waste treatment market.
- **Blending Area:** The Blending Area will be used for non-licensable activities associated with production and storage of water treatment products. The floor will be banded to a capacity of 95,688 litres.
- **Laboratory:** A Laboratory will be located on the first floor adjacent to the western corner of the Healthcare Waste Treatment Area.
- **Offices:** Offices, meeting rooms etc will be located adjacent to the Healthcare Waste Treatment Area also. No hazardous materials will be stored in these areas.
- **Percolation Area & Oil Interceptor:** Surface water run-off will discharge to a percolation area to the south-east of the site. Water will be discharged via an oil interceptor with capacity of 7,000 litres. Foul sewer discharge will be treated with a package plant and discharge to the percolation area.

The facility will operate as a transfer station predominantly for the hazardous wastes set out on the following page. These will be stored in the Unloading Area and/or the Waste Oil Tanks as outlined in the licence review application.

Principal wastes to be handled:

Healthcare wastes	Batteries
Waste oil/hydrocarbons/solvents	Contaminated soil
Oily wastes (filters, rags etc),	Waste cooking oil
Fluorescent tubes	Photographic wastes
Drummed flammable liquids (e.g. oily rags, paints etc)	Aerosols.

The waste bays will have capacity to store up to 189m³ of waste material. Bays CK1 and CK2 account for 144m³ of this and will in fact contain mostly solid material or liquids which present low contamination hazards to the environment (i.e. waste cooking oils). In addition, wastes will be transported off-site once sufficient volumes to fill a 40 ft container have been reached. Thus in practice the actual volume of liquid material posing a potential contamination hazard to the environment will be very much less than 189m³. The quarantine bay will normally be empty and will only be used for any non-conforming waste drums/containers.

Healthcare waste treatment will be suspended pending market developments. During this time some blending process materials may be stored in the Healthcare Waste Treatment Area.

Blending operations are not licensable. These will involve the storage and blending of various compounds for sale as water treatment products. Principal liquid material inputs to the blending operations will include the following:

Materials	Projected Storage
Polymers	80 IBCs
Nutrients	50 IBCs
Foam Control	40 IBCs
Coagulants	30 IBCs
Others including acids	20 IBCs (Max)

The five 50m³ bulk tanks in the Tank Farm Area will be used to store additional blending material inputs as follows:

- Ferric Sulphate
- Aluminium Chloride
- Phosphoric Acid
- Coagulant (non-flammable)
- Caustic Solution

The phosphoric acid and caustic solution will be stored in separate bunds in the tank farm area.

The company will operate a combined environmental and health & safety management system (HSE Management System). The Envirotech site already holds certification to ISO 9001. Operations from Envirotech which involve blending materials for use as water treatment chemicals will be relocated to the Gleneden facility. These blending operations are not licensable.

The site will be operated by Atlas Environmental who have sister sites in Portlaoise, Shannon (Shannon Environmental Services), Cork (Envirotech) and Northern Ireland. These sites include registered SEVESO sites and waste storage and treatment facilities. In the operational history of these sites there has never been a major fire incident.

The site will be provided with full fire detection and alarm systems. A mobile foam unit will be used rather than sprinkler deluge systems due to the hazards sometimes associated with using water with certain hazardous chemicals. The entire Tank Farm will be controlled and monitored by a SCADA system.

2.0 RISK ASSESSMENT

2.1 Types of industrial operations that generally require fire-water retention facilities.

Gleneden Trading Ltd is covered under Section II of APPENDIX A of the guidance document and must therefore carry out a risk assessment of proposed controls unless it is proposed to install a firewater retention feature. In addition a review of materials has shown the following:

- Up to 4.5 tonnes of diesel will be stored on site in a bunded tank. Diesel is classified as an R52/53 compound and is also classified as R40.
- Material Safety Data Sheets for blending materials to be stored at Gleneden were reviewed. One Envirotech product, BREOX Foam Control Agent P12, contained substances with risk phrases of R50 to R54. Up to 10 tonnes of this material may be stored. Under normal circumstances it is anticipated no more than approximately 6 tonnes will be stored at a time. This material is to be stored in 1,000 lt IBCs.
- Other materials including acids/alkalis will be associated with the blending operations. Approximately 500 lt of H₂SO₄ will be stored in 25lt drums. Caustic 30% and Hydrochloric Acid (HCl) 32% will also be on site.

Gleneden Ltd also falls under the category of a waste industry involved in the disposal or recovery of hazardous waste.

For the above reasons, Gleneden must carry out a risk assessment to justify its proposed contaminated firewater control measures as indicated in section (II)(b) of Appendix A.

2.2 Risk Assessment Criteria

The risk assessment criteria listed in APPENDIX B of the EPA Guidance Notes were considered. As this risk assessment is being carried out as part of a Waste Licence Review, information required under parts 1 to 10 of APPENDIX B have already been submitted to the agency elsewhere in Attachment J and are not included in this report. The following information is included in respect of part 11.

- **List of fire fighting equipment on-site**

Fire Extinguishers will be provided as follows:

- 2 No. 5 kg CO2 extinguishers
- 1 No. 2 kg CO2 extinguishers
- 2 No. 6 kg Aqueous Film Foaming (AFF) foam extinguishers
- 2 No. dry chemical powder extinguishers
- 1 No. hose reel
- 2 No. fire blankets

A fire hose reel will be provided within the plant building which will be connected to the mains water supply. There will be a fire hydrant located within 25 metres of the facility.

A mobile foam unit will also be provided on site for use by the Emergency Response Team (ERT).

- **Fire safety systems**

The building will be fitted with a fire alarm system and heat detectors. The alarm system will be connected directly to a monitoring station whom can alert the Cork County Fire Brigade, thus ensuring a very fast response in the event of a fire.

Bulk tanks in the Tank Farm will be controlled by a SCADA system which will incorporate automatic level control. The tanks will be painted externally to prevent corrosion. Internally there is no need for corrosion protection as the oil inhibits any

significant corrosion. Bulk storage tanks will be light coloured to reduce the solar absorbency of the tanks. These measures ensure compliance with BAT.

Ninety-minute fire resistant cladding will separate the tank farm from the main building and the waste bays from the office area.

Phone numbers of the emergency services will be posted in prominent locations throughout the building.

- **Emergency preparedness and response procedures**

In the event of a fire on site it will be fought with foam as water is not a suitable media for combating hydrocarbon based fires. In the tank farm area all three waste oil tanks will be sprayed with water in order to inhibit temperature rise above flashpoint of the material within. For small localised fires, hand held foam extinguishers will be provided in pairs (to allow for failure of one unit) at strategic locations on site, and in particular surrounding the flammable storage area. A water and dry powder extinguisher will be provided in the office and canteen areas. A portable foam making machine will also be kept on site to deal with larger fires. This unit will be permanently located in close proximity to the flammable storage area to act as first response to a major fire while emergency services are making their way to the facility. The criteria for selecting extinguisher foam will include level of eco-toxicity and extinguishment time.

The contaminated foam/water solution remaining after a fire has been quenched will be contained on site by the local bunds (in the case of a small-scale fire) and the remote bunds in the case of a large scale fire. The contaminated foam-water will be pumped to IBCs or tankers and will be taken off-site for safe disposal.

The above actions will be carried out by the on-site Emergency Response Team (ERT) which will be coordinated by Management/HSE Department. Minor emergency situations

will be managed through on-site resources. For larger scale emergencies the local fire fighting services will be called upon.

- **Design features incorporating containment**

Containment features within the Gleneden Ltd site comprise the following:

- Localised Bunding of Waste Bays and Quarantine Area
- Remote Bunding provided by Unloading Area, Healthcare Waste Processing Area and Blending Area.
- Bunded Tank Farm.
- Oil interceptor with shut off valve.
- Spillage control kits.
- Fire-Proof Cabinets for Laboratory Materials.

Waste bays and the quarantine area will be provided with local bunding. Bund floors will slope toward a 300 litre sump in the corner of each bund. These localised bunds will be sufficient to contain smaller volumes of spill material or small volumes of contaminated firewater associated with a small scale fire.

The localised bunds will be augmented with remote bunding provided by the floor areas in the unloading area, healthcare waste treatment area and the blending area. The blending area will also provide containment of spills and/or contaminated fire-water resulting from an incident involving blending operations (non-licensable). Table 1 below shows the volumes of materials and bunding capacity of each area. From this table one can see that the combined local and remote bunding should provide sufficient capacity to retain firewater from a major incident in either the waste bays or the blending operation areas.

Table 1: total capacity of bunds at Gleneden:

CK 1	7,000 litres	72,000 litres*
CK 2	7,000 litres	72,000 litres*
CK 3	5,000 litres	45,000 litres*
Quarantine Area	1,700 litres	16,000 litres*
Unloading Area (not including bays)	17,500 litres	None
Healthcare Waste Processing Area	57,846 litres	None
Blending Operations Area	95,688 litres	220,000 litres
Tank Farm: Waste Oil Tanks	56,300 litres	150,000 litres +
Tank Farm: Four Bulk Tanks	56,300 litres	200,000 litres
Tank Farm: One Bulk Tank	52,500 litres	52,500 litres

*In reality a large quantity of the wastes have little or no liquid content.

