TED O' DONOGHUE & SONS WASTE DISPOSAL

KNOCKPOGE, WATERFALL, Co. CORK

COPY OF

ANNUAL ENVIRONMENTAL REPORT

Period: January 2008 - December 2008

Waste Licence Register Number:	W00214-1
Licensee:	Ted O' Donoghue & Sons Limited
Location of Facility:	Knockpoge, Waterfall, County Cork
Date:	March 29th 2009

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1. INTRODUCTION

This is the fourth Annual Environmental Report (AER) for Ted O' Donoghue & Sons Limited and covers the reporting period January 2008 to December 2008. Ted O' Donoghue & Sons received a waste licence (Register Number W214-1) on 26th September 2005. The waste records are from January 2008 to December 2008. The AER has been prepared in compliance with Condition 11.10 of the Waste Licence.

The content of the AER is based on Schedule D of the Waste Licence and the report format follows guidelines set in the "Draft Guidance on Environmental Management Systems and Reporting to the Agency" issued by the Environmental Protection Agency (Agency). The Waste Licence allows *the facility* to accept Commercial, Household and Construction and Demolition non-hazardous waste on-site and recovered from the incoming waste streams. The various waste streams are processed and stored on-site pending removal to authorised off-site recycling and disposal facilities. The annual licensed waste throughput is limited to 23,000 tonnes. However in the past 2 years this figure has been exceeded and a waste licence review application was submitted to the Agency in November 2008.

2. MANAGEMENT OF THE FACILITY

2.1 Management of the Activity

The site is managed and operated by O' Donoghue family. Details of the management structure for the facility were submitted to the Agency as part of the Environmental Management Programme in March 2006.

2.2 Environmental Management System

An Environmental Management System (EMS) is in operation for the site and is updated annually in accordance with site requirements and conditions, as required under Condition 2.2 of the Waste Licence.

2.3 Environmental Management Programme

The objective of the EMP is to act as the site manual, which will assist the site in achieving its objectives and targets during the current and future operation of the site. The EMP has been prepared and was submitted to the Agency in March 2006.

2.4 Schedule of Environmental Objectives and Targets 2008

The schedule of Environmental Objectives and Targets for the forthcoming year is described in Section 5 of this report.

3. NOTIFICATION AND RECORD KEEPING

3.1. Information stored on-site

All copies of environmental data and prescribed reports obtained and prepared on behalf of the licensee are forwarded to the Agency. Copies of reports and correspondence are retained and available for inspection at the reception building.

The facility provide the following documentation to view:

- o Waste Licence 214-1
- o Waste Licence Application form
- o Periodic reports
- o All monitoring records
- o Waste transfer and acceptance dockets
- o Incident/Complaints reports
- o Once-off reports submitted to the agency
- o Rejected loads log
- o Agency correspondence, EPA approvals and request for additional information
- o Monitoring personnel, experience and training

o Audit records

o Rejected load, compliance, integrity of bunds

o Daily Site Log

o Weekly site inspection forms

o Surface Water Inspection forms

3.2. Waste Records

Records of all waste loads entering and leaving the site is kept electronically by the weighbridge operator. Details such as date, time, origin, waste type, contractors name, waste collection permit number, quantities and vehicle registration number are recorded. `Waste records are contained in Appendices I.

All waste materials accepted at the site are recorded on two separate documents, including a waste transfer document and a computer printout of the waste accepted. The following details are recorded:

Computer Printout:

- Ticket Number/Transaction Number
- Customer code
- Operator / driver signature
- Net weight
- Vehicle Registration Number
- Contractor Name
- Waste Code for site
- Waste Type
- Name of person who checked load
- Waste Source
- Accepted or rejected status
- Weight entering and weight of container leaving site

Waste Transfer Docket includes additional headings of:

- How waste is contained
- European waste catalogue number
- Physical description
- Odour/Description of odour
- Special problems/requirements of waste
- Knowledge with regard to waste
- Waste Producer
- Waste Collection Permit Number

All waste records are retained at the site office.

3.3. Report on Waste Recovery

The waste volumes have increased since 2003 from a figure of 9,318 tonnes to 29,911 tonnes in 2007, and 38,331 in 2008. Figure 3.1 below details the breakdown of material accepted at the facility in 2008.

