PADRAIG THORNTON WASTE DISPOSAL LTD

THORNTONS RECYCLING CENTRE

Waste Licence Reg. No W0044-02

ANNUAL ENVIRONMENTAL REPORT 2011

SUBMITTED February 2012

Prepared By:

David Duff – Environmental Manager

Contents

List of Tables

List of Figures

List of Appendices 2011

Appendix 1 – Building Locations for Operation Processes

Appendix 2 – Waste Received 2011

Appendix 3 – Waste Consigned 2011

Appendix 4 – Plant Capacity Report

Appendix 5 – Schedule of Objectives & Targets from IMS for 2011 and 2012

Appendix 6 – Insurance Details

Appendix 7 – EPRTR

1 INTRODUCTION

This report is the Annual Environmental Report for Thorntons Recycling Centre. It has been prepared in compliance with Condition 11.5 of the Waste Licence (Licence Reg. No. W0044-02).

This licence was granted by the Environmental Protection Agency (EPA) to Padraig Thornton Waste Disposal Ltd (PTWDL) on the 2nd May 2003. The contents of this report are as required by Schedule F of Waste Licence W0044-02.

1.1 OPERATOR

The facility operator of licence number W0044-02 is Padraig Thornton Waste Disposal Ltd (PTWDL), T/A Thorntons Recycling. This AER relates to Thorntons Recycling Centre, Killeen Road, Dublin 10.

The address and contact details for the company headquarters are;

Thorntons Recycling,
Unit S3B Henry Road,
Park West Business Park,
Dublin 12.

Telephone: 01- 623 5133
Fax: 01- 623 5131

1.2 REPORTING PERIOD

The reporting period for this Annual Environment Report (AER) is 12 months between the 01/01/11 and the 31/12/11.

2 FACILITY ACTIVITIES

2.1 WASTE ACTIVITIES CARRIED OUT AT THE FACILITY

Part 1 of the current Waste Licence W0044-02 lists those activities contained in the Third and the Fourth Schedule of the Waste Management Act 1996, which are licensed to be carried out at Thorntons Recycling Centre, Killeen Road, Dublin 10. These activities are as follows:

Third Schedule

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

Third Schedule, Class 12: Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule

Third 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.

Fourth Schedule

Fourth Schedule, Class 2: Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)

Fourth Schedule, Class 3: Recycling or reclamation of metals and metal compounds

Fourth Schedule, Class 4: Recycling or reclamation of other inorganic materials

Fourth Schedule, Class 8: Oil re-refining or other re-reuses of oil:

Fourth Schedule, Class 9: Use of any waste principally as a fuel or other means to generate energy:

Fourth Schedule, Class 11: Use of waste obtained from any activity referred to in a preceding paragraph of the Schedule:

Fourth Schedule, Class 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:

2.2 OPERATION PROCESSES - WASTE ACTIVITIES AT THE FACILITY

The following section details the operational procedure for dealing with each particular waste type which enters Thorntons Recycling Centre. (Appendix 1 displays location of each building where processes are carried out).

Process - Household Dry Recyclables/ Commercial Dry Recyclables and SRF Building Number 1

Dry recyclables were weighed into the facility by the weigh bridge on site, tipped in Building 1 and inspected for non-conforming waste. The mixed dry recycling material was bulked and consigned to a third party for processing during the first half of the year. Minimal processing was carried out on clean source segregated cardboard and plastics on site. These materials were checked for quality before being baled and sold as recyclable material from the site. The environmental manager ensured that all materials were loaded correctly, all destination paperwork was updated and approved by the Environmental

Protection Agency (EPA). A full detailed register of all waste destinations used in 2011 is available for inspection on site.

The dry recycling process was completely decommissioned in June of 2011 and Thorntons opened a dedicated Mixed Dry Recyclables (MDR) Facility in Parkwest Business Park under a waste facility permit issued by Dublin City Council.

For the second half of 2011 building 1 contained the metering drum for mixing the SRF suitable residual waste from the CID skip line (building 2&5) with the SRF suitable residual waste from the MSW line (building 3). Once both materials are shredded inside building 3 the resultant SRF material is conveyed via covered conveyors into Building 1, where it passes under a magnet to remove any remaining metals before it is loaded into a compactor and pushed into a closed arctic trailer from where it is consigned to its end destination. The building also has bays to temporarily store plasterboard, steel cans and aluminium cans where they are bulked before being consigned to further processing facilities.

Process – Cardboard and Plastic Bales
Building Number – 1

A cardboard only and plastic only collection was offered by Thorntons Recycling. The material was weighed and tipped in Building 1. All cardboard and plastic loads were inspected upon tipping and any contaminants were removed before the material was fed into the recycling baler. Bales of cardboard and bales of plastic were sent to approved facilities for further processing.

Process - Household Municipal Waste
Building Number – 3

All Municipal Solid Waste (MSW) waste is accepted using our waste acceptance procedure, weighed on our weigh bridge and recorded in our automated computer system (WIMS). All MSW waste is tipped in Building 3 and inspected for any non-conforming waste material by a waste checker and the fuch operator. The presence of such items is, in turn handled using procedure EP04, "Handling unacceptable wastes". Oversize materials such as mattresses and large steel are mechanically picked out and stockpiled for landfill or recycling.

Once material is accepted as suitable for processing it is loaded using the fuchs machine into the M&J 2000. Here the MSW is passed through a coarse shredder, which opens any bags and tears larger items. The material, once small enough passes out the bottom of the M&J and is brought up an incline into the 60ft trommel. A 100mm screen size on the trommel allows fines and small organic material to fall out on to a conveyor belt underneath the trommel. The organic fines are passed over a magnet, which removes small pieces of metal. The organic fines are then discharged into a separate bay, where there are bulked for onward transport to a facility to be stabilized.

Material larger than 100mm is tumbled along the 60ft trommel and is discharged onto a conveyor belt. A magnet over the belt removes off any large metal items before the MSW material is conveyed to the new processing line. The MSW is passed into a Nihot separator. This separates the MSW by density. The light material mostly consists of paper and plastic is blown forward in the Nihot and is discharged onto a conveyor belt. Before the light MSW material falls to the ground floor conveyor it is passed under a magnet which again removes metal. The light MSW falls on to the ground floor conveyor and is brought into the top of the Linder shredder. The material is shredded to a particle size of less than 25mm. Once the material is less than 25mm it passes through the base of the Linder shredder on to a conveyor belt and is brought under a final magnet, to remove the last remaining pieces of metal. The shredded material is passed through a flip flop screen, which enables Thorntons to produce two grades of SRF. The small particles sized material (<10mm) falls into a bay beneath the flip flop and is loaded into trailers using a loading shovel. The larger particle size material 10mm-25mm is fed into a hopper which loads a 40 foot trailer. When the trailer is loaded it is unclamped from the compactor weighed and consigned to a facility where it is used as a source of energy in the production of cement

The nihot separates the heavy MSW (larger than 100mm) from the light MSW (which goes on to become SRF). The heavy MSW is discharged from the back of the Nihot and is fed into a ballistic separator. The ballistic separator removes any remaining fines and dicharges them into a bay, which is emptied daily and consigned to landfill. Any remaining paper or plastic is bounced along the ballistic separator and is discharged and mixed with the light MSW that goes on to become SRF. The 3 dimensional materials, such as bottles, cans, nappies, shoes etc rolls back off the ballistic separator and is conveyed under a magnet to remove the metal. The MSW then passes through an eddie current, which removes the aluminium cans and the remaining material falls into a bay to be bulked and loaded into artic trailers and consigned to landfill

The segregated metal cans and aluminium cans are brought into building 1 where they are bulked up in separate bays before cleaning and being consigned to approved facilities for further processing.

Process – Compostable Waste (Brown Bin, Source segregated and green waste). Building Number – 3

Thorntons Recycling accepts and collects source segregated compostable waste from third parties, domestic and commercial customers. This material is tipped in Building 3 in a designated bay and is stored separately from normal household municipal waste. Waste is inspected on tipping and bulky material is removed by a grab and any non-conforming waste is removed for processing as MSW such as large black plastic bags etc. Suitable compostable waste is reloaded into artic trailers using a loading shovel, for further processing in Thorntons Recycling composting facility, Kilmainhamwood, Co Meath, waste licence W0195-01.

Process - Mixed Unsegregated Commercial/Industrial Municipal waste (CI) and Mixed Unsegregated Household waste/ Skip Waste
Building 2 and 5

All skip waste is accepted at the facility as per the waste acceptance procedure and is weighed at our weigh bridge and recorded on our automated computer system (WIMS). All skip waste is tipped in Building 2 and inspected for any non- conforming waste material, the presence of such items are handled using procedure EP04 "Handling unacceptable wastes". All skip waste is fed into a shredder (M & J Waste Reducer) where it is broken into smaller particles and fed into a slot conveyor and in turn into the long objector remover; this equipment through its action has the ability to remove long pieces of metal or timber, which are then fed back into the waste reducer to break them up.