+It is unlikely that all 3 bulk tanks would be filled to capacity at any one time.

Theoretically up to 205 m³ of liquid material could be stored in the waste treatment area (including the Quarantine Area being filled to capacity). In practice however the materials to be stored in CK1 and CK2 are either waste cooking oils or are at least 90% solid. Waste cooking oils would not generally pose as significant a risk to the environment as other wastes. Not all of the waste in CK3 will be liquid either. The quarantine area is only to be used in the unusual event of leaking drums etc. Thus it is not anticipated that it would ever be filled to capacity. Under normal circumstances bunds CK1 to CK3 will operate with significant spare capacity and loads will be dispatched from the site regularly. Overall therefore the total volume of waste liquid material to be stored in the Unloading Area is likely to be very much less than 59.4 m³.

It is envisaged that as soon as there are full loads of waste oil (28,000 – 30,000 litres of waste oils) that these will be collected for transport to Portlaoise. Similarly drummed waste will be sent off site as soon as there are sufficient quantities to fill a 40ft truck.

In the Tank Farm Area there will be three bunded areas. One will contain 3 no. 54m³ (50m³ storage plus 4m³ ullage space) above-ground storage tanks and will have capacity to retain 56.3m³ in the event of accidental release. Another will contain four 50m³ tanks and will have capacity to retain 56.3m³ in the event of a tank releasing its contents. The third bund will house one 50m³ tank and a 2.5 m³ diesel fuel tank. This will be bunded to a capacity of 55.5m³. The bunds will be sized such that, in the event of a fire incident in the Waste Oil Tanks Bund the contaminated firewater will overflow into the other two. Similarly, contaminated firewater from one of the other two will overflow to the other bund rather than out of the Tank Farm Area. In this way there will be sufficient capacity to retain contaminated firewater in the Tank Farm Area. A canopy roof will be fixed above the tanks to prevent rainwater entering the bunded areas within the tank farm.

An oil interceptor with capacity of up to 7,000 litres and incorporating a shut off valve will be located adjacent to the percolation area. While this could provide additional containment volume in the event of hydrocarbon contaminated firewater runoff it is unlikely that this would be required due to the reasons stated above. The principal purpose of the interceptor would be accidental spillage containment.

Spill Kits will be provided at strategic locations around the site for containment of spills. These will contain absorbent material and booms for preventing the spread of spilled material and for cleanup of spills. These will be located in areas such as the unloading area where risk of spills may be greater.

Materials in the laboratory will typically be stored in small containers of approximately 1 to 10 litres. These will be stored in fire resistant cabinets which incorporate a degree of spill containment.

- **Access by fire fighting equipment into and around the site**

The building will be surrounded by an access road on all sides. Vehicles for delivery and collection will enter the main gate and proceed to the unloading area at the rear of the building via the northern and eastern flanks of the site. Then they will continue around to the front of the building via the southern and western flanks to exit the main gate in the north west corner of the site. Employees and other vehicles will enter the main gate and proceed via the western and south-western flanks to the car park in front of the Office Area. The access road to the rear of the building also passes by the Tank Farm. Thus, fire tender units would have full access to all relevant areas of the site in the event of a fire.

The Unloading Area and other areas associated with production will be laid out in such a manner as to facilitate access by forklift trucks. Therefore there will be sufficient space for movement of any fire-fighting personnel and hoses/equipment within the building.

- **Work force awareness**

Awareness of fire safety and emergency response will be reinforced among all staff through training and regular awareness promotion. Training will include the following topics:

- Environmental Awareness
- Waste License requirements
- Fire Safety & Emergency Response
- Chemical hazard awareness
- Spill response and cleanup
- Relevant Operational Controls (e.g. Waste Acceptance, Storage & segregation of materials)
- Use of fire extinguishers

- Incident & Accident Reporting

All personnel will undergo basic induction upon commencement of employment. Communication programmes will be in place to keep employees fully informed about environmental and safety hazards. Employees will be involved in the risk assessment process. A HSE Committee comprised of elected representatives and management will also be formed to facilitate employees bringing their concerns in relation to Health, Safety and Environmental matters to the formal attention of management. General awareness will be maintained through notices, bulletins and circulars as appropriate.

Fire notices detailing what to do in the event of a fire will be posted at prominent locations in the plant and these will contain the relevant emergency numbers (fire service, ambulance etc).

In addition, an in-house Emergency Response Team (ERT) will be developed. This team will be specially trained in fire-fighting and other emergency response activities.

- **Information held by local fire fighting unit**

The local fire fighting units will be fully informed of all materials stored on site and will be furnished with site drawings, MSDS (for blending materials), fire detection and alarm systems, site contact numbers as well as any other information they request.

In documenting the Emergency Response Procedures the fire station will be consulted and will be issued a controlled copy of the final version.

- **Available equipment of local fire fighting unit**

Carrigaline fire-station is the nearest fire fighting unit. It is understood that this station has at least two water tenders at its disposal. In addition the resources of this station can be augmented by other local stations including the main Cork City fire station. As stated earlier, the local fire services will be consulted and informed of all arrangements for fire prevention and response on site.

- **Security arrangements**

A standard palisade fence will surround the boundary of the site. The waste transfer building will be locked securely when the site is not in operation. A security firm will monitor the intruder alarm.

During normal operating hours an office within the waste transfer station building will monitor all traffic entering and leaving the site. All packaged waste will be stored within a secure area of the facility and waste hydrocarbons will be stored within tanks in the Tank Farm. Staff will supervise the site during normal hours of operation and the storage areas will be locked when not in use.

- **Response time of local fire fighting unit**

The Carrigaline fire station is located approximately six miles away and could be expected to respond to a call within 12 minutes. Other fire stations are available within the area including the main fire station for Cork City which is just 9 miles away.

- **Emergency management structures**

Comprehensive Emergency Preparedness and Response Procedures will be developed for the site. These will be audited, reviewed and tested regularly as part of the Health, Safety & Environment (HSE) Management System which will also be certified to ISO 14001.

The procedures will clearly set out responsibilities and actions for emergency response. It will also list contact phone numbers for emergency services including fire brigade, ambulance, Gardaí, EPA and others. Emergency responses will be co-ordinated by the HSE Department and other members of site management. A dedicated and specially trained Emergency Response Team (ERT) will be available.

The company will proactively minimise the risks of a fire or other environmental incident occurring. Incident & Accident Prevention procedures will be developed and will encourage identification and reporting of potential accident hazards. A robust corrective action system will be incorporated into the HSE Management System to ensure any such hazards or potential causes of accidents/emergencies will be addressed in a timely fashion.

Accident scenarios to be addressed under the Emergency Response Procedures will include the following:

- Release of dangerous substance
 - Containment failure – drum rupture/rusting
 - Impact by vehicle or other object
 - Operator error
- Fire
 - Ignition following release of flammable liquid
 - Self combustion
 - Arson
 - Electrical faults
 - Hazardous activities – welding, cutting, smoking, battery charging
 - External events – lightening, adjacent fire
- Explosion
 - Following a fire
 - Spills of incompatible materials/flammable substances.

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2.3 Existing and Potential hazards

Based on the above information principle hazards with potential for polluting the environment with contaminated firewater were identified. The risks associated with these hazards are discussed in the following section. The scenarios selected are based on worst case situations. It should be stressed that the risk of any one of these events is considered to be extremely low and that in the event that a fire outbreak did occur it would be on a far lesser scale than outlined in the following section.

1. Major Fire in the Tank Farm.
2. Major Fire in the Waste Bays.
3. Major Fire in the Blending Operation Area.
4. Fire in the Laboratory.

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2.4 Probability of incident occurring

Before examining each of these worst case scenarios the following should be borne in mind. Flammable atmospheres are not likely to occur at the proposed facility as the vast bulk of waste oil are not classified as flammable liquid. All waste oil to be stored on site will have flashpoints well in excess of 61°C. All waste liquids in bulk storage will have high flash points and are not therefore classified as flammable. These tanks will be separated from the drum storage areas by fire proof cladding thus reducing the potential for any fire to spread. Only minimal storage of low flashpoint liquids is proposed (mixed fuels e.g. petrol mixed with diesel). The proposed volume of mixed fuels to be stored on site at any one time would be 2,000 litres. The remainder of other wastes stored on site are not classed as flammable and do not pose a significant risk. In the unlikely event of a fire or explosion at the site the fire alarm would sound automatically and the emergency response procedure would be put into action.

Major Fire in the Tank Farm Area.