A total of 10,707 tonnes of waste was sent to landfill for disposal in 2008. This equates to a recovery rate in the Ted O' Donoghue & Sons Ltd facility of 73% (up from 69% in 2007). Figures 3.1 and 3.2 below detail the fractions of waste accepted and removed from the facility in 2008.

Figure 3.1 Waste Accepted at Facility in 2008

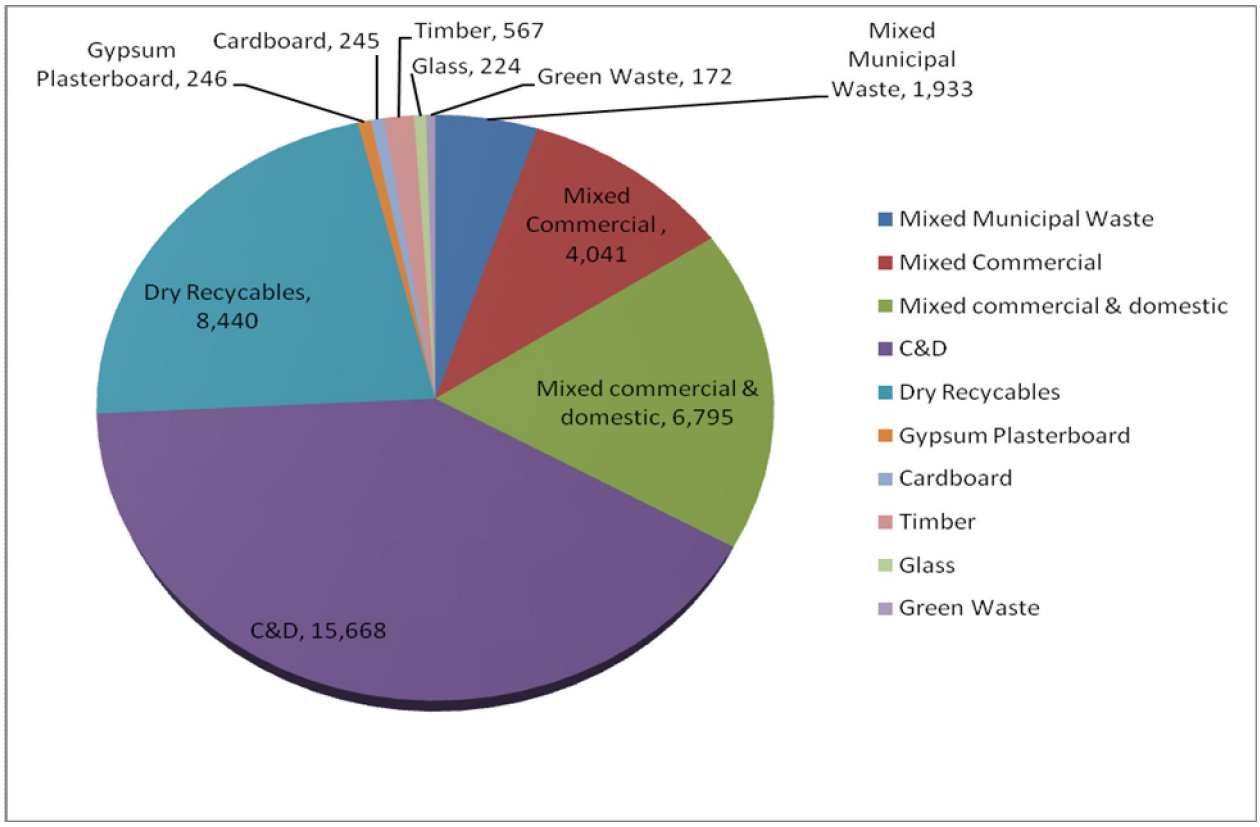
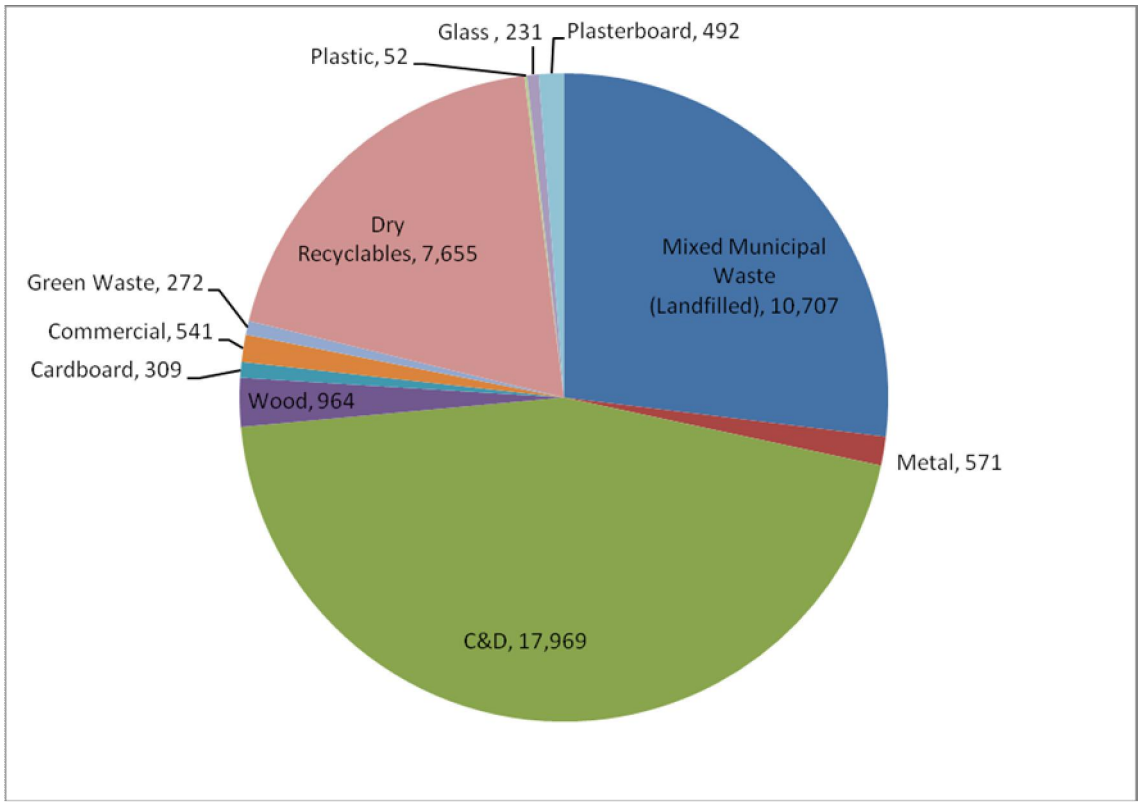