The remaining materials then passes through the first stage of the process under an over band magnet. The over band magnet removes ferrous metal which pass onto a metal conveyor into a picking station where contaminates such as small pieces of paper or plastic which have become tied up in the metals, are manually removed. The trommel transfer conveyor then transports the remaining materials minus the ferrous metals through a trommel drum. The materials are turned in the trommel and the soil fines and small stones (<40mm in size) pass through the 40mm holes present in the trommel onto a trommel discharge conveyor which in turn passes through the back of building 2 into the construction and demolition processing area for further processing.

The remaining material is fed directly into the nihot system. Within the nihot system circulation fans 1 & 2 discharge jets of air to sort the material by weight. Drum 1 separates the stone from the rest of the materials which in turn joins the trommel discharge conveyor mentioned above and are passed through the back of building 2 to the C&D processing area. Drum 2 of the nihot then removes the timber which in turn moves along to be further sorted. The remaining material after the stone and timber has been removed falls onto a light fraction conveyor under the nihot and is conveyed to a compactor and loaded into an artic trailer. Once the artic trailer is full, it is disconnected and tipped into building 1 where it is loaded into the metering drum for shredding to make SRF.

Timber which is separated from the nihot processing area is transported via a transfer conveyor through a picking station, where wiring, textiles and copper are removed manually. The timber then passes into a ballistic separator were contaminants such as plastic and paper are removed. The plastic and paper is conveyed under a magnet and combined eddie current to remove any small metallic objects before the paper and cardboard is conveyed the compactor and loaded into an artic trailer. The remaining timber from the ballistic separator passes through a final picking station, whereby any remaining contaminants are removed before the timber falls into a trailer for transport to our wood chipping permitted facility in County Kildare.

Process – Construction and Demolition Waste (C&D)
Building - 2

Construction and Demolition waste is loaded into the M&J reducer as with the skip waste waste above, the soil and stones are segregated at the trommel and Nihot stages the resultant materials pass along a conveyor in building 2 to the C&D processing area. The mixed material first passes through a 50mm trommel. Stone which is greater than 50mm in size will then pass on to a conveyor belt under an air blower and then through a picking line where contaminants are removed, before passing under a magnet to remove any ferrous metal. The stone then passes into a crusher and the final clean stone product is stored in a purpose build storage shed in Yard 2/Josies Yard, from where it is loaded and delivered to customers.

Stone <50mm, fines and soil enter into a flip flop 8mm screen. Particles/soils which are less than 8mm fall through the screen and are stored underneath in a purpose built storage bay. Small stone and remaining material which is greater than 8mm in size is conveyed into a nihot single drum separator where debris/contamination such as polystyrene etc are removed by an air blower and fall into a storage bay beneath. All small stone which is greater than 8mm and less than 50mm are conveyed via a number of conveyors to the storage area of building 4 where it is stored and then loaded into trailers for customers.

The process produces products such as small stone, crushed rubble and ferrous metals, all of which are suitable for sale and diverted from landfill. The fines which are removed from the C & D process are sent to landfills for use as daily cover.

2.3 WEIGHBRIDGE CALIBRATION

Weights and measures carried out and an independent assessment on the 25th January 2011 on both bridges. Both the in and the out bridge passed and has being verified as fully compliant by Legal Metrology (DN/07/11/001 and DN/07/11/002)

3 QUANTITY AND COMPOSITION OF WASTE RECEIVED, RECOVERED AND DISPOSED OF IN 2011

3.1 WASTE HANDLED IN THORNTONS RECYCLING CENTRE

The quantities of waste received during the current and two previous AER reporting periods are summarised in *Table 1*

Table 1 Summary of total waste received in 2011 and previous 2 years

Year	Waste Tonnes in
2009	195,960
2010	199,035
2011	208,499

All waste is checked and documented at the weighbridge in accordance with our waste licence and our waste acceptance procedures. Waste is then inspected, segregated, processed and reloaded for either disposal at a licensed facility or bulked for delivery to an approved recycling or recovery facility for further processing. Should any non-conforming waste come to the attention of our staff it is either rejected before collection or segregated and quarantined to be disposed of by a licensed contractor, paperwork is maintained on site. Our environmental management system (EMS) which contains procedures, including our waste acceptance procedure, is certified to ISO 14001; information in relation to our EMS can be located at any of the Thorntons Recycling offices.

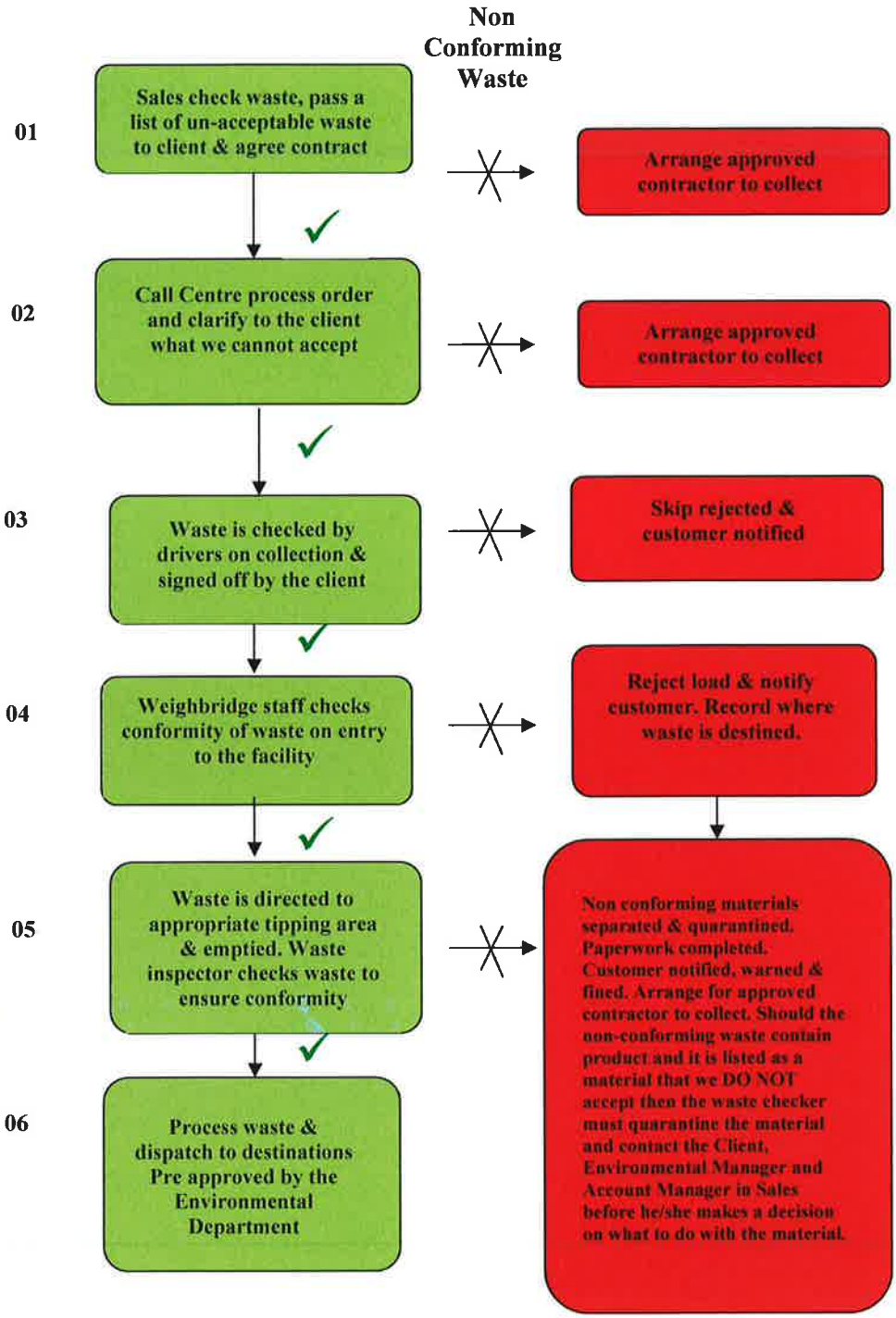
All waste destinations used by Thorntons Recycling Centre in 2011 have been approved by the Environmental Protection Agency. A register of all EPA agreed facilities for recycling, recovery or disposal of waste is maintained on site.

3.2 WASTE ACCEPTANCE

Below is a simplified diagram explaining our waste acceptance procedure at Thorntons Recycling Centre.

New staff employed by the company in 2011 received an Environmental, Health and Safety Induction which includes licence training, waste acceptance procedures, emergency procedures and environmental awareness. All staff employed at the facility are diligent in assisting in eliminating the occurrence of non-conforming wastes.