Under normal circumstances the three bulk waste oil tanks will not simultaneously be filled to capacity as they will generally be sent off-site for processing once the volume reaches approximately 30,000 litres. For the purposes of this risk assessment however, it is assumed that all three tanks have been filled to capacity due to unusual circumstances. Under normal circumstances the waste oil would be likely to contain impurities including water which would reduce the potential fire hazard. However despite all existing controls it is assumed a fire occurs. A possible cause might be that liquid is lost from one of the tanks and subsequently catches fire within the base of the bund. In this scenario, the fire may damage all three tanks and cause the release of all 150m³ of waste oil. The total retention capacity of the Tank Farm Area in this situation (taking account of tank footprint etc) would be approximately 160m³. The emergency response would be to cover all surface areas with a layer of foam. Assuming the liquid surface is covered with a layer of 3cm thick and all other surfaces (eight tanks protruding above the liquid surface) are covered with a layer 2cm thick, a volume of 9m³ of foam would be applied.

In practice a fire incident would be responded to immediately and therefore it is highly unlikely that all three tanks would lose their contents. The mobile foam unit would also be deployed immediately and the fire brigade would be contacted. Upon arrival the waste oil tanks would be sprayed with water in order to cool them and prevent damage. Nonetheless, if we assume one tank is involved in the fire then up to 50,000 litres of oil would be released. The total retention capacity of the tank farm area in this event would be approximately 141m³ (accounting for footprint of unaffected oil tanks). Up to 9m³ of foam would be applied in order to coat all surface areas within the tank farm leaving capacity of 132,600 litres for retention of cooling water applied to the waste oil tanks.

Materials in the other bunds are not generally combustible apart from the 2,500 lt diesel tank. In the event that a fire did occur in these areas however the same arguments would apply. However, it is proposed to arrange bunds such that material would not overflow into the waste oil bunds as this may introduce a corrosion risk from the phosphoric acid or the caustic solution. Nonetheless a total volume of 76m³ would be available to contain 50m³ of contaminant plus water/foam. Water used to cool the waste oil tanks would be contained in the waste oil bund. Up to 50m³ of water for cooling the oil tanks could be contained in this way.

Major Fire in the Waste Bays.

The waste bays could in theory hold up to 205m³ of waste material. In reality however, much of the waste is non-liquid material especially in CK1 and CK2 where the material is likely to be 90% solid or of low environmental risk (cooking oil). Under normal circumstances, waste will be dispatched from the site when there is sufficient volume to fill a 40 ft truck. The Quarantine Bay will normally not contain any material and is unlikely ever to contain more than a few pallets of material at a time. This significantly reduces the potential for a fire outbreak and also reduces the potential consequences of a fire. In addition to this, due to the

ability of Gleneden Ltd to respond immediately to any fire incident, a fire outbreak would most likely be contained to one bay or even to a portion of one bay.

Notwithstanding the above, it is assumed for the purposes of this risk assessment that due to unusual circumstances all three bays are fully loaded, that the quarantine bay is also filled to capacity and that a fire outbreak occurs and involves all four areas (three waste bays and quarantine area). In this scenario it is further assumed that up to 50% of the material in CK1 and CK2 is hazardous liquid waste and that 100% of the material in CK3 and the Quarantine Bay is liquid hazardous waste. Firewater used to control the outbreak would contain up to 133,000 litres of contaminant in this scenario.

Under the proposed arrangements the localised bunding under each of the bays would provide containment for 20,700 litres. The remaining contaminated firewater would overspill into the Unloading area floor bund, the Healthcare Waste Processing Area bund and the Blending Area bund. Total retention capacity would amount to 191,734 litres. This would allow for up to 61,734 litres of firewater for extinguishment of the fire. This is equivalent to a layer of foam almost 5cm thick over the entire surface area of the Unloading Area, Healthcare Waste Processing Area and the Blending Area.

In a more realistic scenario, the Quarantine Bay would not be full and the volume of material in the waste bays would be very much less than stated above. In this case the total volume of firewater and contaminant would likely be less than the combined capacity of the unloading area and healthcare bunds (96,046 litres). In this case contaminated firewater would not even reach the Blending Area.

Major Fire in the Blending Operation Area.

Approximately 220,000 litres of material will be stored in the Blending Area. A small quantity of this material includes R50 to R54 compounds. This material will be stored in separate aisles such that no more than 100,000m³ of material will be contiguous. In the event of a major fire in this area foam will be applied immediately while awaiting the arrival of the

fire services. Assuming that all contiguous liquid material is released as a result of a fire, up to 100,000 litres of contaminant would be released. This would be contained by a combination of the Blending Area bund and the Healthcare Waste Treatment Area bund (153,534 litres capacity). To apply foam to a depth of 3cm to this entire area would require 30m³ of foam. Additional foam would be applied to other surface areas (including remaining unspilt material) which would in time add to the volume of contaminated firewater. Up to 61,734 litres of foam/water could be applied to the other surface areas in the Blending Area before reaching the total capacity of the banded floor areas.

Fire in the Laboratory.

A fire in the laboratory is unlikely to involve significant volumes of materials. However, due to the nature of materials stored these may pose a greater fire hazard and may include small volumes of materials with contamination potential. Under normal circumstances the majority of these materials would be stored in approximately 10 litre containers and would be held in fire proof cabinets. A fire in this area would give rise to a small volume of potentially contaminated firewater which would be contained within the building as there are no doors leading directly from the laboratory out of the building. The laboratory is adjacent to and opens out onto the Healthcare Waste Treatment Area which is banded to a capacity of 57,846 litres. Spill control kits and spill containment within the flame proof cabinets will further diminish the risk of contaminated firewater release from a fire in the laboratory. This area is therefore considered low risk.

3.0 RECOMMENDATIONS

In view of the preceding assessment of contaminated firewater risk from the Gleneden site the risk of a release of contaminated firewater is low. Sufficient capacity exists to contain potentially contaminated firewater in all worst case scenarios considered. As a result, a designated firewater containment facility is not recommended for the site.

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Appendix 1

Copy of EPA Letter (14th January 2005)

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Environmental Protection Agency
An tAidmheasáin le an tAinmneáil

Regional Inspectorate, Inniscarra
County Cork, Ireland
Cigireacht Réigiúnach, Iúis Cúra
Contae Charraige, Éire

T: +353 21 487 5540
F: +353 21 487 5545
E: info@epa.ie
W: www.epa.ie

Toll Call 1890 33 55 99

Managing Director
Gleneden Trading Ltd
Rafeen Industrial Park
Monkstown
Co. Cork

14th January 2005

145-2

re: Notice in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations

Dear Mr. McNamara,

I am to refer to the above referenced application for a waste licence relating to a facility at Gleneden Trading Ltd, Unit 9, Rafeen Industrial Estate, Rafeen, Monkstown, Cork. Having examined the documentation submitted, I am to advise that the Agency is of the view that the documentation does not comply with Article 12 of the Waste Management (Licensing) Regulations.

You are therefore requested, in accordance with Article 14(2)(b)(ii) of the regulations, to take the steps and supply the information detailed below:

ARTICLE 12 COMPLIANCE REQUIREMENTS

B.3 Planning Authority

1. Submit a copy of the planning application currently being processed by the Local Authority, include the Local Authority file reference number.
2. Submit a confirmation letter from the planning authority that an EIS was not required for the increase in waste quantities proposed for the site.
3. Reassess Table B.7.1 of the application. Class 3.11 of the Third Schedule will be required for the blending or mixture of waste.

D.1 Infrastructure

1. Provide detailed specifications on site security including perimeter fencing and gates.

Page 1 of 2



Department of the Environment

2. Provide details of the plant required to provide a paper and cardboard shredding and baling facility on site and provide information on their location within the facility.

3. Provide details of the proposed location of the existing plant as listed in attachment D.1 (d) and how this will be accommodated within the confines of the capacity of the facility as indicated in Drawing No. 2004-238-01-001.

4. Provide detailed specifications for all waste bulking mixing, blending, storage and spill retention tanks on site including volumes, venting systems and bunding arrangements.

5. Provide details of the infrastructure, storage location and capacity, which will be provided for the acceptance of contaminated soils, sludges and construction and demolition wastes at the facility ensuring that all proposed waste types indicated in table H.1.2 is accounted for.

H. Materials Handling

1. Provide details on the 400tpa of commercial waste indicated in table H.1(c)

2. Resubmit table H.1.2, EWC codes must accurately reflect associated waste description. All waste types specified must be included in the relevant section of table H.1(c) when appropriate.

3. The description and typical treatment given in table H.3.2 must correspond to all waste listed in tables H.1(c) and H.1.2.

3. Clarify storage capacity and location for all waste types listed in Attachment D.1(g) against the resubmitted table H.1.2. Assess storage proposed against the BREF Reference Document on Best Available Techniques on Emissions from Storage and the EPA Guidance Note on Storage and Transfer of Materials for Scheduled Activities.