Figure 3.1 Waste Removed from Facility in 2008



3.4. Register of Complaints

Details of all complaints made by the public are recorded in a Complaints Register. Complaints can be registered by contacting the facility manager or staff at the site. The register includes the name of the complainant, the nature of the complaint, the date of the complaint and the actions taken to remedy the complaint. The facility manager signs off the completed form. Operational Procedure 9.3 details the recording of complaints.

3.5. Non-Compliances

Non-compliances were notified to the facility manager following site inspections on 9/10/09.

1. Exceedance of licence tonnages.
2. Acceptance of waste from non-permitted contractors.

Non-compliances were notified to the facility manager following site inspections on 17/10/09.

1. Waste Storage.
2. Surface water monitoring at SW1.

Monitoring of dust deposition at location D1 exceeded the 350mg/m2 limit in August 2008 (380mg/m2/day). The construction of fencing at the adjacent dwelling was likely to have attributed to the increased levels.

3.6. Reported incidents and Complaints summaries

No incidents took place or complaints were received by the facility manager during the reporting period.

3.7. Summary of Resource & Energy Consumption

Table 3.1 presents an estimate of the resources used on-site during the reporting period.

Table 3.1: Estimate of Resources Used On-Site

Resources	Quantities
Diesel	190,000 litres
Hydraulic and Engine Oil	200 litres
Disinfectant	3 litres(concentrate)
Truck Wash Detergent	30 litres
Electricity	10,000 KWH

3.8. On-site Procedures

Current procedures relating to the handling and storage of waste are being developed and will be forwarded to the Agency when completed.

