

INSPECTORS REPORT

WASTE LICENCE REGISTER NUMBER 158-1

Applicant: Ray Whelan Ltd., Waste Services, Ballyharmon, Co. Carlow.

Facility: Waste Transfer & Recycling Facility, Cappanaboe, Co. Laois.

Inspector: Ms. Regina Campbell

Inspector's recommendation: The licence be granted subject to conditions.

(1) Introduction

This application relates to an operational unauthorised transfer station in Cappanaboe, Co. Laois. The applicant has applied to take up to a maximum of 70,000 tonnes (in 2005) of non-hazardous waste. The applicant currently handles approximately 28,000 tonnes per annum. At present the facility is poorly developed. In the application, the applicant has proposed substantial upgrading of the facility.

The facility is located in a rural area on the Laois/Carlow border approximately 4 km northwest of Carlow Town. The facility itself is situated in Co. Laois. The 1 acre site is bounded by agricultural land on three sides and is adjacent to a minor trunk road. There are 6 known domestic wells providing drinking water to residential properties within 400m of the site. The nearest residence is approximately 350m to the east of the facility.

The main activity to be carried out at this facility will be bulking and transfer of waste for disposal (Classes 11 and 13 (Principal activity) of the 3rd Schedule). Other activities include the recovery of metal, glass, construction & demolition waste, cardboard, paper and wood (Classes 2, 3, 4 and 13 of the 4th Schedule). Ray Whelan Ltd. currently collects waste from the Laois/Carlow area. The applicant will be required by Condition 11 to examine waste recovery options for wastes being accepted at the facility.

Waste shall only be accepted at the facility between the hours of 8.00am and 6.00pm Monday to Friday inclusive and 8.00am and 3.00pm on Saturdays. No waste acceptance is allowed on Sundays. Waste acceptance is only allowed on Bank Holidays with the prior agreement of the Agency. These hours are as applied for by the applicant.

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| Quantity of waste applied for (tpa) | 70,000 |
| EIS Required | Yes. I have assessed the EIS and I am satisfied that it complies with the EIA Regulations. |
| Prescribed date | 01/05/98 |
| Date Application Received | 06/07/01 |
| Number of Submissions Received | One |
| Planning Permission Status | Applied to Laois Co. Council 20/02/01. |

SITE VISITS:

| DATE | PERSONNEL | OBSERVATIONS |
|-------------|--------------------------------|---|
| 01/08/01 | Regina Campbell | Site notice check (not compliant) and site visit. |
| 22/08/01 | Regina Campbell & Maeve McHugh | Site notice check (compliant) and site visit. |

Appendix 1 contains a facility location drawing (Map A.1 Site Location) and a drawing showing the proposed layout of the facility (Dwg. 00-04-P-09 Rev. A entitled (Drainage Layout-Proposed)).

(2) Facility development

Mr. Ray Whelan began operating a domestic wheelie bin collection and disposal service in the Laois/Carlow area in 1992. In the same year, he purchased a green field site in Cappanaboe and in 1994 he obtained planning permission from Laois County Council to erect a building on the site. An application has been made to Laois County Council (on 20/02/01) for planning permission to upgrade the current site. At present, up to one third of the site is currently covered in concrete. There is a single run-down building which is currently used for waste transfer operations and for cardboard baling and storage. The remainder of the site is used for scrap equipment/metal storage, glass storage and construction and demolition waste stockpiles. The site is not currently serviced with water or electricity but the applicant proposes to connect electricity and provide a water supply from an on-site well. A diesel generator is used to provide site power for the cardboard baler. There is currently no surface water or foul water infrastructure on-site (see Section 6 – Emissions to surface water).

At present the front of the site is screened from the road partly by a 1 metre high concrete wall and partly by overgrown hedgerows. The western and eastern boundaries of the site are formed by hedgerows and the back of the site is screened by a 3 metre high concrete wall and a well established hedgerow.

The applicant proposes to demolish the existing building and to erect three interlinked buildings. These buildings will contain the waste transfer area, waste quarantine/inspection area, the picking lines and a storage area for cardboard and other recyclables. The applicant also proposes to construct an office, staff canteen, weighbridge and vehicle wash area. The recommended PD requires the major works to be undertaken within twelve months from the date of grant of the licence or date of grant of planning permission whichever is the later.