4. Supply information on waste acceptance techniques to show they comply with EPA BAT Guidance note for Waste Transfer Activities for all waste types accepted on site. This information should deal with waste compatibility and confirmatory testing particularly regarding the proposal to bulk up and mix waste solvents and oil. The facilities ability to store waste in terms of both volume and type during the testing/compliance process should be addressed in the response.

5. Provide details on the proposed transfer and handling of solids with reference to the BREF Reference Document on Best Available Techniques on Emissions from Storage and the EPA Guidance Note on Storage and Transfer of Materials for Scheduled Activities.

6. Provide details of methods and control proposals for dealing with the proposal to accept packaging contaminated by dangerous substances.

7. Supply information on whether the facility intends to wash tankers and drums following waste delivery and submit proposals for dealing with this wash water.

E. Emissions

1. Complete table E.1 (iv) detailing fugitive emissions to atmosphere on site in particular from both the bulking and mixing of waste oil and waste solvent.
2. Emissions from the storage of contaminated soils must be addressed in particular dust and leachate.

F. Control and Monitoring

1. Supply information on the air filtration system proposed for the control of fugitive emissions of waste vapours from transfer activities.
2. Supply information on proposals for the control and subsequent treatment of emissions from the bulking, blending and mixing of hazardous waste solvent, packaging contaminated with dangerous substances and contaminated soils. Submit proposals on any ventilation systems proposed and any subsequent treatment of exhaust air.

J. Accident Prevention and Emergency Response

1. Assess the adequacy of the fire fighting equipment on site taking account of the volumes and types of waste stored. Carry out a risk assessment to determine if the activity should have a dedicated firewater retention facility. Regard in drafting your response should be taken to both the Agency's *Draft Guidance Note to Industry on the Requirements for Firewater Retention Facilities* and the BREF *Reference Document on Best Available Techniques on Emissions from Storage* and the *EPA Guidance Note on Storage and Transfer of Materials for Scheduled Activities*.

Your reply to this notice should include a revised non-technical summary, which reflects the information you supply in compliance with the notice, insofar as that information impinges on the non-technical summary.


In the case where any drawings already submitted are subject to revision consequent on this request, a revised drawing should be prepared in each case. It is not sufficient to annotate the original drawing with a textual correction. Where such revised drawings are submitted, provide a list of drawing titles, drawing numbers and revision status, which correlates the revised drawings with the superseded versions.

Please supply the information in the form of a one original plus three copies within one month of the date of this notice. In addition submit one CD-ROM copies of the requested information to the Agency. The e-file should be saved as a 'pdf' file, read only status.

Prior to the submission of the response to this letter please contact Ms. Niamh O' Donoghue at the above number.

Please note that the application's register number is 145-2. If you have any further queries please contact Ms. Niamh O' Donoghue at the number above. Please direct all correspondence in relation to this matter to the *Licensing Unit, Office of Licensing & Guidance, Environmental Protection Agency, Headquarters, PO Box 3000, Johnstown Castle Estate, County Wexford* quoting the register number.

Yours sincerely,


Ms. Marie O' Connor
Senior Inspector
Office of Licensing & Guidance

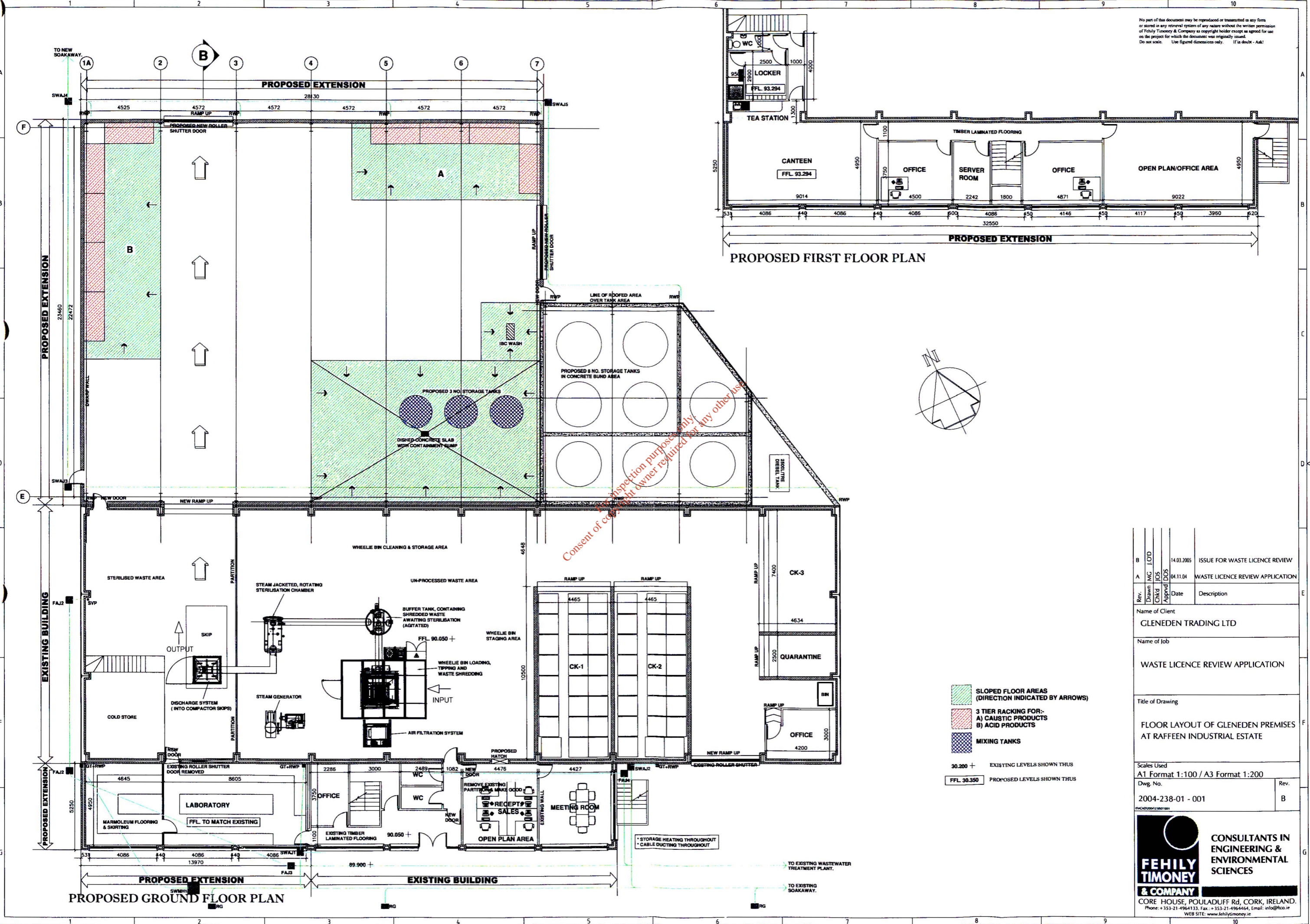
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Appendix 2

Internal layout of Gleneden Site at Raffeen Industrial Estate
Drawing No. 2004-238-01 - Rev B

1:2500 Licensable Area Map
Drawing No. 2004-238-01-002 - Rev B

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Rev.	Drawn	Chkd	Apprd	Date	Description
B	IMG	JOS		14.03.2005	ISSUE FOR WASTE LICENCE REVIEW
A	IMG	JOS		04.11.04	WASTE LICENCE REVIEW APPLICATION

