INSPECTORS REPORT

WASTE LICENCE REGISTER NUMBER: 185-1
FACILITY: Hazardous Waste Transfer Station; Site No. 14A1, Greenogue Business Park, Rathcoole, Co. Dublin.
APPLICANT: Cara Waste Management
INSPECTOR: Olivia Cunningham

INSPECTOR'S RECOMMENDATION:
That a Waste Licence 185-1 be granted subject to Conditions.

(1) Introduction:

This report relates to an application received from Cara Waste Management Limited (185-1) for the operation of a hazardous and non-hazardous waste transfer station at Greenogue Industrial Estate, Rathcoole, Co. Dublin. The proposed facility is located within an extension to the existing Greenogue Industrial Estate, on what was previously agricultural land; on the outskirts of Dublin. An existing road servicing the Greenogue Industrial Estate will be used as the access road to the site.

The application site, which extends to 0.5 hectares, is located at the northern part of the Industrial Estate. The urban settlement of Newcastle lies c. 1.5km to the west of the subject site, with Rathcoole and Saggart located c.2 km and 2.5 km respectively, to the south east. Casement Aerodrome, a state military airport, is located 0.5 km to the north of the application site. A tributary of the Griffin River (Liffey catchment) flows west along the northern boundary of the site.

The proposed transfer station is designed to be capable of handling 60,000 tonnes of waste per annum of which 33,000 tonnes will be hazardous while the remaining 27,000 will be non-hazardous. The life-span of the facility is expected to be at least 20 years.

The proposed development comprises of a main warehousing unit to be used for the handling, sorting and repackaging of waste materials, including hazardous waste, a hazardous waste store, a three bay tanker parking area and an ancillary office.

The classes of activity applied for by the applicant and for which I recommend to be granted are:

Waste Disposal Activities - 3rd Schedule

Class 7	Relates to the shredding of waste material including household hazardous waste containers and metals, plastic, card and paper.
Class 11	Relates to the bulking-up of volumes of hazardous and non-hazardous waste prior to onward shipment.
Class 12	This activity relates to the baling and repackaging of various waste types prior to disposal off-site.
Class 13	This activity relates to the storage of hazardous and non-hazardous waste at the facility prior to disposal off-site.

Waste Recovery Activities- 4th Schedule

Class 2 This activity relates to the recycling of various organic substances including, wood, paper/cardboard, textile materials and vegetable oils.

Class 3 This activity relates to the dismantling, shredding, baling and recycling of various metal wastes.

Class 4 This activity is limited to the reclamation of refrigerator gasses.

Class 11 This activity is to make provision for the acceptance on-site for transfer to an appropriate facility of waste that has been obtained from any activity referred to previously in the Schedule.

Class 12 This activity refers to the exchange of certain waste types and their packaging for further processing off-site

Class 13 This activity refers to the storage of hazardous and non-hazardous wastes received at the facility prior to recovery/recycling at an alternative appropriate facility.

Class 13 of the Fourth Schedule is the Principal Activity applied for.

Site Visits:

DATE	**PURPOSE**	**PERSONNEL**
28th April 2003	Site Notice Check	O. Cunningham

General Information

EIS Required	Yes. I have assessed the EIS and am satisfied that it complies with the EIA and Waste Licensing Regulations.
Date of Application	04/04/2003
Number of Submissions Received	None

(2) Facility Development

- **Warehouse/Transfer Station**

  The warehouse is the primary unit within the proposed development, responsible for handling and baling of waste materials, and is bunded to a depth of 150mm.

- **Hazardous Chemical Storage Area**

  This comprises of three compartments located at the southeast part of the site, adjoining the main warehouse unit by means of a canopy. This area will be utilised for the storage of hazardous materials prior to transportation off site.

  The floor of each compartment drains into a line of gullies down the middle which discharge into a 2m deep retention tank with a capacity of approximately $400m^3$.

- **Tanker Bays**

  Three bunded tanker bays are located adjacent to the hazardous waste storage area.

- **Ancillary Office Use**

The office space in the proposed development is small scale and ancillary to the main warehouse use associated with the transfer station.