A Puraflo treatment system is proposed for the treatment of sewage and wash water from the canteen area. All other foul water will be collected in a storage tank and tankered off-site for treatment at a facility to be agreed with the Agency.

The applicant proposes that waste delivered to the facility will be passed through a hopper and trommel where organic fines will be separated out and stored prior to being sent off-site for composting. The waste will then be passed down a conveyor to a 'picking line'. Any recyclables will be sorted manually and stored in designated areas within the building. The

residual waste will be loaded onto bulk containers and sent to landfill. Currently waste is landfilled at Powerstown and KTK landfills. All waste handling areas will be covered in impervious concrete.

Condition 3 requires the applicant to provide 50% standby capacity on critical items of plant in order to ameliorate the effects of any unusually large waste loads arriving at the facility. There will also be a requirement for back up and spares to be provided for these critical items. Condition 3 also states that the applicant shall not accept waste quantities in excess of the working capacity of the waste handling and processing equipment on site.

(3) Waste Types and Quantities

According to the application, the licensee was handling 28,000 tonnes per annum in 2000. Of this amount, approximately 18,000 tonnes was household waste. In the application the licensee estimates the amount of waste that could potentially be handled at the facility over the next five years with a maximum of 70,000 tpa proposed to be accepted in 2005.

With regard to assessing the capacity of the facility to process waste, reference was made to a USEPA document entitled "Waste Transfer Stations: A Manual for Decision-Making" (2002). It was calculated that the maximum annual tonnage of waste processed at the facility would be 33,000 tpa (see Appendix 2). This is based on the applicant having one hopper and trommel as applied for in the application.

It is therefore concluded that the facility should be licensed initially for a maximum annual tonnage of 33,000 tpa of waste as outlined in Schedule A of the recommended PD. The applicant is required to obtain the agreement of the Agency prior to increasing the waste intake at the facility up to a maximum of 70,000 tonnes per annum (see Schedule A of the recommended PD).

(4) Emissions to Air

Potential emissions to air from the facility include odour, noise and dust. Condition 7 requires a dust and odour management system to be installed in the buildings.

All waste for disposal stored overnight must be stored in appropriately covered containers within the Waste Transfer Building, and must be removed from the facility within 48 hours.

Dust deposition limits are specified in Schedule C.

Noise emission limits are specified in Schedule C. Condition 6 requires that there shall be no clearly audible tonal component or impulsive component in the noise emissions from the activity at the noise sensitive locations.

(5) Emissions to Groundwater

As part of the application, an existing well at the applicant's own private residence (located 400m from the facility) was analysed and no contamination from the transfer station was found. In addition a series of trial pits at the facility were dug to access groundwater and a groundwater sample was taken 6m from the existing waste storage area. Apart from conductivity which was elevated (1.947ms/cm), no other indication of contamination was found (ammoniacal nitrogen <0.02mg/l and BOD <1mg/l). During the digging of the trial pits, a 300mm thick layer of clay was observed and it was suggested in the application that this may be acting as a barrier preventing run-off from soaking deep into the site and into the groundwater.

A groundwater well is required to be installed at the facility (see Condition 3.16.1) and annual monitoring of this is required as part of the recommended PD.

All waste handling areas will be covered in impervious concrete. No fuel or lubricants will be stored at the facility but if future storage is required any fuel tanks are required to be bunded.

(6) Emissions to Surface Water

The nearest surface water to the site is the River Douglas which is about 3 km east of the site. At present there is no direct discharge from the site to surface rivers or streams. All run-off from the existing site flows to a drainage ditch around the site boundary or percolates through the site. A sample of run-off taken from the existing waste tipping area showed high levels of BOD (320 mg/l), COD (1,274 mg/l) and ammoniacal nitrogen (4.2 mg/l).

As part of the recommended PD, all clean surface water drainage from the facility (other than surface water from waste handling areas that will be collected and transferred off-site) will be directed to a silt trap and a Class I bypass oil separator before discharge to a perimeter surface water drain. Monitoring of this emission will require a weekly visual inspection and quarterly for chemical components (BOD, pH etc.).

A wastewater treatment system such as a Puraflo will be required for the treatment of sewage and wash water from the canteen area. All other waste water will be collected in a storage tank and tankered off-site for treatment at a facility to be agreed with the Agency.

(7) Other Significant Environmental Impacts of the Development

None.