Name of Client
GLENEDEN TRADING LTD

Name of Job
WASTE LICENCE REVIEW APPLICATION

Title of Drawing
FLOOR LAYOUT OF GLENEDEN PREMISES AT RAFFEN INDUSTRIAL ESTATE

Scales Used
A1 Format 1:100 / A3 Format 1:200

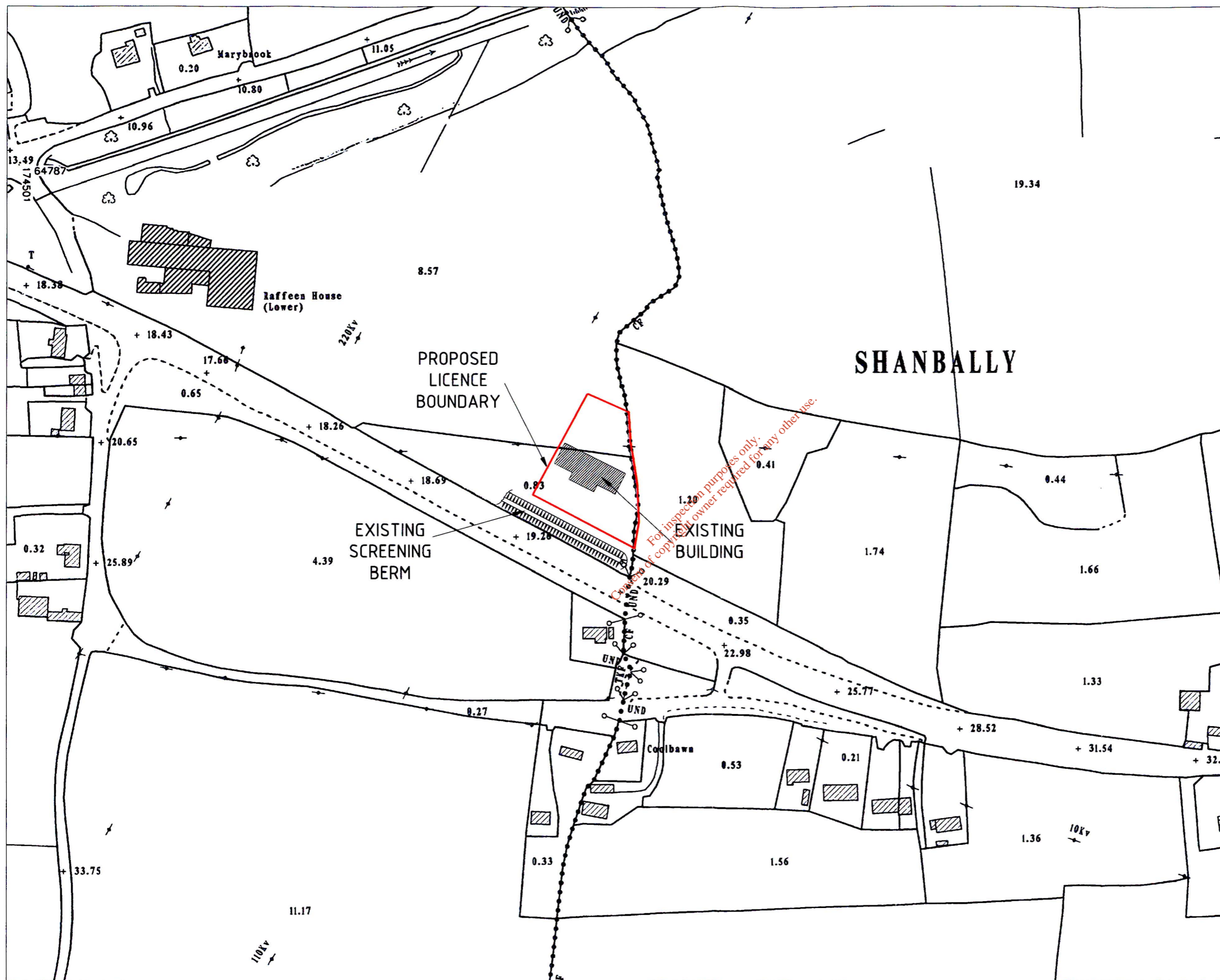
Dwg. No. 2004-238-01 - 001

Rev. B

FEHILY TIMONEY & COMPANY

CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES

CORE HOUSE, POULADUFF RD, CORK, IRELAND.
Phone: +353-21-4964133 Fax: +353-21-4964464 Email: info@ftco.ie
WEB SITE: www.fehilytimoney.ie



Rev.	Drawn	Chkd	Apprd	Date	Description
B	MC	JOD		14.07.2005	ISSUE FOR WASTE LICENCE REVIEW
A	MC	JOS		11.11.04	WASTE LICENCE REVIEW APPLICATION

Name of Client
GLENEDEN TRADING LTD.

Name of Job
WASTE LICENCE REVIEW APPLICATION

Title of Drawing
PROPOSED LICENCE BOUNDARY

Scales Used
A3 Format 1:2500

Dwg. No.
2004-238-01 - 002

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CONSULTANTS IN
ENGINEERING &
ENVIRONMENTAL
SCIENCES
CORE HOUSE, POULADUFF Rd, CORK, IRELAND.
Phone: +353-21-4964133, Fax: +353-21-4964464, Email: info@ftco.ie
WEB SITE: www.fehilytimoney.ie



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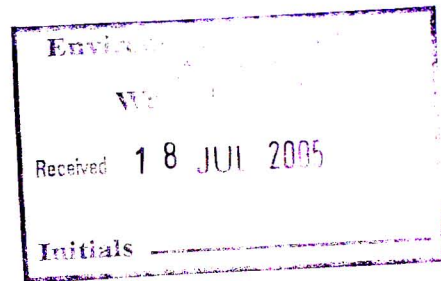
<i>no.</i>	<i>revision</i>	<i>date</i>

Kavanagh Ryan & Associates.

Unit 48, The Egan Centre,
Dargle Road, Bray, Tel. 2765661/662. Fax. 2765663.
Co. Wicklow. E-mail. kmryan@eircom.net



<p>PROJECT Extension to Existing Building at Glenedan Trading Ltd., Raffeen Ind. Park, Monkstown, Co. Cork.</p>	<p>SCALE 1:100.</p> <p>DATE Dec. '04.</p> <p>DRAWN A.C.</p> <p>JOB NO. C04109.</p>
<p>TITLE</p> <p style="font-size: 1.2em; text-align: center;">Proposed Elevations.</p>	<p>DRAWING NO.</p> <p style="font-size: 1.2em; text-align: center;">Glen-6.</p>



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Kavanagh Ryan & Associates.

Unit 48, The Egan Centre,
Dargle Road, Bray, Tel. 2765661/662. Fax. 2765663.
Co. Wicklow. E-mail. kmryan@eircom.net

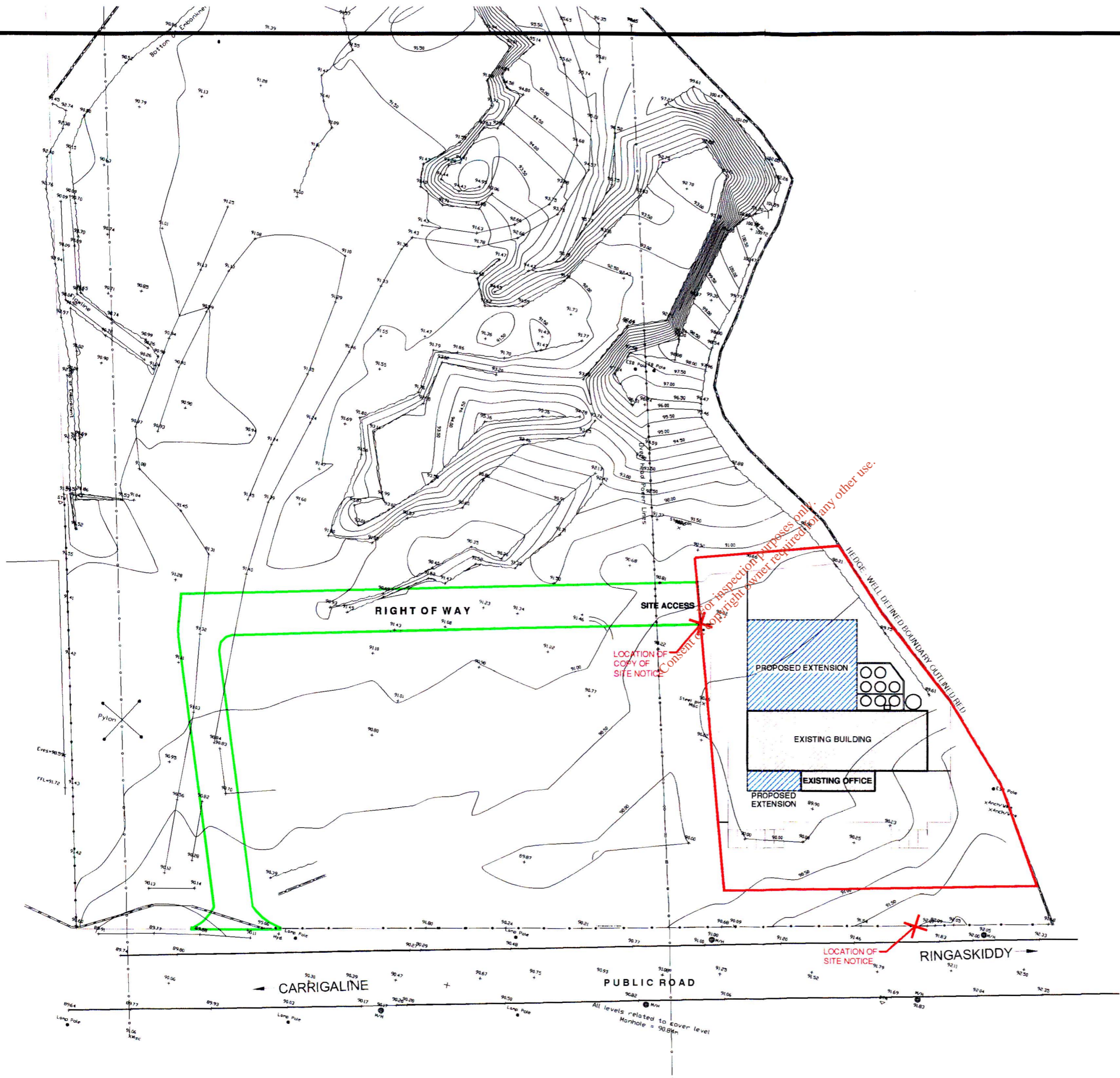
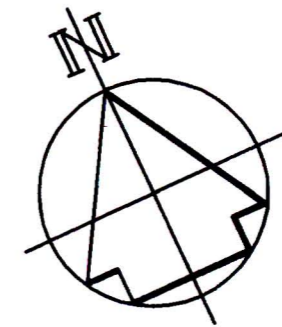


PROJECT Extension to Existing Building at Glenedan Trading Ltd., Raffeen Ind. Park, Monkstown, Co. Cork.	SCALE 1:100. DATE Dec. '04. DRAWN A.C. JOB NO. C04109.
TITLE Proposed Elevations.	DRAWING NO. Glen-7.