4. ENVIRONMENTAL MONITORING REPORT FOR PREVIOUS YEAR 2008

The following is a summary of the noise, dust, and groundwater quality monitoring and monitoring carried out at the site during 2008.

4.1. Noise Monitoring

The following are the details of the survey as carried out at Ted O' Donoghue and Sons Ltd premises on the 24th April 2008.

The following is a description of the noise sensitive locations monitored during the noise survey and the sources of noise in the area at the time.

The following is a description of the noise sensitive locations monitored during the noise survey and the sources of noise in the area at the time.

Table 4.1: Monitoring Locations

Monitoring Location	Description
N1	Adjacent O Donoghue family residence
N2	South east corner of site adjacent transfer station and workshop
N3	North west corner of site, close to trailer parking area
N4	North east corner of site, close to timber shredder
N5	At sensitive dwelling, north east of site

The results of the noise monitoring at locations N1-N5 is presented in Table 4.2.

Table 4.2 Ambient Measurements (Locations N1-N5)

Monitoring Location	Time and Date	L_{Aeq}, dB(A)	L_{A90}, dB(A)	L_{A10}, dB(A)	Main Noise Sources
N1	24/04/08 10:18	55.7	41.4	51.4	Trucks entering facility, local traffic.
N2	24/04/08 11:23	55.2	40.4	49.8	Vehicle movements. Noise from transfer building.
N3	24/04/08 12:25	62.7	50.0	64.0	Noise from transfer building, site truck movements
N4	24/04/08 14:31	61.9	45.4	65.6	Traffic on local road, no site noise
N5	24/04/08 15:35	66.4	49.6	65.2	Traffic on local road, no site noise

Measurements at location N1 were recorded adjacent to the O' Donoghue family residence adjacent to the entrance to the facility. Intermittent traffic noise from the adjacent public road contributed to the ambient levels. Two trucks entered the facility during the 30-minute monitoring period. Noise from the workshop was audible at this monitoring location. The L_{Aeq} average noise level was recorded at 57.7dB(A).

Noise measurements at N2 and N3 were recorded at the north-western and north-eastern corners of the site respectively. Site vehicle movements and the mechanical grab within the transfer station building contributed to the annual were the main noise sources. The average noise levels were recorded at N2 and N3 were 55.2dB(A) and 62.7dB(A) respectively. The level at N3 was influences by a truck idling close tot he monitoring position.

- The earthen mound at the north-western boundary provides significant landscape and acoustic screening of the activities in the facility. Tree cover along the eastern boundary also alleviates the noise impact to the west.

- The noise from the facility was not considered a major source at locations N4 and N5. Intermittent traffic movements were the main noise source. There was no activity audible from the waste facility at locations N4 and N5.

From the above it can be concluded that the O' Donoghue waste transfer facility is in compliance with the requirements of the waste permit for the facility. The facility is not a source of nuisance to surrounding sensitive areas. All waste segregation activity takes place within the waste transfer building. Truck movements are the main noise associated with the operation of the business. At local dwellings (N1, N4 and N5) there is minimal noise contribution from the facility.

4.2. Dust Deposition Monitoring

The dust gauges were set up at the locations D1, D2, D3 and D4 as listed in Table E.2.2 of the waste licence. The gauges were erected such that the containers were 1.8m above the ground surface and free from any obstruction. The containers were exposed from 17th July – 15th August 2008.

The second round of sampling was conducted from 9th September – 10th October 2008.

D1: This sample location is sited on the western boundary of the site close to the O' Donoghue family residence.

D2: This sample location is positioned at the south-east corner of the site close to the workshop and transfer building.

D3: This sample location is at the north-western side boundary

D4: Located at the north-eastern corner of the facility

RESULTS:

The results of the dust monitoring event are outlined in the table below.

Table 2: Dust Monitoring Results 17th July – 15th August 2008

Location	Total Dust mg/m^2/day
D1	380
D2	94
D3	326
D4	161

Table 3: Dust Monitoring Results 9th September – 10th October 2008

Location	Total Dust mg/m^2/day
D1	194
D2	295
D3	124
D4	187

CONCLUSIONS:

The first round results from July-August indicate that the total dust concentration at location N1 is above the 350mg/m^2 stated in the licence limits. However the construction of a fence within 5m of this location during the monitoring period appears to have influenced the dust concentrations.