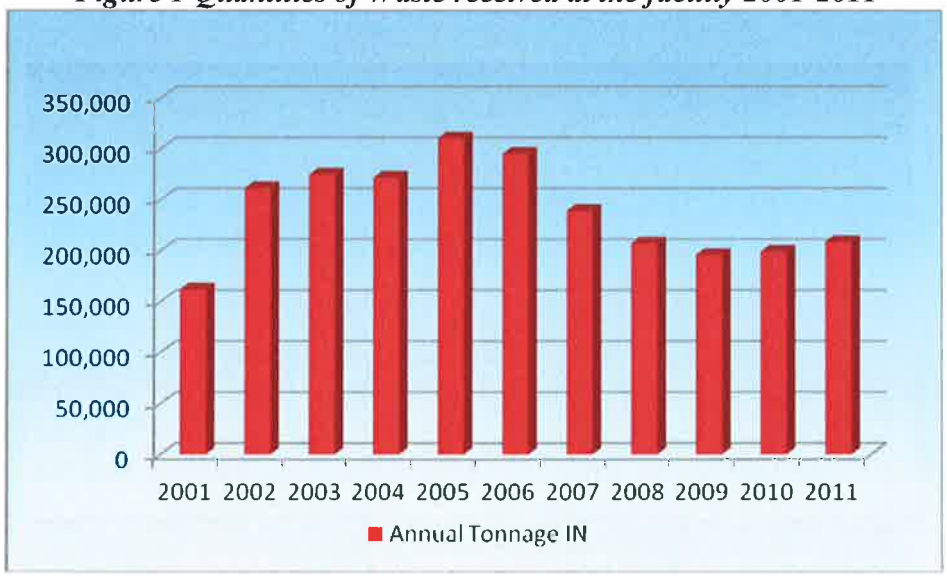
As the EPA is aware Thorntons Recycling has a certified management system for ISO14001 Environmental, ISO 9001 Quality, OHSAS 18001 Health and Safety. The Integrated Management System (IMS) is available for inspection on the IMS Drive at any of the companies' offices.
This system was audited at the Killeen Road Facility in November 2011 and was approved for re certification by Certification Europe.


Non Conforming Waste
01
Sales check waste, pass a list of un-acceptable waste to client & agree contract
Arrange approved contractor to collect
02
Call Centre process order and clarify to the client what we cannot accept
Arrange approved contractor to collect
03
Waste is checked by drivers on collection & signed off by the client
Skip rejected & customer notified
04
Weighbridge staff checks conformity of waste on entry to the facility
Reject load & notify customer. Record where waste is destined.
05
Waste is directed to appropriate tipping area & emptied. Waste inspector checks waste to ensure conformity
Non conforming materials separated & quarantined. Paperwork completed. Customer notified, warned & fined. Arrange for approved contractor to collect. Should the non-conforming waste contain product and it is listed as a material that we DO NOT accept then the waste checker must quarantine the material and contact the Client, Environmental Manager and Account Manager in Sales before he/she makes a decision on what to do with the material.
06
Process waste & dispatch to destinations Pre approved by the Environmental Department

3.3 WASTE RECEIVED

A total of 208,499.75 tonnes of waste was received at the facility in the reporting period of 2011. Details of which are contained in Appendix 2 of this report. Figure 1 illustrates the trend in waste received at the facility between the periods 2001 to 2011.

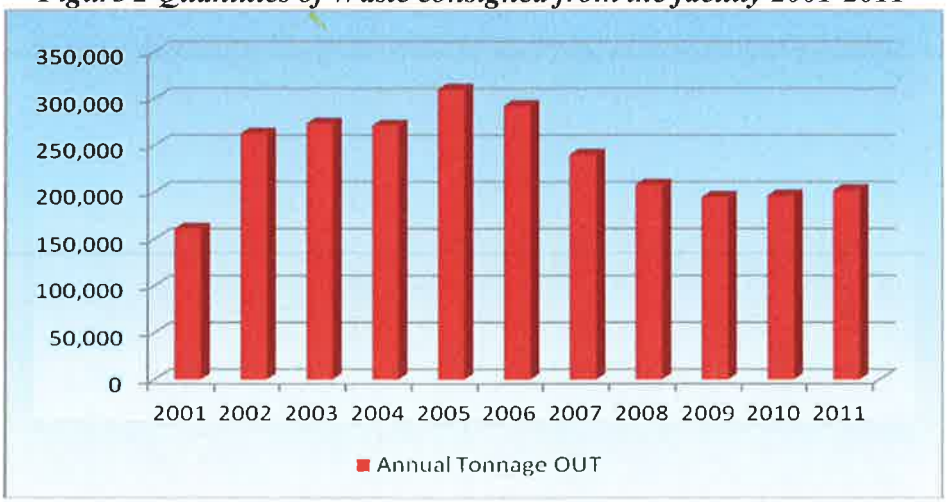
Figure 1 Quantities of Waste received at the facility 2001-2011



3.4 WASTE CONSIGNED TO LANDFILL AND RECYCLING/RECOVERY FACILITIES

A total of 202,099.60 tonnes of waste was consigned from the facility in the reporting period of 2011. Details of which are contained in Appendix 3 of this report. Figure 2 illustrates the trend in waste consigned from the facility between the periods 2001 to 2011.

Figure 2 Quantities of Waste consigned from the facility 2001-2011



The facility displayed another increase in the recycling rates for 2011. The overall recycling/recovery rate for the facility was 81.85%, which is the highest figure recorded for the facility since operations began. This is an increase of 10.99% on the previous year and is an excellent achievement partially due to increased awareness, education and segregation of customer's wastes and also due to the expansion of the SRF to include the processing of MSW. During 2011 the facility began to produce an SRF from processed Municipal Solid Waste (MSW). This material is blended with the residual material from skip waste to produce a fuel with a high quality standard that meets the specifications of the receiving facilities. Thorntons Recycling supplies SRF to cement kilns that use this material as a substitute for coal which is a high carbon producer when burned. The use of SRF from a residual waste has enabled the cement kiln to lower its carbon footprint by using a sustainable fuel and also reduce their reliance on imported fossil fuels as a raw material in the production of cement. The SRF is tested on a weekly basis to ensure that it meets the acceptance criteria for the destinations. The production of the SRF has helped Thorntons reduce the quantity of material which would otherwise have being destined for landfill. A waste characterisation survey was carried out on the SRF by independent consultants in 2011 and it was found that 30.7% of this waste could be classified as packaging waste, which is now being recovered as part of the national packaging recovery targets and diverted from landfill.

Overall since 2003, the Killeen road facility has shown a positive trend in diverting a high percentage of material away from landfill, through continuously improving the sorting techniques and sourcing markets for recyclates (Figure 3). The recycling rate of waste has increased from 12.14% in 2003 to 81.85% in 2011, which is a massive increase and demonstrates Thorntons commitment to increasing recycling and diversion from landfill all of which contributes to the national recycling figures.

Figure 3 – Recycling rate trends for waste between 2003 to 2011

The total quantity of waste recovered or recycled has increased steadily at the facility. PTWDL process, sort and segregate all skip waste and now MSW material at Thorntons Recycling Centre, Killeen Road, Dublin 10 and strive to improve process efficiencies on a continuous basis. The main materials which are currently being recovered from skip waste include wood, ferrous metals, non-ferrous metals, soils and stone and a solid refuse fuel, which is used as a substitute for coal in the cement manufacturing process in Ireland. The main materials which are currently recovered from the MSW are biodegradable organic fines, steel cans, aluminium cans and SRF, with the remaining residual waste going for disposal to a licensed landfill.

It is hoped that Thorntons Recycling Centre will continue to increase its recycling and recovery rates in 2012 by;

- Continuing to work to International Standards ISO 14001 Environmental, ISO 9001 Quality and OHSAS 18001 Health and Safety with continuous development and improvement of new operational procedures.
- We have identified that the residual waste that is been consigned to landfill from the MSW line contains PET and HDPE bottles, which can be recycled. During 2012, we plan to investigate and develop a process for removing these recyclable materials from the residue and further increasing the recycling rate of the facility.
- We have also identified that the residual waste that is been consigned to landfill from the CID line contains recyclates such as PET, HDPE and metal cans. During 2012, we plan to investigate and develop a process for removing these recyclable materials from the residue and further increasing the recycling rate of the facility.
- Continuous training and education of staff at all levels on recyclable material types and the development of new outlets for new materials.
- Business Development. Thorntons recycling have developed a new on line skip service www.skip.ie and in 2012 Thorntons hope to further expand its domestic collection services to other areas.
- Thorntons Recycling offers an integrated waste management service that encourages clients to opt for different types of bins for different waste types. The company also has a tankering service division (TTS Thorntons Tankering Services), confidential shredding service and composting / brown bin service which can be offered to all our customers.
- Our licensed composting facility Kilmainhamwood Compost is approved by the Department of Agriculture (Composting Approval Number COMP/6) and also approved in line with SI 612/2006 and EC 1774/2002. The facility is the holder of the Cre Award for Best Composting Facility of the Year. We will continue to reduce biodegradable material being sent to landfill by offering a three bin service to all our commercial customers.
- Thorntons Recycling has invested in the latest technology for confidential shredding in situ with the purchase of a state of the art shredding vehicle with CCTV camera system and developed a secure shredding facility which is permitted by Dublin City Council (WFP-DC-11-0023-01). A second shredding vehicle was purchased in 2011.