(8) Waste Management, Air Quality and Water Quality Management Plans

Consideration was given to two waste management plans as this facility is situated on the Carlow/Laois border. The Proposed Joint Waste Management Plan for the South-east Region (adopted June, 2002) stated that local transfer stations will be provided as necessary to rationalise waste collection systems. Ray Whelan is mentioned as being one of the larger refuse collectors in County Carlow.

The Waste Management Plan for the Midlands Region (adopted September, 2001) states that a number of private sector companies operate waste transfer stations. Ray Whelan is not listed as a private waste collector operating in the Midland Counties in the report. The Plan states that partnership and increased involvement will be developed with the private sector in the provision of new waste collection, recovery and disposal operations where appropriate.

The Barrow Water Management Plan was adopted in 1998. However I consider that this facility will have no impact on the River Barrow.

There is no relevant Air Quality Management Plan for the region.

(9) Submissions/Complaints

One submission was received in relation to this application.

Submission 1 - Dúchas. Dúchas stated that they had no comments regarding this site other than when their ranger visited the site he said that 'it was filthy and that Mr. Whelan should clean up his act'.

Response

The recommended Proposed Decision requires substantial infrastructure to be put in place within twelve months of the date of grant of this licence or grant of planning permission whichever is the later. It also contains conditions governing nuisance control and requires procedures for the proper acceptance, handling and storage of waste to be put in place.

(9) Recommendation

It is recommended that a licence be granted for Classes 11 and 13 of the Third Schedule and Classes 2, 3, 4 and 13 of the Fourth Schedule as applied for in the application.

Signed: _____

Date: _____

Name: Ms. Regina Campbell, Inspector
Environmental Management & Planning

07/05/03

APPENDIX I

Map A.1, Site Location

Dwg. 00-04-P-09 Rev. A - Drainage Layout-Proposed

APPENDIX 2

When assessing the capacity of the facility to process commingled waste, reference was made to the USEPA document – “Waste Transfer Stations: A Manual for decision making” (2002). The document provides a number of formulae for determining the capacity of a given facility. The option used in this case was the formula that relates to hopper/compaction stations as this facility proposes to load all incoming commingled waste into the hopper of a waste shredder for processing. The equation is given below:

$$C \text{ (per day)} = (N_n \times P_t \times F \times 60 \times H_W) / (P_t/P_c \times T_c) + B$$

$$C \text{ (per day)} = (1 \times 25 \times 0.175 \times 60 \times 9) / (25/12.5 \times 6) + 10 = \text{approx. } 107 \text{ tonnes per day}$$

Annual Capacity based on a 6 day week

Annual Capacity = **approx. 33,000 tonnes**

Formulas for Determining Transfer Station Capacity

Stations with Surge Pits

Based on rate at which wastes can be unloaded from collection vehicles:

$$C = PC \times (L / W) \times (60 \times HW / TC) \times F$$

Based on rate at which transfer trailers are loaded:

$$C = (P_t \times N \times 60 \times H_t) / (T_t + B)$$

Direct Dump Stations

$$C = N_n \times P_t \times F \times 60 \times H_W / [(P_t/P_c) \times (W/L_n) \times T_c] + B$$

Hopper Compaction Stations

$$C = (N_n \times P_t \times F \times 60 \times H_W) / (P_t/P_c \times T_c) + B$$

Push Pit Compaction Stations

$$C = (N_p \times P_t \times F \times 60 \times H_W) / [(P_t/P_c) \times (W/L_p) \times T_c] + B_c + B$$

Where:

C = Station capacity (tons/day)

PC = Collection vehicle payloads (tons)

L = Total length of dumping space (feet)

W = Width of each dumping space (feet)

HW = Hours per day that waste is delivered

TC = Time to unload each collection vehicle (minutes)

F = Peaking factor (ratio of number of collection vehicles received during an average 30-minute period to the number received during a peak 30-minute period)

Pt = Transfer trailer payload (tons)

N = Number of transfer trailers loading simultaneously

Ht = Hours per day used to load trailers (empty trailers must be available)

B = Time to remove and replace each loaded trailer (minutes)

Tt = Time to load each transfer trailer (minutes)

Nn = Number of hoppers

Ln = Length of each hopper

Lp = Length of each push pit (feet)

Np = Number of push pits

Bc = Total cycle time for clearing each push pit and compacting waste into Trailers