The results at the other 3 locations are within the EPA limit set out in Schedule C.2 of Waste Licence register no. W0214-01 for the facility.

The results of the second round monitoring at the 4 locations are within the conditions stated in the EPA licence for the facility for the first survey carried out in August-September.

4.3. Groundwater Monitoring

A water sample from an external tap water source GW1 was sampled for analysis in April 2008. This sample is comparable with the drinking water quality in the O' Donoghue residence located adjacent the waste transfer activities. The sample was analysed for parameters as listed in the Schedule C of the waste licence for the facility.

The results of the water monitoring indicate a water quality that complies with the standards in the EC Drinking Water Directive [98/83/EC].

The analysis of total and faecal coliforms from the sample taken on 4th November 2008 showed a result of <3MPN per 100mls for both parameters. The results are within international drinking water standards.

4.4. Storm Water Monitoring

Monthly samples were obtained and analysed from the storm water chamber at the separator. High levels of coliforms were detected in the monitoring chamber during the year. It is believed that the source of the contamination may be from septic tank effleunt. Works have carried out on the drainage system in late 2008 and early 2009. Monthly monitoring for coliforms will determine the pact of these works. Monitoring results are regularly forwarded to the Agency.

5. SITE INFRASTRUCTURE

5.1. Report on Objectives & Targets 2008

The O&Ts detailed last year have all been completed as proposed in the 2008 AER. The facility manager is currently investigating the viability of alternative recovery products.

Objective 1 – Maintain Regular Schedule of EHS

Increase safety and risk awareness on-site emphasised by monthly reviews.

Objective 2 – Improve Waste Acceptance Procedures On-site

All incoming waste inspected by operator, unsuitable waste quarantined and collected by licensed/permitted third parties. Management to inform customers of acceptable waste types. Hazardous material records maintained on-site.

Objective 3 – Emergency Response Training

Further training planned.

Objective 4 – Maintain and Improve the EMS

Environmental management review meetings on-going. EMS documentation updated. Site inspections undertaken in accordance with EMS.

Table 5.1: Schedule of Objective and Targets 2009

No.	2009 Objective	Target	Responsibility	Timescale
1	Maintain regular schedule of EHS / Safety Committee meetings	Continue with Monthly meetings & ensure actions are closed out. Increased safety and risk awareness on-site	Facility Manager All site personnel	Monthly basis with end of year review 31 Dec 2009
2	Improve Waste Acceptance procedures on-site	Continue to ensure that any unacceptable waste is quarantined and any hazardous waste is disposed of using only fully certified carriers and only to fully certified facilities. Maintain details of hazardous materials used on-site.	Facility Manager, Vehicle Drivers, Weighbridge Operators, Operations Manager	New Procedures in place by Q1 and active immediately. Further training if required by end of Q3
3	Emergency Response Training	Update Health, Safety & Environmental Emergency Response training. Ensure designated people are familiar with procedure and necessary training is completed if required.	Facility Manager	At intervals throughout the year
4	Maintain and improve the EMS	Continue to hold quarterly and annual Environmental management review meetings at the site.	Environmental Compliance Manager	31 December 2009

5.2. Waste Management Activities

The facility is licensed to accept the following waste types as specified in Schedule A of the Waste Licence: -

- Household,
- Commercial,
- Construction & Demolition,
- Industrial Non-Hazardous Solids

Hazardous waste is not accepted at the facility, with the exception of small quantities of machinery batteries that inadvertently arrive in waste deliveries. Such batteries are stored in a designated skip pending collection by an off-site recycling organisation. Any other materials suspected either to be hazardous or not acceptable under licence conditions (e.g. gas cylinders, sheets of asbestos) are temporarily stored on-site in the waste quarantine area, before removal off-site for treatment/disposal at an appropriate facility.