- Continued education with new and existing clients on new regulations and their obligations in relation to the law. Thorntons Recycling offer educational workshops to existing customers.
- Continue to offer reduced rates to customers who segregate their waste, for example wood, metal, dry recyclables, glass, plasterboard and compost bins.
- Continually improve on service and our after sales service.
- Offer presentations and demonstrations on our client premises and schools.
- Awareness through the publishing of newsletters, continuous development and updating of the website for Thorntons Recycling.
- Thorntons Recycling won Repak Recovery Operator of the Year Award 2008 and 2011 and was a finalist in 2009 and 2010.
- Thorntons Recycling has entered the domestic market in South Dublin County Council in 2010 and continued to increase our base in this area in 2011 by offering potential customers an efficient and effective three bin collection service. We plan to further increase our share of this local market during 2012.
- Thorntons Recycling developed a new state of the art dry recycling facility (WFP-DC-10-0021-01) in Parkwest Business Park which produces a high quality of segregated recyclates and recovers more material to increase the companies recycling rate further.

4 CONTRIBUTION TO THE ACHIEVEMENT OF RECOVERY TARGETS

4.1 Proposal for the contribution of the facility to the achievement of targets for the reduction of Biodegradable waste to landfill as specified in the landfill Directive

Progressive targets have been set out in the Landfill Directive (1999/31/EC) to reduce the proportion of biodegradable municipal waste land filled. Biodegradable waste is waste that can undergo biological decomposition and is typically composed of food and garden waste, wood, paper, cardboard and textiles. By 16th July 2010 Ireland was restricted to land filling a maximum of 75% of the total weight of biodegradable municipal waste generated in 1995, the baseline year. This target is further reduced to 50% of the 1995 baseline by 16th July 2013 and 35% by 16th July 2016. According to the National Waste Report 2009, an estimated 1,939,182 tonnes of biodegradable municipal waste was generated in Ireland in 2009 of which 55% was land filled. Ireland has made significant inroads into closing the gap between the EU targets and where we currently stand and Thorntons recycling is playing their part.

Thorntons Recycling own and operates an award winning compost facility in Kilmainhamwood, County Meath which is approved by the Department of Agriculture (Composting Approval Number COMP/6) and also approved in line with SI 612/2006 and EC 1774/2002. The facility was awarded the "Cre Best Composting Facility Award 2008" in Ireland. Thorntons Recycling Centre, Killeen Road, Dublin 10 has been successfully contributing towards National Targets by using this facility as a destination and now offers all our commercial customers the option of a brown bin for

food waste/catering waste etc. The facility has developed its own segregated area for this material which is fully enclosed in an odour controlled building. We accepted approximately 23,331.61 tonnes of Green Waste and Brown Bin Waste for composting in 2011 which after any contamination was removed the remaining material was bulked at the Killeen Road facility and sent for composting in Kilmainhamwood Compost, Waste Licence W0195-01. This is an increase of 19.8 % on the previous year. Thorntons Recycling diverted approximately 19,216.71 tonnes in 2011 of biodegradable waste in the form of cardboard, paper, tetrapak and wood. Thorntons Recycling diverted 4638.44 tonnes of organic fines from landfill during 2011 as a result of an increase in investment and technology to process MSW material. Thorntons Recycling diverted 2,427.29 tonnes of biodegradable paper and cardboard from landfill, by producing SRF for cement kilns. In total 49,614 tonnes of biodegradable waste have been diverted from landfill by the facility in 2011. This represents a facility diversion rate of 57.4% of organic waste from landfill and demonstrates Thorntons Recycling ability to assist in meeting the national target for 2013. This is an increase of 17.84% on 2010 level of 39.56%.

We offer all our customers the opportunity to segregate all biodegradable waste at source and the option of a composting alternative. Kilmainhamwood Compost (Waste License W0195-01) is currently at capacity. The facility accepts non-hazardous biodegradable wastes (household and commercial waste for composting) and accepted 26,889.94 tonnes of biodegradable waste in 2011 for composting. Thorntons Recycling will aim to continue to increase the quantity of biodegradable waste that can be diverted from landfill even further and assist Ireland in achieving targets laid down by the landfill Directive (1999/31/EC). An application for a review of the current licence has been lodged with the EPA in 2010 to increase tonnage at the facility to 40,000 tonnes. Planning for an increase in capacity was granted by An Bord Planeala in January 2011. If approval is granted for the review of the waste licence by the EPA then Thorntons Recycling will be in a better position to divert more biodegradable waste away from landfill as we will have more capacity on site for composting.

4.2 The separation of recyclable materials (paper, wood, plastic, inert materials) from the waste & the recovery of commercial waste, including cardboard, newspapers/magazines, aluminium and steel cans.

Thorntons Recycling carries out a number of operational processes on different types of waste which allows for the separation of the above materials. These are detailed in the following section:

Dry commercial, industrial and domestic skip waste which enters the facility are checked upon tipping and any large bulky items that can be recycled such as wooden furniture and metals are removed by a grab and are segregated into piles to be sent for further processing. The remaining material is then sent through a high specification plant, this consists of equipment such as a crusher, long object removers, ferrous metal remover, trommel, nihot, ballistic separator, picking lines and a shredder, the working combination of which has resulted in a significant increase in recycling and recovery rates at the facility.

Dry recyclables were weighed into the facility at the weigh bridge on site, tipped in Building 1 and inspected for non-conforming waste during 2011. This material was then bulked and loaded for a third party to process until Thornton Recycling new state of the art facility in Parkwest Business Park was opened in June 2011.

Detailed quantities of material received and consigned from the facility are displayed in Appendix 2 and 3 of this report. Table 2 compares results submitted for Annual Environmental Reports for 2009 to 2011 for materials recycled at the site;

Table 2 – Comparison on recyclable material consigned 2009-2011

Total Materials Consigned	2009 Tonnes	2010 Tonnes	2011 Tonnes
Cardboard Out	4,250	4,294	2,226
Metals Out Packaging (Aluminium and Steel)	534	228	680.43
Plastics Out (Bottles, Film and Hard)	2,032	1,308	476
Mixed Papers	13,848	8,109	112
Wood Out	10,653	9,746	11,199
Mixed Metals Out (Bulky)	3,787	4,193	3,852

Packaging waste in general consigned from Thorntons Recycling Centre has decreased in 2011, due to the closure of the dry recycling processing line and its relocation to a specialised facility in Parkwest Business Park. When the figures for the new dry recycling shed are calculated, the recovery rate for packaging material by Thorntons Recycling will have increased.

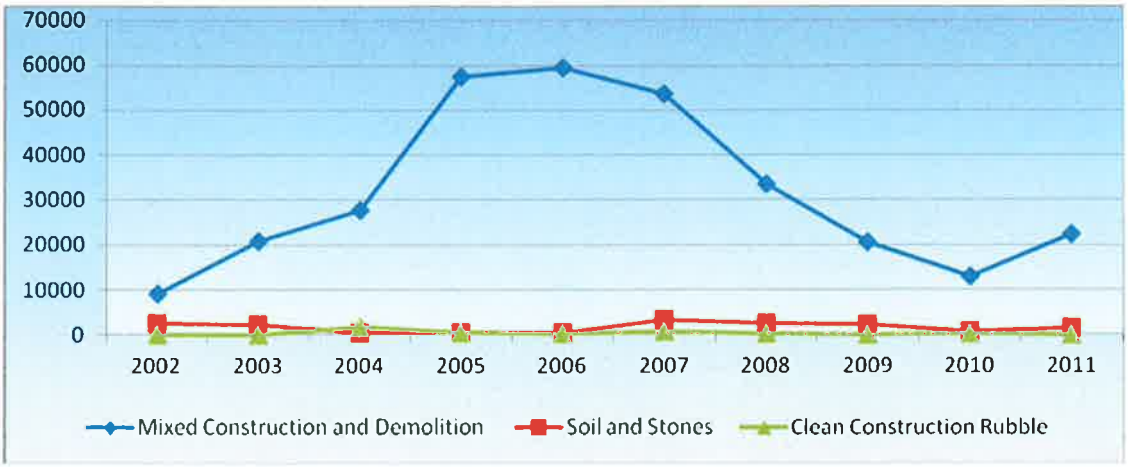
Since March 2003, producers of packaging are obliged to segregate for recovery specified packaging waste materials at source. Thorntons Recycling has a team of account managers who educate customers on the advantages and their legal obligations for segregating packaging waste.

As stated in the National Waste Report 2009 published by the Environmental Protection Agency, Ireland had surpassed its 2011 target of 60% again in 2009 (70%). Thorntons recycling has played a significant part in the packaging recovery rate. During 2011 Thorntons Recycling carried out a Repak survey on the packaging content of the SRF which is used for energy generation in cement kilns. The survey carried out in 2011 found that 30.7% of the SRF is packaging waste. The production of such material on site attributes to further diversion of recyclable material from landfill

4.3 THE RECOVERY OF CONSTRUCTION AND DEMOLITION WASTE

Under National and European waste policies, Ireland is expected to recycle 85% of Construction and Demolition Waste by 2013. Mixed Construction and Demolition materials received at the facility had increased steadily between 2003 to 2006. However 2007 to 2010 showed a decrease in the quantity of this material accepted from 60,214 tonnes in 2006 13,824 tonnes in 2010. The quantity of construction and demolition material received on site in 2011 increased to 23,980 tonnes which is similar to 2009 levels.