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT KAVANAGH RYAN & ASSOCIATES DRAWINGS AND SPECIFICATIONS.
2. ALL DIMENSIONS TO BE CONFIRMED. DO NOT SCALE DRAWING.

SCANNED
29 SEP 2005



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no.	revision.	date

Kavanagh Ryan & Associates.  CONSULTANTS PLANNING DESIGN AND CONSTRUCTION
 Unit 48, The Egan Centre,
 Dargle Road, Bray, Tel. 2765661/662. Fax. 2765663.
 Co. Wicklow. E-mail. kmryan@eircom.net

Client Extension to Existing Building at Glenedan Trading Ltd., Raffeen Ind. Park, Monkstown, Co. Cork.	Scale 1:1000. Date Dec. '04. Drawn A.C. Job no. C04109.
Title Block Plan.	Drawing no. Glen-1.



CONSULTANTS IN ENGINEERING & ENVIRONMENTAL SCIENCES

off.

Our Ref.: Q2004/238/01/Ltr011/FM

Licensing Unit
Office of Licensing and Guidance
Environmental Protection Agency
Headquarters
P.O. Box 3000
Johnstown Castle Estate
Co. Wexford

SCANNED
25 SEP 2005
Under Reg Infca2 - map4

15 July 2005

Needs to be
split & moved.
N Ke.

RE: Response to Article 12 compliance requirements for review of Waste Licence Registration No. 145-2

Dear Sirs

Fehily Timoney & Company has been retained by Atlas Environmental Ireland Ltd to prepare a waste licence review for the above referenced licence in response to a letter issued by the EPA on 14th January, 2005.

With regard to the above document, please find herein, the following:

- One original, three hard copies and one digital copy of the Article 12 Compliance Requirements
- One original, three hard copies and one digital copy of the revised non-technical summary.
- One original and two copies of the transfer of a licence application form and supporting attachments
- A cheque for €5,000 for the processing of the application.

Please note that copies of drawings (drafted by Kavanagh Ryan & Associates) submitted with the planning application are enclosed.

Please contact the undersigned if you have further queries.

Yours faithfully

Jerome O'Sullivan

Jerome O'Sullivan
for and on behalf of Fehily Timoney & Company

off
Environmental Protection Agency
Waste Licences
Received 18 JUL 2005
Initials _____

Encl.

CORE HOUSE POULADUFF ROAD CORK IRELAND
TEL.: +353 21 4964133 FAX.: +353 21 4964464 E.MAIL: info@ftco.ie Web Site: www.fehilytimoney.ie

Directors: E. Timoney BE CEng FIEI MICE MCIWEM RConsEI D. O'Sullivan BE CEng MIEI RConsEI G. O'Sullivan BE CEng FIEI RConsEI W. Quirke Dip Ag
Company Secretary: A. Keohane Associates: D. Egan BSc MSc O. Tierney BE CEng MStructE C. Mahony BE CEng MEng Sc MIEI

Registered in Dublin, Ireland, Fehily Timoney & Co. Ltd. Number 180497 Registered Office: Core House, Pouladuff Road, Cork. VAT Registration Number: IE 6580497 D



**WASTE LICENCE REVIEW APPLICATION
FOR A
HAZARDOUS WASTE TRANSFER STATION
AT
RAFFEEN INDUSTRIAL ESTATE
RAFFEEN
MONKSTOWN
CO. CORK**

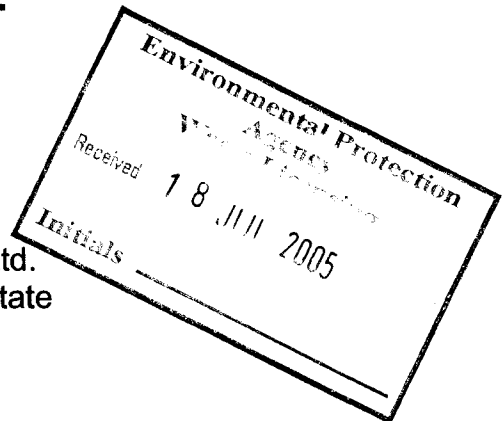
**WASTE LICENCE REGISTER No. 145-1
REVISED NON-TECHNICAL SUMMARY**

ORIGINAL

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Prepared for:

Gleneden Trading Ltd.
Raffeen Industrial Estate
Raffeen
Monkstown
Co. Cork



Prepared by:

Fehily Timoney & Company
Core House
Pouladuff Road
Cork

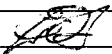
July 2005



**WASTE LICENCE REVIEW APPLICATION
FOR A
HAZARDOUS WASTE TRANSFER STATION
AT
RAFFEEN INDUSTRIAL ESTATE
RAFFEEN
MONKSTOWN
CO. CORK**

**WASTE LICENCE REGISTER NO. 145-1
NON-TECHNICAL SUMMARY**

User is Responsible for Checking The Revision Status Of This Document

Rev. Nr.	Description of Changes	Prepared by:	Checked by:	Approved by:	Date:
0	Amendments	JO'S	DOS		14/07/05

Client: Atlas Environmental Ireland

Keywords: Non-technical summary, waste licence review, waste oils, bunded areas

Abstract: Gleneden Trading Ltd. wishes to apply for a review of the waste licence. The applicant wishes to use the existing site to store and bulk-up waste oils and other related wastes on site. The new facility will be fully managed by Atlas Environmental Ltd. No treatment of waste will be carried out on site. All waste will be sent off site for treatment and/or disposal. All operations will take place indoors. All wastes will be stored on site in sealed drums, tankers and other containers. Emissions will be minor. These proposed activities will have no impact on the environment.

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2. COMPLIANCE WITH ARTICLE 12(1) OF THE ACT	2

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1. INTRODUCTION

This revised non-technical summary has been prepared in accordance with Article 12(1) (u) of the Waste Management (Licensing) Regulations, 2004. Sub-Articles (a) to (t) of Article 12 (1) are addressed below.

Gleneden Trading Ltd. (Gleneden) is the holder of Waste Licence Registration 145-1 which permits the facility at Unit 9, Raffeen Industrial Estate, Raffeen, Monkstown, Co. Cork to collect, store and treat (using a non-burn method) hazardous healthcare waste. In November 2004, Gleneden applied to broaden the scope of its licensed activities at the above mentioned site to include the acceptance, temporary storage and onward shipment off-site of waste oils and other hydrocarbon containing materials. Gleneden proposed to partner with Atlas Environmental Ireland (Atlas) who specialise in dealing in waste oil type materials.

Gleneden intends to suspend the processing of hazardous clinical waste for the time being and concentrate, in partnership with Atlas Ireland, on the bulking-up and temporary storage of waste oils. All plant equipment connected with the treatment of clinical waste will be decommissioned, dismantled and placed in off-site storage. However, Gleneden wishes to retain permission to treat clinical waste on site should the market again become more favourable in the future.

In January 2005, the EPA wrote to Gleneden/Atlas requesting some further information and clarifications in relation to the application. For administrative reasons, Gleneden/Atlas was not in a position to respond to the request until now. Apart from requesting detailed responses on a number of issues, a revised non-technical summary of the application was requested. This document comprises the revised non-technical summary in response to the EPA request. For assistance to the reader, the full text of the request for further information is appended.

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2. COMPLIANCE WITH ARTICLE 12(1) OF THE ACT

Article 12 (1) of the Waste Management Act requires an applicant to describe himself and his/her proposals.

Article 12(1) (a) Applicant & Operator Details

Gleneden is the holder of the current waste licence (Reg. No. 145-1) for the Raffeen Facility. Gleneden is also the applicant in this submission. The contacts details for Gleneden Trading Ltd are:

Unit 9
Raffeen Industrial Estate
Raffeen
Monkstown
Co. Cork

Tel: (021) 4852477
Fax: (021) 4852490

Gleneden has entered into a partnership agreement with Atlas. Should Gleneden be granted permission to establish a waste transfer station at the Raffeen site the facility will be fully managed and operated by Atlas. The contact details for Atlas Environmental Ireland are:

Clonminam Industrial Estate
Portlaoise
Co. Laois

Tel: (0502) 74747
Fax: (0502) 74757

Under separate cover, an application will shortly be made to transfer the licence 145-1 from Gleneden to Atlas.