5.2.1. Household and Commercial Waste Containing Putrescible Materials

Household and commercial wastes (originating in factories, hotels, pubs and supermarkets) containing an organic fraction are either deposited on the floor of the transfer building, or tipped directly into open trailers. All the household waste deposited on the floor is either pushed into an open trailer, or compacted for removal off-site for disposal at an off-site landfill, as agreed with the Agency. The commercial waste is inspected and segregated into recyclable cardboard, bottles, domestic waste, or compactor waste (supermarkets are generally the main origin of this waste). All uncontaminated cardboard and plastic packaging material, which is suitable for baling, is collected for recycling. Drink cans are collected, baled and stored on-site pending removal off-site for recycling. Glass bottles, which are either segregated prior to arrival on-site or deposited at the civic amenity area, are stored on-site pending removal for recycling off-site.

5.2.2. Non Putrescible Household and Commercial Waste

Non putrescible household wastes, arising from the kerbside collection, and non putrescible commercial/industrial waste is deposited onto the floor of the transfer building and inspected for disposable and/or recoverable fractions. Non-recyclable/ recoverable waste is stored within the building before transfer for disposal to an off-site landfill, as agreed with the Agency.

5.2.3. Construction and Demolition Waste

All construction and demolition waste is inspected to determine if it is suitable for transfer and/or recovery. Wood and metal are separated using a mechanical grab and subsequently removed off-site to approved recovery/recycling facilities. The residual material is passed through a trommel to remove the fine fraction containing subsoil and topsoil. This material is either used on-site for restoration purposes, or is sold for agricultural and/or horticultural purposes. The heavy fraction from the trommel

containing concrete, brick etc is then passed through the crusher to produce a crushed inert aggregate.

5.2.4. Wood, Timber Waste

Wood delivered to and recovered on-site is shredded and removed off-site for disposal.

5.2.5. Other recovery Infrastructure

External storage bays are located at the facility for storing waste recovered for recycling. Concrete storage bays for soil, rubble green waste and chipped wood are located at the north east of the facility. At the south-west of the waste transfer building there will be bays for glass and scrap metal and also a quarantine area for white and electrical goods.

5.3. Quantity & Composition of Waste Recovered

Details of the quantities of waste recovered are contained in Appendix I.

6. *REPORT ON ENVIRONMENTAL NUISANCES & CONTROLS*

The site is inspected daily and weekly by the manager and recorded on separate inspection sheets as required by Condition 8.10. The daily inspection sheet records environmental nuisances such as flies, loose litter, vermin, birds, odour, dust, fires and complaints. The sheet also provides for the recording of descriptions of works on the day of inspection and provides for comments and required actions.

6.1. Litter Control

Litter picking is carried out daily and as required. Daily and weekly inspection sheets are maintained at the site office. The site manager carries out daily litter inspection in the area surrounding the waste transfer station. An overhead CCTV camera is located at the weighbridge to enable inspection of loads brought to the facility. The weighbridge operator inspects each load brought to the facility and ensures that they are covered with appropriate netting.

Weekly inspection sheet provides for the recording of nuisances as well as site security, infrastructure and housekeeping.

A road sweeper vehicle attachment has been procured for use on the site and for local access roads when required.

6.2. Odour Control

Operations at the waste transfer facility involve the transfer and compaction of solid waste only. No liquids, agricultural or sewage sludges will be accepted at the site.

Waste accepted at the facility will have generally undergone relatively little decomposition. The storage of waste in sealed containers following compaction and

fast turnaround times on site means that the potential for odour problems arising at the facility will be minimised.

6.3. Dust Control

In dry weather all site access roads will be sprayed with a water bowser to suppress dust. To minimise dust generation traffic restrictions on the site will be implemented including a speed limit of 15 mph. Dust deposition monitoring at the site show that present dust emissions are unlikely to cause a nuisance.

However management propose to implement the following mitigation measures:

- Sprinkling water by applying a fine water mist over dusty waste as it's unloaded inside the transfer building
- Covering/dampening any external dusty waste stockpiles of C&D waste
- Sweeping and washing down the transfer building floor regularly
- Using a road sweeper on the facility yard and local road during dry weather

Dust deposition levels ware recorded twice a year using Bergerhoff gauges, during the period May to September.

6.4. Noise Control

Noise measurements have been recorded annually at the facility since 2003. The results from the monitoring indicate that noise from the facility is not a source of nuisance outside the perimeter of the facility. The doors of the waste transfer building remain closed during trommeling of waste. There have been no reports of noise nuisance complaints made to the facility manager.