- **Dispatch Assembly Area**

  The dispatch assembly area, located between the warehouse and hazardous chemical store will be used to visually inspect all waste shipments leaving the site.

- **Site Developments Works**

  In addition to the principal units, Conditions 3.6, 3.8, and 3.9 provide for Facility roads/hardstanding, waste inspection and quarantine areas, weighbridge and wheel cleaning respectively.

(3) Waste Types and Quantities

The total amount of waste to be accepted at the facility is 60,000 tonnes per annum of which 33,000 tonnes is hazardous and the remaining 27,000 tonnes is non-hazardous. The non-hazardous waste consists mainly of household waste, commercial and industrial waste, sewage sludge, industrial sludge and construction and demolition waste. Hazardous wastes to be accepted at the facility consist primarily of wastes from organic chemical processes, waste electronic and electrical equipment (together they make up 25,000 tonnes of the total 33,000 tonnes of hazardous waste permitted under the PD).
Condition 1.5 and *Schedule A: Waste Acceptance* of the PD specify which wastes may be accepted at the facility and limit the total quantity of wastes to 60,000 tonnes per annum.

(4) Facility Operation/Management

- **Waste Acceptance and Handling**

  Detailed procedures for the acceptance, handling and sampling of all incoming wastes must be in place prior to the acceptance of waste at the facility, Condition 5.3.1. Only pre-notified and pre-classified waste is to be accepted at the facility. subject to availability of a designated storage are and sufficient quarantine space, Additional waste acceptance criteria are detailed in Condition 5.3. Condition 5.4 governs the storage of waste and Condition 5.9 requires a waste and chemical storage plan to be established and maintained by the facility management.

- **Repackaging/Bulking-up Compartment**

  Small volumes of compatible liquid hazardous waste will be transferred from small containers to larger containers for storage and eventual shipment off-site. The bulking-up of all liquid wastes will only be conducted in a purpose built repackaging/bulking-up compartment. Condition 5.14.6 states that the compartment will be designed in accordance with the principles outlined in the *Safe Use & Handling of Flammable Liquids* (HSE publication). Prior to construction and operation of the repackaging/bulking-up compartment all design details are required to be approved in advance with the Agency, Condition 5.14.1.

Detailed operational procedures are required by Condition 5.3.1 prior to the commencement of this activity. Satisfactory compatibility tests must be performed on all samples prior to bulking up, Condition 5.10.

All activities conducted in the bulking-up compartment will be conducted under negative air pressure with dust filtration as a minimum, Condition 5.14.5. A detailed design of the air handling unit for this area must be agreed in advance by the Agency under Condition 5.14.2.

- **Tanker Parking/ Bulking-up of ISO Road Tankers**

Three bunded tanker bays will be installed at the facility. They are designed to be contained by means of a retaining kerb and which will be sloped to a sump. This sump discharges to the surface water drainage system via a petrol interceptor. The contents of this sump will be analysed prior to release to the surface drainage system (See *(10) Emissions to Surface Water* below). The tanker bays are bunded with a depression in the slab for collection of possible spillage of materials that is set to contain $27m^3$ of materials. An emergency overflow drain to the chemical store bund is provided, this provides an extra $400m^3$ of emergency containment of spills, leakages and the retention of fire suppressant.

The applicant proposes to bulk-up road tankers, this can only commence with prior agreement from the Agency, Condition 5.14.1.

- **Refrigeration Processing Plant:**

The applicant is seeking approval in principal from the Agency to carry out this activity, as it has yet to be decided whether this process will be carried out at the facility. Precise details of the automated refrigerator processing plant are unknown to the applicant and it is proposed to approve the process, if required, by means of and Specified Engineering Works (SEW).

Proposed equipment required includes conveyors, preliminary degassing equipment, a shredder, a material classification system (magnet, non-ferrous separator) and gas capture and bottling system. The exhaust from the gas capture system will be monitored to ensure compliance with relevant international standards with regard to CFC emissions and rate of capture.