Figure 4 – Recovery of construction and demolition waste trends from 2002- 2011



Quite often construction and demolition material arrives at the facility as a mixture of soil, rubble and somewhat contaminated with small pieces of plastic, polystyrene, metals, wood and other materials. These are removed during processing at Thorntons Recycling Centre and segregated into individual waste streams for processing. Clean stone is crushed at the facility and can be used as a product suitable for backfill and private road construction as the base layer. If incoming skips are mixed with numerous different waste types they are weighed in as mixed municipal waste, waste which originated from construction or demolition sites is weighed in as Mixed C&D waste.

4.4 THE RECOVERY OF METAL WASTE AND WHITE GOODS

White goods arrive at the facility mixed in with skip waste. All white goods are picked from the waste and stored in skips before being transferred to a designated facility for Waste Electrical and Electronic Equipment (WEEE). All mixed metals are stored at the facility in designated bays and sent to approved destinations in Ireland where they are further segregated into different types i.e. Copper, Aluminium etc. Quantities of metals recycled can be noted in Table 2 above. Thornton's Recycling offers a reduced price to customers who segregate metal completely.

4.5 CONVERSION OF WASTE VEGETABLE OIL INTO A BIO FUEL

Thorntons Recycling Centre does not process waste vegetable oil into bio fuel on site and have no plans to do so in the near future.

4.6 RECOVERY FACILITIES PROPOSED TO ACCEPT SHREDDED OR WHOLE TYRES

Tyres normally arrive at the facility mixed in with other materials, for example in household skips. In 2011 these were segregated and stockpiled until a sufficient pile was achieved. These were then sent to our End of Life Vehicle (ELV) Centre, Waste Permit WFP-DC- 09-0005-01, where they are bulked with other tyres from the recovery process of end of life vehicles and sent to processing facilities within Ireland for further processing into a crumb material. An annual recycling cert is maintained electronically on site for the 35.73 tonnes of tyres sent to the ELV facility in 2011 from Killeen road.

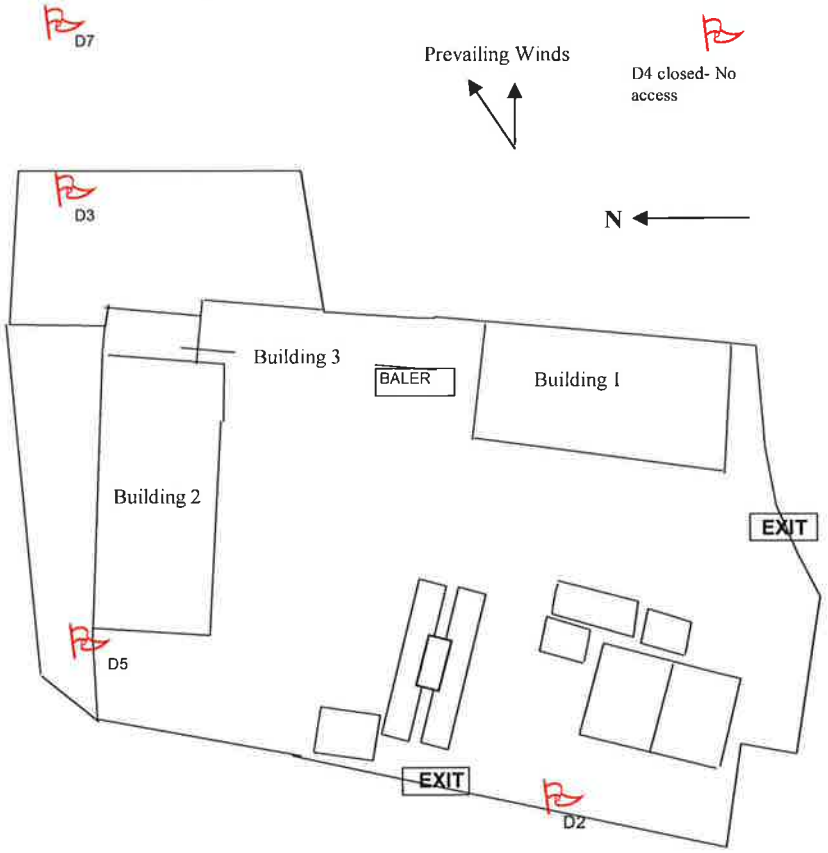
5 SUMMARY REPORT AND INTERPERTATIONS OF ENVIRONMENTAL MONITORING AND EMISSIONS DATA

In accordance with *Schedule D: Monitoring* of PTWDL waste licence W0044-02, monitoring of dust, noise, surface water and foul water must be carried out. Odour monitoring is also completed by an independent consultant bi annually. All monitoring has been completed as required for reporting period 2011. The following section details results obtained and interpretations of results for the year of 2011.

5.1 DUST

Annual Dust Monitoring was carried out at five locations D2, D3, D4, D5 and D7. Thorntons Recycling are required by Schedule D to monitor dust three times a year, results are displayed in Table 3 and Figure 6. The locations of each dust monitoring point are displayed in Figure 5.

Figure 5 - Dust Monitoring Locations



Thorntons Recycling Centre is located in a predominately industrial area. Two busy roads i.e. the Killeen Road and Kylemore Park North form the western and northern site boundaries of the facility. Monitoring points D2 and D5 are located on these boundaries and as a result receive significant contamination from passing traffic and vehicles accessing Park West Industrial Estate and Ballyfermot.

Table 3 Dust Results for 2011

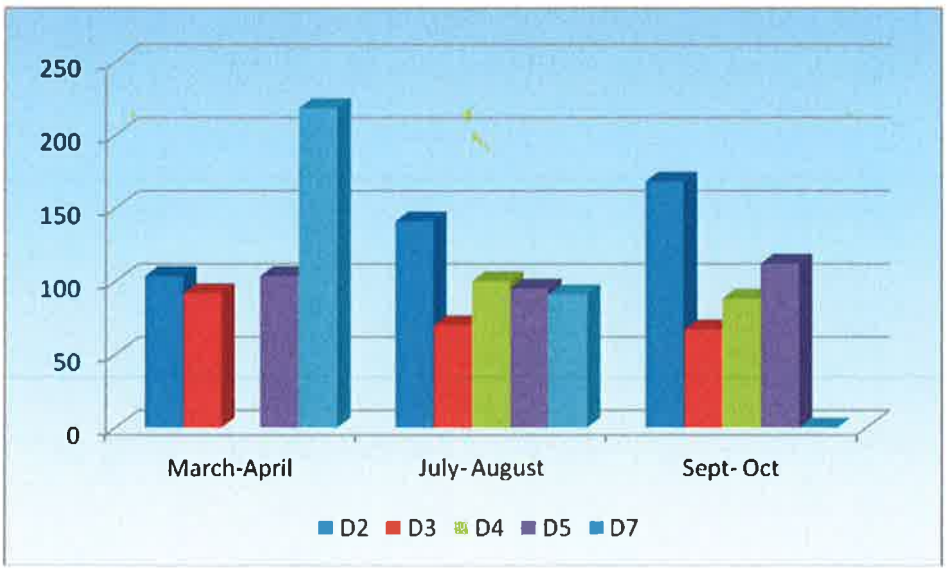
Monitoring Locations	Sample 1 March-April	Sampel 2 July- August	Sample 3 Sept- Oct	ELV
D2	103.4	141	168	350
D3	91.9	70	67	350
D4		100	88	350
D5	103.4	95	112	350
D7	218.2	91	-	350

The emission limit value for dust deposition is 350mg/m^2/day. During 2011 none of the dust emission levels exceeded the emission limits (Table 3). No sample jar could be placed at D4 during the first sample as the gates to the neighbouring facility were locked. The dust pot at D7 during sample 3 was destroyed by accident during the monitoring period. Figure 6 shows the trends in dust deposition during the year.

Thorntons Recycling will aim to reduce dust deposition levels and will continue to monitor dust on a regular basis. Thorntons Recycling staff use power hoses to wet down yard surfaces at the facility during dry periods, dust curtains have been fixed to all entrances and exits of the buildings where dust is generated. Maintenance was carried out on these dust curtains in 2010 on Building 3 and on the CID tipping building (2), to improve their coverage over the entrances and exits. During 2010 the roof cladding was extended over the corner of building 2 on the CID building. During 2011 dust curtains were fixed to the exit of building 5 to reduce the likelihood of dust escaping from the building during the drier months. A dust suppression system is in operation in Building 2 when required. Roller doors were put on the exit from building 1 and also on an exit on building 3 to further reduce the likelihood of dust escaping from the buildings. In an effort to further reduce dust emissions Thorntons Recycling also uses a road sweeper which is used at least twice daily in the facility. This is also used on the Killeen Road and Kylemore Park North to assist in reducing dust levels due to passing traffic and upwind contributors.