Article 12(1) (b) Relevant Planning Authority

Cork County Council
The Planning Department
Model Business Park
Model Farm Road
Bishopstown
Cork.

Article 12(1) (c) Relevant Sanitary Authority

There will be no discharge of any trade effluent to a sewer of a sanitary authority and therefore this sub-section is not applicable in this case.

Article 12(1) (d) Location Details of the Facility

The location/postal address of the facility is as above.

Article 12(1) (e) Nature of the Facility

Gleneden proposes to operate the facility as a waste transfer station. The new proposed activities at the facility will entail accepting, holding and bulking up hazardous and non-hazardous wastes and the onward shipment of the waste to licensed recycling/ recovery or disposal facilities.

The principal elements of the development will comprise:

- A main warehousing unit to be used for the receiving and storage of waste materials, including hazardous waste.
- A spillage retention area
- A tanker parking/inspection area
- Welfare facilities and ancillary offices
- Dispatch assembly area
- Car parking

The activities proposed on the site do not themselves lead to the production of wastes.

The only waste that would possibly be treated on site would be healthcare waste for which licensee currently holds a waste licence to treat. The current licence is for the treatment of healthcare waste using a heat disinfection unit (HDU) and the review application was for the continued use of the HDU (albeit after a temporary decommission period). The applicant now proposes to use a heat sterilisation unit operating on a slightly different principle (steam as against hot-oil). There is no significant difference between the environmental impacts of either unit however the latter treats the waste to higher standard.

The normal operating hours of the facility will be 7:00am to 9:00pm Monday to Saturday. Special deliveries e.g. from ships or as a result of an emergency call-out, will occur outside those hours.

Article 12(1) (f) Classes of Activity

The activities proposed for the site will comprise both waste disposal and waste recovery. The waste disposal activities proposed are the same as currently permitted with the addition of Class 11.

Class 7 Physio-chemical 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 8 to 10 of this Schedule (including evaporation, drying and calcination)

Class 11 Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.

Class 12 Repackaging prior to submission prior to any activity referred to in the preceding paragraph of this Schedule.

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 was produced.

The new waste recovery activities proposed is described under the following classification:

Class 13 Storage of waste intended for submission to any activity referred to in the preceding paragraphs of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.

The principal activity at the site will be Class 13 of the Fourth Schedule.

Section 12(1) (g) Quantity and Nature of Wastes

In total the site is currently licensed to **accept and treat 1,600 tonnes of clinical waste per year.**

It is now proposed to accept and bulk-up an extra 5,400 tonnes of waste (mainly oils and automotive related waste) per annum.

Section 12(1) (h) Raw and Ancillary Materials

The only raw materials to be used are drums, pallets etc. used to safely pack waste before dispatching the waste off-site for recovery or disposal. Electricity, water, gas and fuel consumption will be minor.

Section 12(1) (i) Plant, Methods, Processes, Abatement and Operating Procedures

Plant

The existing plant equipment will be replaced with a new steam-based heat sterilisation unit.

The plant required for conducting **proposed operations** (i.e. handling, storage and off-site dispatch of waste oil materials) at the facility will consist of a pump, storage tanks, forklifts and a pressure washer.

Methods, Processes and Operating Procedures

Only properly labelled and authorised waste will be received at the facility. Waste will be accepted at the plant from fully licensed and registered carriers only. All authorised transport personnel will be fully trained in regulated waste oil management safety.

Deliveries of incoming waste will be scheduled to facilitate prompt unloading and storage of material. Once a consignment arrives at the facility it will be directed to the waste inspection area. All documentation will be checked. All tankers or containers will be visually checked for leaks. Rejected loads will be returned to the site of origin or quarantined on-site. Once accepted, loads will be directed to the appropriate storage bay area or storage tank.

Every drum, box and container etc. is given an individual barcode, which is clearly attached to two sides of the container. An "Incoming Waste Form" is then completed which records the drum number, the waste type, the drum type, the storage area, the UN number, the condition of the drums and if necessary the weight. If re-drumming is required this will be noted and recorded in the waste variation form.

Once quantities of various wastes have been accumulated to a manageable quantity they will be shipped off-site either in road tankers or in pallets.

Section 12(1) (j) This section is in accordance with information sought by the Agency of the activities purposed by the licence review applicant in relation to the matters specified in paragraph (a) to (g) of Section 40(4) of the Act.

Section 40 (4) of the Waste Management Act, 1996 deals with pollution:

(A) The potential emissions from the site include:

1. **Noise emissions** that may arise from operational plant and traffic to and from the site.
2. Waste handling, re-packing and bulking-up may give rise to some **dust emissions**. However, all such operations will take place under the enclosed conditions of the main waste transfer building.
3. The waste received at the facility will not give rise to significant **odours** due to:
 - The quick turnaround times for waste entering and leaving facilities
 - The storage of compacted waste in sealed containers
 - No food or putrescible waste will be accepted on-site

Apart from waste oils, most containers will not be opened on site, only stored prior to transportation off site to approved recycling or disposal outlets.

4. There is no discharge of any effluent to **surface water**. Surface water run-off from external yard will be discharged to a percolation area. Surface/storm water emissions will arise during periods of precipitation only.
5. There is no **sewer discharge**. The toilet/domestic type sewage is treated on site.

(B) Potential environmental impact of the site's activities on the various environmental media

1. Air

The proposed activities will have no significant impact on the quality of air because:

- All proposed activities will take place in-doors
- As all waste will be covered in drums, tanks or other tankers
- No dust causing activities will take place
- All external areas of the site will be hardstanding with the exception of landscaped areas
- Emissions arising from the heat sterilisation unit are to be recycled back into and absorbed by the waste itself. This represents an improvement on the current licensed activity

Odorous smells will not impact the air quality in the locality as any odours generated as a result of bulking activities will be controlled by the use of covered tankers and tanks. There will be no food or putrescible waste managed on site.

2. Noise & Vibration Impacts

All loading/unloading of waste and bulking up of waste will take place within the building. There will be no significant impact on the local environment.

Potential vibrational impacts may arise from the trucks moving to and from the facility. However, as the site is located adjacent to the N28 it presently experiences periodic high levels of vibrations from heavy vehicular traffic. Furthermore, the proposed facility will add 2 to 4 more traffic movements daily in the Raffeen area compared with the current facility. Therefore, the impact on the local environment will be minimal.

3. Discharges to Surface Water

There will be no discharges to surface water apart from rainfall.

4. Discharges to Sewer

There will be no discharges to sewer.

The proposed activities will also have no impact on **climate, cultural heritage, ecology, human beings, hydrogeology or landscape.**

(C) The use of 'Best Available Technology (BAT) used to prevent/eliminate or reduce/limit/abate emission from activities carried out on site

The most important technology used on site will be bunding. This means that, if a tank is ruptured, its contents will be held in a sealed secondary tank.

(D) Applicant to demonstrate that he/she is a 'fit and proper person'.

The applicant, being Gleneden Trading Ltd, is a fit and proper person to hold a waste licence and does not possess any convictions under the Waste Management Act 1996 to 2003.

Atlas Environmental Ireland will manage and control the running of the waste transfer station. Neither Atlas Environmental Ireland nor any of its management staff possess any convictions under the Waste Management Act 1996 to 2003.

The site manager and all other site personnel will be fully trained Atlas Environmental employees.

(E) Applicant to demonstrate compliance with any requirements under Section 53 of the Act

Section 53 of the Act is concerned with the financial provisions of the operator. Atlas Environmental Ireland is a subsidiary of DCC Environmental. DCC has pledged to financially support the proposed activity particularly cost of decommissioning and clean-up.

(F) Applicant to demonstrate that energy will be used efficiently in the carrying out of the proposed activities.

As stated above already, the proposal is a low energy user.

- (G) **Applicant to demonstrate that any noise from the activity concerned will comply with, or will not result in the contravention of, any regulations under Section 106 of the Act of 1992.**

Section 106 of the Act deals with noise levels and emissions. This proposal includes a number of small pumps in addition to the replacement of some plant with similar type plant existing

Section 12(1)(k) Emissions Arising

1. Noise emissions may arise from operational plant and traffic to and from the site.
2. Waste handling, re-packing and bulking-up may give rise to some dust emissions. However, all such operations will take place under the enclosed conditions of the main waste transfer building.
3. The waste received at the facility will not give rise to significant odours due to:
 - The quick turnaround times for waste entering and leaving facilities
 - The storage of compacted waste in sealed containers
 - No food or putrescible waste will be accepted on-site

Apart from waste oils, most containers will not be opened on site, only stored prior to transportation off site to approved recycling or disposal outlets.