Noise levels will continue to be monitored annually at locations. The $L_{Aeq,}$ L_{A10} and L_{A90} are monitored at each location for a thirty-minute duration.

6.5. Vehicles and Road Sweeping

In accordance with licence conditions a wheel wash has been installed on site. All vehicles leaving the facility must use the dry wheel wash prior to exiting the site. Signs directing vehicles to the wheel wash will be erected. New waste hauliers entering the site will be informed by the weighbridge operator of on-site procedures.

In the event that mud and debris is carried from the site onto the public road the facility manager will arrange that the road be cleaned with the road sweeper.

The site roads will be maintained in a clean and tidy state at all times. This will eliminate any potential for soiling of the public road outside the site.

Environmental monitoring at the site will be carried out in accordance Schedule F of the waste licence. The following environmental parameters will be monitored:

- Dust
- Noise
- Surface Water
- Groundwater
- Odour

APPENDIX I

WASTE RECORDS

Transfer Destination	European Waste Code	Hazardous	Quantity T/Year	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Name and Licence / Permit No. of Recoverer / Disposer / Broker	Address of Recoverer / Disposer / Broker	Name and Address of Final Destination i.e. Final Recovery / Disposal Site	Licence / Permit No. of Final Destination i.e. Final Recovery / Disposal Site
						M/C/E	Method Used					
Within the Country	19 12 12	No	7638.0	Mixed MSW	D1	M	Weighed	Onsite in Ireland	Youghal Landfill	Youghal		
Within the Country	19 12 12	No	1035.0	Mixed MSW	D1	M	Weighed	Onsite in Ireland	Gortadroma Landfill	Limerick		
Within the Country	19 12 12	No	2034.0	Mixed MSW	D1	M	Weighed	Onsite in Ireland	Kinsale Road Landfill	Cork		
Within the Country	17 05 04	No	534.0	Soil & Stone	R10	M	Weighed	Onsite in Ireland	Tom Hickey CK537/03	Aherla		
Within the Country	17 05 04	No	369.0	Timber and greens	R3	M	Weighed	Onsite in Ireland	CTO, Kinsale Road	Kinsale Road		
Within the Country	17 08 02	No	492.0	Plasterboard	R5	M	Weighed	Onsite in Ireland	Gypsum Recycling	Meath		
Within the Country	17 05 04	No	1167.0	Soil & Stone	R10	M	Weighed	Onsite in Ireland	Flor Keneally CK275/05	Templemartin		
Within the Country	17 05 04	No	1607.0	Soil & Stone	R10	M	Weighed	Onsite in Ireland	Kevin McCarthy CK433/07	Cork		
Within the Country	17 05 04	No	11043.0	Soil & Stone	R10	M	Weighed	Onsite in Ireland	Kevin McCarthy CK395/07	Cork		
Within the Country	17 05 04	No	2606.0	Rubble	R5	M	Weighed	Onsite in Ireland	John A Wood	Ballygarvan		
Within the Country	19 12 01	No	186.0	Cardboard	R3	M	Weighed	Onsite in Ireland	Gaelic Environmental	Cork		
Within the Country	19 12 01	No	96.0	Cardboard	R3	M	Weighed	Onsite in Ireland	Marwin Recycling	Cork		
Within the Country	19 12 01	No	27.0	Paper	R3	M	Weighed	Onsite in Ireland	Veolia	Forge Hill, Cork		
Within the Country	19 12 03	No	289.0	Metal	R4	M	Weighed	Onsite in Ireland	Cork Metal	Dublin Hill, Cork		
Within the Country	19 12 03	No	99.0	Metal	R4	M	Weighed	Onsite in Ireland	National Recycling 1462/04	Cork		
Within the Country	19 12 03	No	178.0	Metal	R4	M	Weighed	Onsite in Ireland	MSM Recycling 365/06	Cork		
Within the Country	19 12 04	No	52.0	Hard Plastic	R5	M	Weighed	Onsite in Ireland	Bernard O Brien Waterfall	Cork		
Within the Country	19 12 05	No	231.0	Glass packaging	R5	M	Weighed	Onsite in Ireland	Jackie Whelan quarries	Tullagower, Co. Clare		
Within the Country	19 12 03	No	5.0	Gas bottles	R4	M	Weighed	Onsite in Ireland	Tervas Gas, Waterfall	Cork		
Within the Country	19 12 07	No	70.0	Timber	R3	M	Weighed	Onsite in Ireland	Eirblock, Lissarda	Cork		
Within the Country	19 12 07	No	168.0	Timber	R3	M	Weighed	Onsite in Ireland	Eras Eco	Youghal		
Within the Country	19 12 12	No	1035.0	Mixed MSW	D1	M	Weighed	Onsite in Ireland	Limerick Landfill	Limerick		
Within the Country	19 12 12	No	2034.0	Mixed MSW	D1	M	Weighed	Onsite in Ireland	Cork City Landfill	Cork		
Within the Country	20 02 01	No	272.0	Greens	R3	M	Weighed	Onsite in Ireland	CTO, Kinsale Road	Cork		
Within the Country	20 01 39	No	7655.0	Recyclables	R5	M	Weighed	Onsite in Ireland	ReGen	Cork		
Within the Country	17 05 04	No	1018.0	Soil & Stone	R10	M	Weighed	Onsite in Ireland	Jeremy Lynch CK260/05	Cork		