PTWDL recognise the importance of maintaining dust levels below the emission limit level of 350mg/m^2/day and are fully committed to maintaining compliant emissions from the facility in 2011.

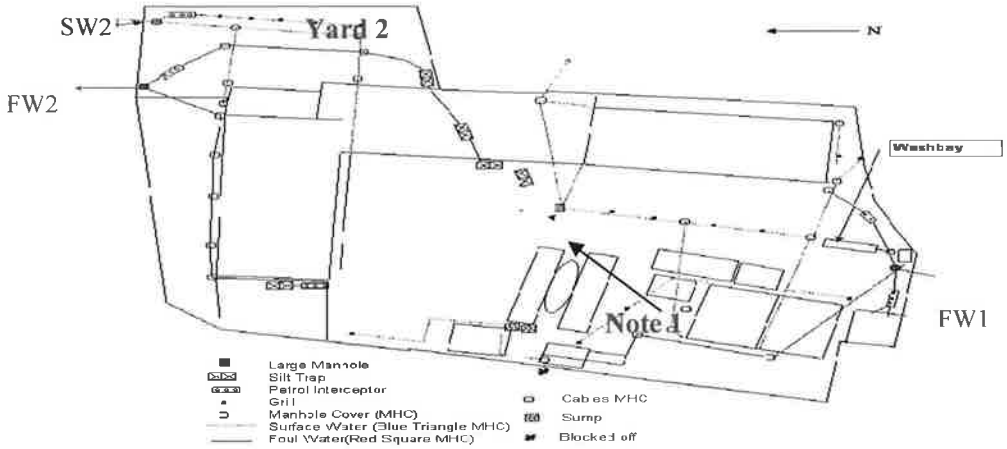
Figure 6 - Dust Monitoring Results per Monthly Sample 2011



5.2 EMISSION TO FOUL WATER AND SURFACE WATER

The monitoring points FW1 FW2 and SW1 are displayed in figure 7. Monitoring is carried out by Thorntons Recycling quarterly, as per the licence. Unannounced monitoring is also carried out by the EPA and split samples are shared with Thorntons Recycling.

Figure 7 Monitoring points for the sampling of Foul Water and Surface Water Thorntons Recycling Centre



*Note 1 - SW1 was made redundant in May 2007. The line now passes through the screener in Yard 2 and passes out through FW2.

5.2.1 FOUL WATER

In accordance with Waste Licence W0044-02 Schedule D all emissions to sewer must be monitored. Emissions to sewer must be monitored on a quarterly basis. Quarterly reports for Quarter 1 (44-2/11/EPA/DD/13) Quarter 2 (44-2/11/EPA/DD/21) Quarter 3 (44-2/11/EPA/DD/32) and Quarter 4 (44-2/11/EPA/DD/34) have been forwarded to the EPA. All of these reports detail results and interpretations of monitoring of both the surface water and foul drainage system at the facility.

EMISSIONS TO SEWER (Foul 1) F1

Table 4 Illustrates results received at FW1 monitoring location's for 2011. The results in 2011, shows that there was one exceedance reported to the EPA as per the licence conditions (W00-44-02/11/EPA/DD/26). The drains and interceptors were routinely cleaned between the samples being taken and receiving results from the laboratory thus the incident was not deemed to be occurring for a long duration. All prior testing showed no exceedances. Full detailed quarterly reports have been forwarded to the EPA as detailed in section 5.2.1.

EMISSION TO SEWER (Foul 2) FW2

Samples were also taken from Foul Sewer 2 (FW2), results are detailed in Table 5. The results show that there was no exceedance recorded during the reporting period of 2011.

Table 4 Results of sampling from FW1 in 2011

Monitoring	Quarter 1	Quarter 2	Quarter 2	Quarter 3	Quarter 3	Quarter 3	Quarter 4	Units
	TH Sample	EPA split	TH Sample	EPA split	EPA Split	TH Sample	TH Sample	
Parameters	31.03.11	09.05.11	17.05.11	29.08.11	05.09.11	30.09.11	25.10.11	mg/l
BOD	125	242	332	870	175	1250	233	4000
COD	300	482	716	1530	0	1530	364	8000
Suspended Solids	63	148	101	345	132	218	338	1000
pH	8.33	8.34	7.93	7.02	8.2	6.62	6.67	6, - 10
Orthophosphate (asP)	1.58	2.69	0.813		2.454	9.97	0.16	50
Surfactants/Detergents	0.715	1.88	0.773	0.509		2.14	0.364	50
Conductivity	0.628	1.34	1.12			1.59	0.639	n/a
Fats, oil, grease	17.6	14.8	18.8	392		56.4	45.6	100
Mineral Oil by GC	3.7	2.85	10.7	21.8		14.7	7.41	20

Table 5 Results of sampling from FW2 2011

Monitoring	Quarter 1	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Units
	EPA Split	TH Sample	TH Sample	TH Sample	TH Sample	
Parameters	10.02.11	31.03.11	17.05.11	30.09.11	25.10.11	mg/l
BOD	528	850	525	852	787	4000
COD	1070	1600	1030	1150	1210	8000
Suspended Solids	174	226	426	164	390	1000
pH	6.84	7.83	7.89	6.62	5.5	6, - 10
Orthophosphate (asP)	0.033	3.24	7.23	5.6	2.266	50
Surfactants/Detergents	1.260	0.865	0.59	0.641	0.48	50
Conductivity	1.270	1.65	0.919	1.57	1.25	
Fats, oil, grease	17.200	19.3	5.96	64.5	19.8	100
Mineral Oil by GC	3.74	4.2	1	0.612	1.9	20

5.2.2 SURFACE WATER (SW2)

The monitoring point for surface water is displayed in figure 7 and the results for each sample are in Table 6. PTWDL re-designed the drainage system on site in 2007 to ensure compliance with waste licence W0044-02 emission limit levels. SW2 is now the only surface water monitoring point which exists at the facility. This is located in Yard 2 (Josie's Yard) where there is little activity.

The elevated BOD sample result for Q1 was not reported to the EPA as the sample was taken from the interceptor and not the correct sampling location which is at the discharge location from the site. The correct sample could not be taken as there was no rain fall on the day of sampling and in order to have a sample for the quarter the sample was taken from the interceptor which is not an accurate reflection of the quality of the water discharged from the facility. All prior sampling was taken before the end of the respective quarterly period and no exceedances were recorded.

PTWDL recognise the importance of maintaining emissions limits within levels set down by the licence and will continue to do their utmost to ensure compliance with these levels. We will continue to carry out weekly inspections of the drains and ensure regular maintenance is carried out.

Table 6 Results of sampling from SW2 in 2011

Monitoring Parameters	Quarter 1 31.03.11	Quarter 2 17.05.11	Quarter 3 30.09.11	Quarter 4 25.10.11	Units
BOD	52	16.6	3.74	4.05	25mg/l
COD	105	82	34.9	17.4	mg/l
Suspended Solids	16	12	5.21	7	35mg/l
pH	7.98	8.09	7.3	7.28	6, - 10
Orthophosphate (asP04)	0.22	0.90	0.079	0.16	mg/l
Surfactants/Detergents	0.209	0.270	0.165	0.0902	mg/l
Conductivity	0.27	0.31	0.401	0.164	mS/cm
Fats, oil, grease	5	4	1.15	0.0902	m
Mineral Oil by GC	1.12	2.02	0.109	0.115	5mg/l

5.3 NOISE

In accordance with Condition 8 and Schedule D3 of waste licence W0044-02 annual environmental noise monitoring was carried out. The day time survey was carried out on the 20th and 21st December 2011 and the night time survey was carried out on the 22nd December 2011. The results of the survey were submitted to the EPA on the 28th December 2011 (44-2/11/EPA/DD/39).

Table 7: Noise measurement results for Killeen road annual monitoring in 2011

	20-22nd December 2011			ELV
Locations	LA, eq (dB)	LA 10 (dB)	LA90(dB)	(dB)
NP1	70.1	73.3	62	NA
NP2	73.1	75.4	69.2	NA
NP3	73.8	76.3	66.1	NA
NP4	68.5	71.3	61.7	NA
NP5	68.8	70.3	66.7	NA
NP6	71.8	72.5	63.1	NA
NP7	63.1	66.8	55.7	55
NP8	64.7	67.9	55	55
NP9	72	76	60.2	55
NP7 Night	55.7	58.5	50.8	45
NP8 Night	62.6	64.3	53.9	45
NP9 Night	70	74.5	54.9	45

Thorntons Recycling was not responsible for the elevated noise levels at the noise sensitive receptors as detailed in Table 7. The predominant noise source at these locations was from non-site related vehicular movements on the nearby roads. This is verified in the similarity between the LA_{eq} readings and the LA_{10} readings at these monitoring locations during the surveys and the many sudden spikes in the respective logging graphs. There was audible noise from Thorntons Recycling, such as from Thornton's related traffic, the odour system and the dust system/RJP (Regenerative Pulse Plant) at these locations but was mostly audible only when there was no traffic noise present. Thorntons is not the main influencing noise source at these monitoring locations during day time monitoring and as a result we can conclude that Thorntons Recycling is in compliance with its waste licence. The noise from the surrounding business also contributes to the noise survey, however these noises cannot be separated from the noise created from Thorntons Recycling facility thus the noise levels recorded is the noise from all the facilities in the proximity of the monitoring locations.