4. There is no discharge of any effluent to surface water. Surface water run-off from external yard will be discharged to a percolation area. Surface/storm water emissions will arise during periods of precipitation only.
5. There is no **sewer discharge**. The toilet/domestic type sewage is treated on site.

Section 12(1) (l) Effects of Emissions on the Environment

Emissions from the proposed activities will be so minor they will have no effects on the environment.

All waste movements onto and off the site will be in enclosed vehicles. All waste handling, re-packaging, bulking and storage will be carried out within the confines of the existing building. Odours will be controlled by storing the waste in sealed drums, tanks and other containers.

Section 12(1) (m) Monitoring of Emissions

Noise, dust and any other parameter specified by the Agency will be monitored as required.

Section 12(1) (n) Prevention, Minimisation & Recovery of Waste Arisings

As this is a transfer station virtually no waste will arise. Office and canteen waste will be handled in accordance with best modern practices.

Section 12(1) (o) Off-site treatment or disposal of waste

All bulked-up waste will be consigned to other Atlas facilities or other licenced sites.

Section 12(1) (p) Unauthorised or unexpected emissions

Due to the nature of the facility, the risk of unauthorised or unexpected emissions is predominantly from accidental leakages or spillage. In the unlikely event of such an emission, the supervisor will ensure that;

- The spill or leak is contained and cleaned up immediately
- The incident is recorded
- The EPA is notified immediately and samples are taken and sent for external analysis.

Section 12(1) (q) Closure and Restoration

Detailed arrangements for decommissioning of the proposed waste transfer station will be agreed with the Agency prior to instigation.

All waste remaining at the facility will be removed off-site to the appropriate recovery/recycling/disposal facilities.

Upon closure of the facility, all plant will be decommissioned and removed from the site to an appropriate reuse/recovery/disposal facility. All records will be stored at an appropriate facility.

Once the site has been decommissioned, there will be no emissions of any kind to soil, air or water. Effectively, an empty warehouse, parking bay, stores and ancillary offices will remain.

A comprehensive closure and restoration plan for the site will be drawn up in due course and will include details of post-closure monitoring.

Section 12(1) (r) Landfilling of waste

There is no landfilling of waste associated with this proposal.

Section 12(1) (s) European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2000 (S.I. No. 476 of 2000)

The quantities of waste to be stored on site at any one time are too small for this legislation to apply. The Health & Safety Authority were consulted with in regard to this issue.

Section 12(1) (t) Aquifer pollution with emission containing List I and II substances specified in the Annex to Council Directive 80/68/EEC

There will be no discharge to groundwater or aquifers. All tanks and drums will be banded. All of the site is hardstanding therefore there will be no pollution of underlying aquifers.

Non-Waste Activities

For commercial reasons, the applicant proposes to use part of the site for non-waste activities comprising primarily the storage and blending of water-treatment materials. Because the building proposed for those activities is within the 'red line' boundary of the licence, the activities will now be subject to the conditions of the waste licence. The non-waste activities will not give rise to any significant environmental emissions.

Appendix

Copy of EPA Letter (14th January, 2005)

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Environmental Protection Agency
An tAidmheannaí na hÉireann

Regional Inspectorate, Inbhearú
County Cork, Ireland
Ligheann Rinnach, Iú C.17A
Contae Chorcaí, Éire

T: +353 21 487 5540
F: +353 21 487 5545
E: info@epa.ie
W: www.epa.ie

Lo Call 1800 33 55 99

Managing Director
Gleneden Trading Ltd
Rafeen Industrial Park
Monkstown
Co. Cork

14th January 2005

145-2

re: Notice in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations

Dear Mr. McNamara,

I am to refer to the above referenced application for a waste licence relating to a facility at Gleneden Trading Ltd, Unit 9, Raffeen Industrial Estate, Raffeen, Monkstown, Cork. Having examined the documentation submitted, I am to advise that the Agency is of the view that the documentation does not comply with Article 12 of the Waste Management (Licensing) Regulations.

You are therefore requested, in accordance with Article 14(2)(b)(ii) of the regulations, to take the steps and supply the information detailed below:

ARTICLE 12 COMPLIANCE REQUIREMENTS

B.3 Planning Authority

1. Submit a copy of the planning application currently being processed by the Local Authority, include the Local Authority file reference number.
2. Submit a confirmation letter from the planning authority that an EIS was not required for the increase in waste quantities proposed for the site.
3. Reassess Table B.7.1 of the application. Class 3.11 of the Third Schedule will be required for the blending or mixture of waste.

D.1 Infrastructure

1. Provide detailed specifications on site security including perimeter fencing and gates.



2. Provide details of the plant required to provide a paper and cardboard shredding and baling facility on site and provide information on their location within the facility.

3. Provide details of the proposed location of the existing plant as listed in attachment D.1 (d) and how this will be accommodated within the confines of the capacity of the facility as indicated in Drawing No. 2004-238-01-001.

4. Provide detailed specifications for all waste bulking mixing, blending, storage and spill retention tanks on site including volumes, venting systems and bunding arrangements.

5. Provide details of the infrastructure, storage location and capacity, which will be provided for the acceptance of contaminated soils, sludges and construction and demolition wastes at the facility ensuring that all proposed waste types indicated in table H.1.2 is accounted for.

H. Materials Handling

1. Provide details on the 400tpa of commercial waste indicated in table H.1(c)

2. Resubmit table H.1.2. EWC codes must accurately reflect associated waste description. All waste types specified must be included in the relevant section of table H.1(c) when appropriate.

3. The description and typical treatment given in table H.3.2 must correspond to all waste listed in tables H.1(c) and H.1.2.

3. Clarify storage capacity and location for all waste types listed in Attachment D.1(g) against the resubmitted table H.1.2. Assess storage proposed against the BREF *Reference Document on Best Available Techniques on Emissions from Storage* and the EPA *Guidance Note on Storage and Transfer of Materials for Scheduled Activities*.

4. Supply information on waste acceptance techniques to show they comply with EPA *BAT Guidance note for Waste Transfer Activities* for all waste types accepted on site. This information should deal with waste compatibility and confirmatory testing particularly regarding the proposal to bulk up and mix waste solvents and oil. The facilities ability to store waste in terms of both volume and type during the testing/compliance process should be addressed in the response.

5. Provide details on the proposed transfer and handling of solids with reference to the BREF *Reference Document on Best Available Techniques on Emissions from Storage* and the EPA *Guidance Note on Storage and Transfer of Materials for Scheduled Activities*.

6. Provide details of methods and control proposals for dealing with the proposal to accept packaging contaminated by dangerous substances.

7. Supply information on whether the facility intends to wash tankers and drums following waste delivery and submit proposals for dealing with this wash water.

E. Emissions

1. Complete table E.1 (iv) detailing fugitive emissions to atmosphere on site in particular from both the bulking and mixing of waste oil and waste solvent.

2. Emissions from the storage of contaminated soils must be addressed in particular dust and leachate.

F. Control and Monitoring

1. Supply information on the air filtration system proposed for the control of fugitive emissions of waste vapours from transfer activities.

2. Supply information on proposals for the control and subsequent treatment of emissions from the bulking, blending and mixing of hazardous waste solvent, packaging contaminated with dangerous substances and contaminated soils. Submit proposals on any ventilation systems proposed and any subsequent treatment of exhaust air.

J. Accident Prevention and Emergency Response

1. Assess the adequacy of the fire fighting equipment on site taking account of the volumes and types of waste stored. Carry out a risk assessment to determine if the activity should have a dedicated firewater retention facility. Regard in drafting your response should be taken to both the Agency's *Draft Guidance Note to Industry on the Requirements for Firewater Retention Facilities* and the BREF *Reference Document on Best Available Techniques on Emissions from Storage* and the EPA *Guidance Note on Storage and Transfer of Materials for Scheduled Activities*.

Your reply to this notice should include a revised non-technical summary, which reflects the information you supply in compliance with the notice, insofar as that information impinges on the non-technical summary.


In the case where any drawings already submitted are subject to revision consequent on this request, a revised drawing should be prepared in each case. It is not sufficient to annotate the original drawing with a textual correction. Where such revised drawings are submitted, provide a list of drawing titles, drawing numbers and revision status, which correlates the revised drawings with the superseded versions.

Please supply the information in the form of a one original plus three copies within one month of the date of this notice. In addition submit one CD-ROM copies of the requested information to the Agency. The e-file should be saved as a 'pdf' file, read only status.

Prior to the submission of the response to this letter please contact Ms. Niamh O' Donoghue at the above number.

Please note that the application's register number is 145-2. If you have any further queries please contact Ms. Niamh O' Donoghue at the number above. Please direct all correspondence in relation to this matter to the *Licensing Unit, Office of Licensing & Guidance, Environmental Protection Agency, Headquarters, PO Box 3000, Johnstown Castle Estate, County Wexford* quoting the register number.

Yours sincerely,


Ms. Marie O' Connor
Senior Inspector
Office of Licensing & Guidance

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