The principal standard addressing the refrigerator recycling process is:

'*Guidance on the Recovery and Disposal of Controlled Substances Contained in Refrigerators and Freezers'*: Environment Agency, SEPA (2002). The standard has adopted ozone depleting substance (ODS) loss as a means of measuring the recycling process. The Environment Agency Refrigerator Guidance Document stipulates that emissions to air are based on the mass loss of ozone depleting substance (ODS) from the refrigerator processing plant. This loss should be proportional to the feed rate of appliance to the system; therefore, mass loss should not exceed the values given in Table 1 below:

Table 1: Maximum Mass Loss of ODS per Unit

No. of refrigeration units processed per hour	**Maximum mass loss of ODS expressed as CFC R11**
<100	5g/hr

>100 but <200	10g/hr
>200 but <300	15g/hr
>300 but <400	20g/hr

The standards recommends that monitoring of ODS be carried out at various stages throughout the process. Condition 5.13.5 states that the operation and monitoring of the Refrigerator Processing Plant be carried out in accordance with this standard or any other standard stipulated by the Agency. Condition 5.13.1 and 5.13.2 state that the refrigerator processing plant cannot be operated by the licensee prior to submission of detailed SEW's and Agreement by the Agency. Emission predictions and a noise prediction model is required by Conditions 5.13.3 and 5.13.4 to be included as part of the proposal. Monitoring locations, frequency of monitoring, methods of analysis and emission limit values are to be agreed in advance with the Agency.

- **Waste Repackaging: Solid Materials System - Bulking-up Solids**

  This process is dedicated to handle paper, plastic and metal based packaging. The principal components of the system include a shredder, vibrating table, conveyers, a metal baler and a paper/plastic baler. Any residual liquid will be collected and drummed up for off-site treatment. This area will be subject to an air-handling unit. This activity will be carried out in a bunded area.

- **Household Hazardous Waste and Office Hazardous Waste**

  This waste consists of waste household chemicals and containers, pesticides, paints, solvents, pharmaceuticals and batteries collected mainly via the applicant's ChemCar© operation. If small quantities of liquid residues are present in containers that arrive at the facility by way of household hazardous waste collections or of office-type collections, these liquids will, where appropriate, be bulked into larger containers such as drums. All bulking of household/office hazardous waste where appropriate will be carried out in a controlled atmosphere of the repackaging/bulking-up compartment subject to the requirements of Condition 5.14. This activity will be conducted under negative air pressure with dust filtration as a minimum, Condition 5.14.5.

- **Waste Electrical and Electronic Equipment**

  This waste consists of the following generic categories:

  White Goods: Washing machines, Driers, Dishwashers, Electric Ranges, Ventilation Systems and similar devices.
  Brown Goods: Television Sets, Video Recorders, Stereo Systems, Wireless Sets, Electrical Appliances, Radio Sets, Telephones and Cellular Phones, Cables and Florescent Tubes.
  Computers: Large-scale computers, Process control computer, Personal computers, Laptops, Printers, Computer Accessories etc.
  Medical Equipment: X-Ray Units, Tomographs, Diagnose Equipment, Therapy Equipment etc.
  Waste will be transported to the facility in suitable containers. Procedures for the handling of this waste type are dependent on the category of waste and its components. Generally wastes will be dismantled and sorted. No WEEE

processing shall be carried out without prior approval from the Agency, Condition 5.11.1. The procedure for dismantling WEEE and storage of WEEE shall be in place prior to the acceptance of this waste type.

- **Asbestos Waste**

  The facility proposes to accept 500 tonnes per annum of asbestos waste for storage and bulking-up; no processing of asbestos will be carried out on-site. Condition 5.7 details stringent requirements on the acceptance, storage and handling of asbestos waste. *Schedule D: Monitoring* requires that asbestos fibre monitoring be carried out on a quarterly basis.