When the L90 values are taken into account, which gives an accurate level of the noise for 90% of the monitoring period at the location, which largely excludes the passing traffic, it should be noted that at N8 the noise levels is below the limit of 55dBA and that both the N7 and N9 are above the limit, which indicates that the level of traffic on the Kylemore North Road is almost constant and is having a large impact on the noise levels in the area. Both logging graphs supports this as seen in the large number of spikes recorded during the monitoring period.

The survey concludes that the daytime noise levels at the noise sensitive locations are not being negatively impacted upon by the activities of Thorntons Recycling. The night time noise levels were exceeded at all three noise sensitive receptors during the monitoring period. The main source of noise at the locations was from passing traffic and external

sources and not site activities from Thorntons Recycling. It was noted during the monitoring period that there was vehicular traffic at all locations. While Thorntons Recycling's odour system does contribute to the noise levels at N8 and N9, it should be noted that N8 and N9 are not in a residential area and it is not occupied during the night time hours. N8 and N9 are located within an industrial complex there are other companies influencing the night time noise levels. At N7 the night time noise was predominately from vehicular traffic at a distance from the monitoring location which was audible as a constant humming noise during the monitoring.

The survey concludes that the night time noise levels at the noise sensitive locations are not being negatively impacted upon by the activities of Thorntons recycling.

Thorntons Recycling consider that although the noise levels at the noise sensitive locations are exceeded, that Thorntons Recycling is not the primary cause of the noise at the locations. Elevated noise readings can be attributed predominately to the high levels of un-associated traffic in the area and the presence of numerous other industrial businesses in the immediate vicinity all of which are not under the control of Thorntons Recycling. As a result it can be concluded that Thorntons Recycling is in compliance with its waste licence in relation to noise.

5.4 ODOUR

In order to assess efficiency of the odour treatment system Thorntons Recycling contracted Odour Monitoring Ireland to carry out independent monitoring of the Odour treatment system every six months in 2011 as agreed with EPA (Your reference W0044-02/ak01NH.doc).

Two reports were forwarded to the EPA in 2011 for testing carried out on the 21st December 2010 (44-2/11/EPA/DD/05) and in 14th July 2011 (44-2/11/EPA/DD/24).

Reports issued to the EPA show that the system is working effectively, using olfactometry testing and dispersion modeling.

6 RESOURCES AND ENERGY USAGE

The following section discusses resources such as electricity, fuel and water used at Thorntons Recycling Centre in 2011.

6.1 ELECTRICITY

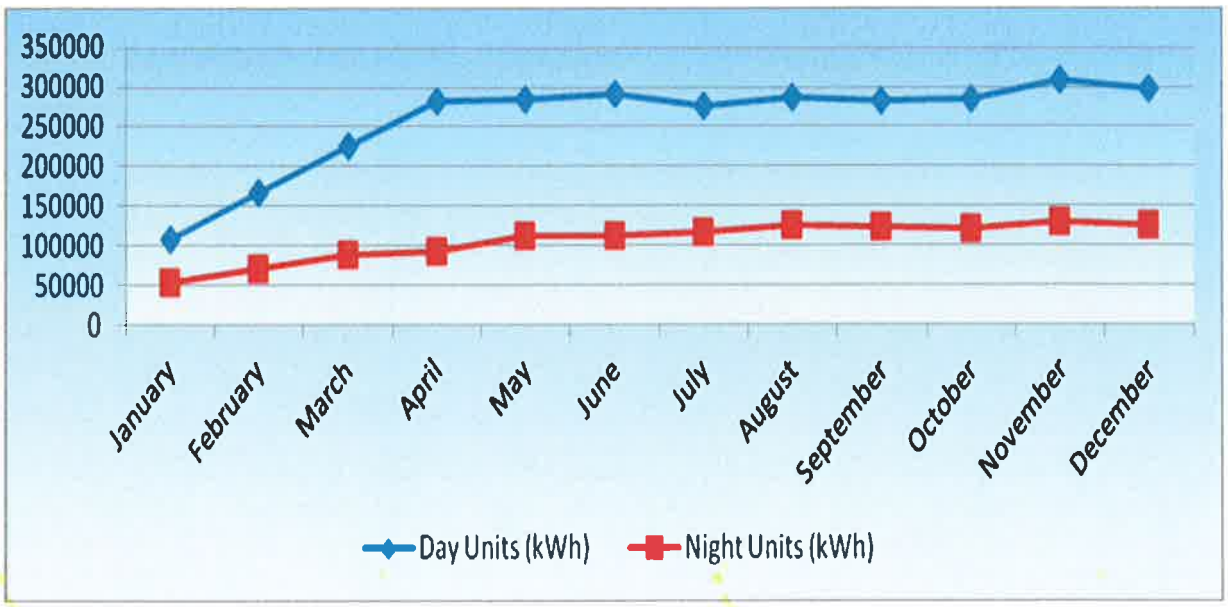
Electricity consumption in 2011 increased at the facility from a total of 2,744,030 kWh in 2010 to 4,362,144 kWh in 2011. This increase in electrical usage can be attributed to the plant been converted to run on electrical power rather than diesel. The conversion from diesel to electrical power has reduced noise levels on site and provides cleaner energy with a lower carbon footprint. The average usage of power per tonne produced is largely consistent throughout the year with only minor fluctuations. During 2011, a monthly

report on energy usage was forwarded to managers which show the daily usage trends and also the usage per tonne processed for monthly comparisons which enable efficiency decisions to be made.

An energy register of opportunities was created which details potential energy saving opportunities on site. The register allows for all the opportunities to be ranked by cost saving, carbon dioxide saving potential, ease of implementation etc. During 2011 Thorntons Recycling began completing the opportunities from the register and has highlighted new areas to focus on during 2012. The register will be reviewed annually and updated accordingly to ensure continual improvement.

Figure 8 illustrates the monthly daily and nightly usage of electricity on site during 2011.

Figure 8 Day and Night Electricity usage by the month 2011



6.2 WATER

In 2011 the facility used approximately 2,710m^3 of water compared to the 2,850 m^3 in 2010. Water is used on site to dampen down dust during dry periods and to wash the floor and hard standing area and also to wash plant and vehicles. The use of water is kept to a minimum which is required to ensure a safe and clean working environment.

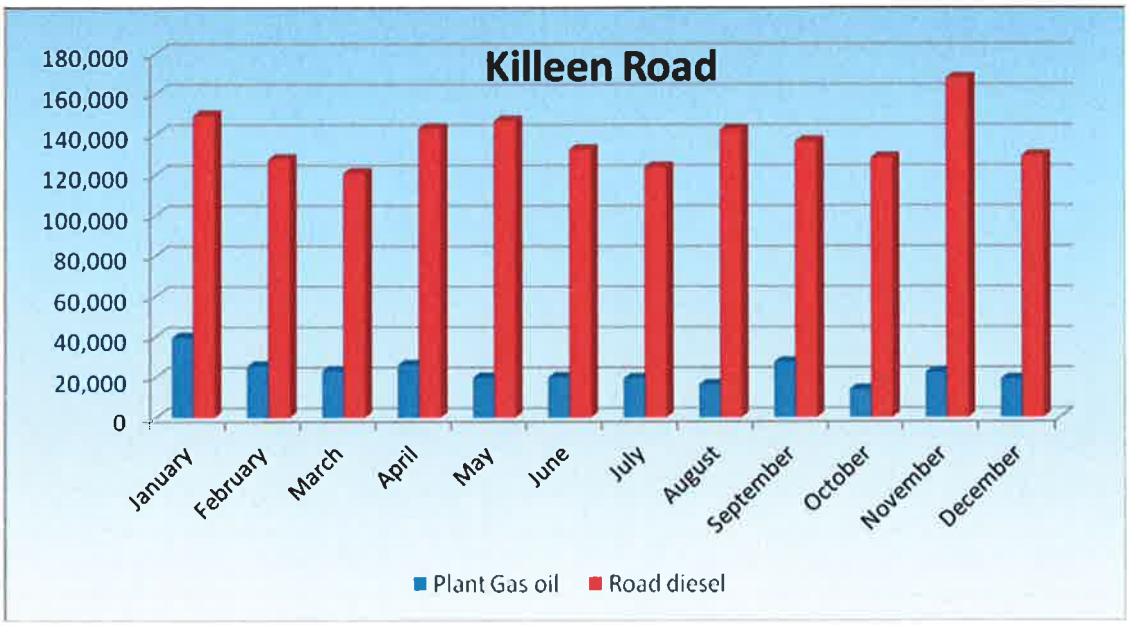
6.3 DIESEL

The main types of fuel used at Thorntons Recycling Centre include road diesel and machinery diesel. The breakdown of fuel consumed is detailed in Figure 9 below. In 2011 a total of 271,956 litres of plant diesel and 1,648,007 litres of road diesel were consumed.