APPENDIX II

BUND TEST REPORT

TED O' DONOGHUE & SONS LTD

KNOCKPOGE, WATERFALL, CORK

ASSESSMENT OF BUND INTEGRITY

WASTE LICENCE W0214-01

REPORT BY:
P. POWER

DATE: 8TH MAY 2008

1.0 Introduction

Glenside Environmental was commissioned by Ted O' Donoghue & Sons Ltd to carry out bund testing at their facility. The containment arrangements were inspected on April 24th and 1st May 2008 and this report presents the findings.

2.0 Scope

The scope of this report is determined by sub-conditions 3.6.1 and 3.6.2 Waste Licence W0214-01. The sub-conditions state as follows:-

3.6.1 All tank and drum storage areas shall be rendered impervious to the materials stored therein. In addition, tank and drum storage areas shall from the date of grant of this licence, as a minimum be bunded, either locally or remotely, to a volume not less than the greater of the following:

(i) 110% of the capacity of the largest tank or drum within the bunded area,
(ii) 25% of the total volume of substance which could be stored within the bunded area.

There are no underground storage tanks or process material pipework (sub-conditions3.6.3 and 3.6.4).

3.0 Methodology

The assessment of the bunds' integrity was based on visual inspection of the type and standard of construction, evidence for structural failure or potential failure and evidence of water ingress or leakage from the structures. The bunds were then filled with water to a pre-calculated, recorded level, reflecting sub-condition 3.6.1 above. After this the period the water level was recorded to calculate any fluctuations. The total permissible drop in level, during the testing period, after allowing for evaporation and rainfall, should not exceed 1/500th or 10mm of the average water depth of the full tank.

4.0 Bund Inspection

There is no evidence (dampness) to suggest that water is seeping from the interior to the exterior in any of the bunds.

All of the bunds comply with the storage capacity requirements i.e. >110% of the largest tank therein allowing for that part of the bund capacity taken up by the tank volume within the bund.

5.0 Results

The results are presented in Tables 1 and 2.

6.0 Conclusion

The structural integrity of the fuel bund was satisfactory on the day tested.

Table 1: Ted O' Donoghue & Sons Ltd: Bund Schedule and Inspection Notes

Largest Tank Size (l)	Bund Dim. (m)	Bund Capacity (l)	Construction [1]	Inspection	Liquid inside	Dampness or staining outside
220	9.64 x 3.60 x 1.45	50,320	Reinforced concrete	No visible cracks or bulges. In excellent condition.	Yes	No

Table 2: Ted O' Donoghue & Sons Ltd: Final Bund Inspection Notes

Bund ID	Bund Capacity (L)	Vol. Water Added (L)	Height from top after Filling (m)	Height from top @ 7 days (m)	Total Loss / gain (l)	Total Loss / gain (%)
Bund No. 1 – Fuel Bund	50,320	0	0.340	0.340	0	0

Note: There was no change in water level in any of the control containers.