- **Infectious Healthcare waste**

  The facility proposes to accept 120 tonnes per annum of infectious healthcare waste. Infectious healthcare waste acceptable at the facility is restricted to wastes arising from health and welfare services provided to staff at their place of work, Condition 5.15.2. Infectious healthcare waste from hospitals or similar institutions are not to be accepted at the facility, Condition 5.15.3. All healthcare waste must be removed off-site within 48 hours of its arrival on-site. Condition 5.15 details stringent requirements on the acceptance and handling of this waste type.

(5) Decommissioning and Aftercare

Condition 4.1 of the recommended Proposed Decision deals with decommissioning, restoration and aftercare of the facility. The life span of the facility is expected to be 20 years. The applicant has stated that all waste in the hazardous waste transfer station will be removed for disposal or recovery to an appropriate alternative facility and that they will carry out a facility closure assessment to ensure that no contamination has occurred from the operation of the facility. The facility is to implement such measures as the assessment identifies.

(6) Emissions to Groundwater

Condition 6.4 prohibits direct emissions to groundwater. Condition 3.16.1 (i) of the PD provides for the installation representative monitoring boreholes. Monitoring parameters and frequency are detailed on *Schedule D: Monitoring* of the PD.

(7) Emissions to Air

A single air emission point will be located on the north facing wall of the main warehouse building. Emissions from this emissions point will be generated from the following sources:

- Paper and cardboard shredding and bailing
- Metal/plastic crushing, shredding and bailing

- Bulking-up and repackaging of chemicals in the purpose built compartment.

Localised extraction ventilation (LEV) systems will be located above both the paper/cardboard and metal/plastic handling unit. An air exchange handling unit will ensure that the chemical bulking compartment is ventilated. All extraction units will be connected to the proposed single air emissions discharge point. The exact design of the air extraction/abatement system for the refrigerator processing plant and the repackaging/bulking-up compartment is to be agreed in advance with the Agency, Conditions 5.13.2 and 5.14.2.

Schedule C: Emission Limits details Emission Limit Values for air emissions using the 2002, T. A. Luft Standards.

Condition 7.4 of the PD details dust and odour controls for the facility, including the requirement to submit an odour management plan and a feasibility study on the installation of a negative air pressure system throughout the building.

(8) Noise Emissions

Conditions 6.1, 6.2 and 6.5 of the PD control noise emissions, which are not envisaged to be a problem due to (a) the location of the facility within an industrial estate and (b) the carrying out of all process activities within the warehouse building. Conditions 5.13.3 and 5.14.3 of the PD require noise prediction models to be submitted with the SEW for the refrigerator processing plant and the repackaging/bulking-up compartment.

(9) Emissions to Sewer

All foul discharges will be to the foul sewer servicing Greenogue Business Park, terminating at Ringsend Wastewater Treatment Plant. Consent for this discharge has been granted by South Dublin County Council. Sewage and floor washings from the waste transfer building will discharge to a $5m^3$ self-contained monitoring tank (Condition 3.14.1). Prior to discharge the contents of the tank are sampled and analysed; discharge will only occur when the Emission Limit Values (set out in *Schedule C: Emission Limits*) are satisfied. Control for the emissions to sewer are detailed in Condition 6.7.

(10) Emissions to Surface Water

There is no direct discharge to surfacewater. The surfacewater drainage system is divided into two catchments:

1. Roof drainage: Discharges drain directly to the stormwater sewer.
2. Run-off from paved areas: Collected in drains and gullies and drains via a bypass interceptor to the stormwater sewer, Condition 3.14.2.

Both routes pass through a discharge control system by means of an attenuation tank and flow control device.

(11) Waste Management Plans

The Waste Management Plan for the Dublin Region was adopted by South Dublin County Council in December 1998. I consider that the proposed facility is consistent with National and Regional policy.

(12) Submissions/Complaints

None received.

(13) Recommendation

I recommend that a waste licence be granted in accordance with the conditions recommended in the attached recommended Proposed Decision. In coming to this recommendation, I consider that the waste activities and works to be carried out at Cara Waste Management Limited facility would, subject to the conditions of the recommended Proposed Decision, comply with the requirements of Section 40(4) of the Waste Management Act, 1996.

Signed_____ Dated: 26/03/04

Olivia Cunningham
Inspector
EPA