The consumption of road diesel increased by 269,577 litres from 2010's level. Plant diesel decreased by 221,341 litres from 2010's consumption due to the machinery being changed to run on electrical power.

Invoices in relation to all Thorntons facilities are sent to the head office of the company at Thorntons Recycling, Unit S3B, Park west Business Park, Dublin 12. Every effort has been made to distinguish between individual facilities to ensure an accurate fuel consumption report for Thorntons Recycling Centre, waste licence W0044-02.

Figure 9: Fuel consumed by month in 2011



7 DEVELOPMENT / INFRASTRUCTURAL WORKS

7.1 SITE DEVELOPMENTS 2011

The following summarises the main developments made at the facility in 2011;

Buildings and Waste Processing Equipment

- Dust curtains were connected to the new roofed area of the CID line in Building 5. This will reduce the potential for any nuisances such as litter and dust to escape from the building.
- A new line was installed for the processing for MSW to produce SRF material and abstract metal and aluminium that was previously going to landfill. An organic fines fraction is also been abstracted and is being sent for stabilisation.

- The Linder shredder was moved from building 2 to building 3. This allowed us to increase production of SRF.
- The opening in building 3, where the bales of MMW were loaded into trailers was half closed up with metal and transparent cladding and the other half there is a roller door. This has assisted in further reducing the possibility of any fugitive odour or noise missions from the building.
- The power source for the fixed plant on site was converted to run on electrical power rather than diesel. This reduced the sites carbon footprint and also helped to reduce noise levels in the yard.
- The mixed dry recyclable processing was removed from the facility to its own specifically designed MRF in close proximity to the Killeen Road site. This assisted in reducing site traffic and enabling an increase in processing efficiencies of other waste types due to less space restrictions.

Training

- Staff training - ISO Training and auditing carried out
- Staff training – On non conforming wastes
- Emergency Response Training – Fire drills
- Manual Handling training

ISO

- Thorntons Recycling Centre passed a successful surveillance audit which was carried out by Certification Europe in November 2011 to maintain standards for ISO 14001 Environmental, ISO 9001 Quality and OHSAS 18001 Health and Safety.

7.2 PROPOSED DEVELOPMENTS IN 2012

A number of developments are proposed for the forthcoming year of 2012. All developments are carried out with the intention of reducing environmental impacts of the facility and increasing waste processing efficiency at Thorntons Recycling Centre. Thorntons Recycling main aim is to reduce as much waste as possible for landfill disposal in line with national policy and further increase recycling and recovery rates at the facility.

- It is proposed to carry out a study on the current landfill residual waste from the MSW line to determine the characteristics of the waste stream and to ascertain the amount if any that can be diverted for recycling or reuse.
- It is proposed to carry out a study on the current landfill residual waste from the CID line to determine the characteristics of the waste stream and to ascertain the amount if any that can be diverted for recycling or reuse.
- Continuous Development on company procedures in line with ISO certification

Any planned infrastructural developments will be notified in advance to the EPA.

7.3 PLANT CAPACITY 2012

A detailed report on plant operating capacity, provision of adequate standby capacity and provision of contingency, backup and spares in case of breakdown is contained in Appendix 5 of this report.

Without taking into consideration the spare plant and machinery available at other Thorntons sites the report concludes that it is apparent from the information supplied that Thorntons Recycling Centre has well above the sufficient capacity required to handle waste tonnages licensed to enter the facility.

Thorntons Recycling has employed a full time maintenance manager who is responsible for ensuring there are adequate spare parts at the facility at all times. A maintenance workshop was developed off site in Park West Industrial Estate with a team of staff who are capable of carrying out repairs as needed.

An additional service bay and maintenance workshop has been maintained on site with one electrician and two maintenance men at Thorntons Recycling Centre. Plant is serviced and maintained during a night cleaning shift, which enables plant which is required during the day to operate at full capacity.

8 SCHEDULE OF ENVIRONMENTAL OBJECTIVES AND TARGETS FOR 2012 AND PROGRESS REPORT FOR 2011

Thorntons Recycling operates an Integrated Management System (IMS) which has been certified to a number of standards namely; ISO 14001 Environmental, OHSAS 18001 Health and Safety, ISO 9001 Quality.

The complete content of the IMS itself is too large to contain within the main body of this report, however the EPA can access this for inspection on a specially designated drive (X Drive or IMS Drive) at any of the companies' site offices.

A detailed report table on progress towards the achievement of the Environmental Objectives and Targets for 2011 is contained within Appendix 6 of this report. The schedule of environmental objectives and targets for 2012 has being included but may be amended and finalised after the management review in March of 2012. This schedule will be available for the EPA to inspect during any of their site audits in 2012 at any of our facilities.

9 SUMMARY OF PROCEDURES DEVELOPED BY THE LICENSEE IN 2011

As discussed previously with the EPA Thorntons Recycling have an IMS system to incorporate Environmental, Quality and Health and Safety and have achieved certification in ISO standards 14001, ISO 9001 and OHSAS 18001.

In 2011 the system was continuously developed and improved. One surveillance visit on the Killeen road site was carried out by Certification Europe in 2011 which resulted in the company being recommended for maintenance of certification.

Due to the large content of the IMS system it is not possible to include it in the main body of this report but it is available for inspection at Thorntons Recycling, Killeen Road, Dublin 10.

10 TANK, DRUM AND PIPELINE TEST

10.1 TANK BUNDING

Thorntons Recycling commissioned Geoline Ltd consultants to complete testing on the main diesel bund. The main diesel bund passed its test on the 18th-19th March 2011 and a certificate is maintained on site. The bund is not due for testing until 2014. The C & I bund passed testing on the 23rd August 2007. This bund was decommissioned in early 2011 and the diesel tanks were removed. The bund is still in situ but is not used and thus it was not tested in 2011. The bund will remain in place as it is a concrete structure and will be tested if it is re-commissioned in the future.

10.3 PIPELINE TESTS

Thorntons Tankering Services (TTS) completed a full CCTV drain survey at the facility during November 2009 on both the surface water drains and the foul water drains in both the main yard and in Yard 2 (Josies yard). These reports were submitted to the EPA as well as a DVD of the survey in January 2010.

The integrity and water tightness of all underground pipes and tanks and their resistance to penetration will be carried out once every 3 years as per Condition 3.13.7 of the waste licence. The pipelines are due for testing in 2012.

11 SUMMARY OF INCIDENTS AND COMPLAINTS

11.1 INCIDENTS

The following table summarises incidents which occurred at the facility in 2011. These were reported to the Agency and actions were put into place to resolve the issues where necessary.

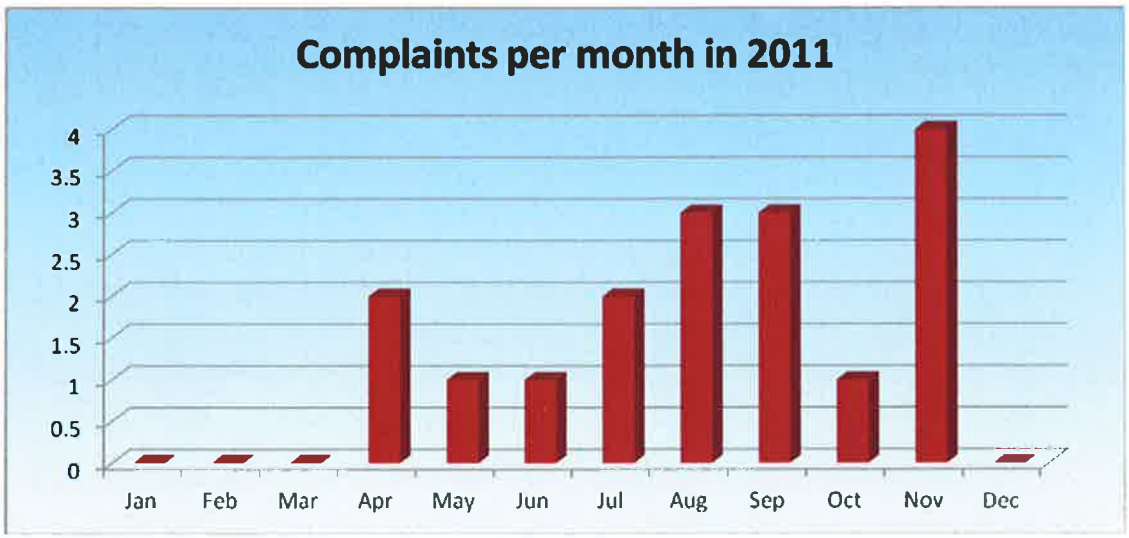
Table 8 Incidents 2011

Number	Incident Description	Incident Reported	Action
1	Exceedance of FW1 in Q3 of 2011	Phone to the EPA on the 21.09.11	Report to the EPA (44-2/11/EPA/DD/26)

11.2 COMPLAINTS

Complaints were reported either directly to the EPA or to Thorntons Recycling Centre during 2011. Figure 10 shows the breakdown of complaints by the month in 2011. There were a total of 17 complaints received during 2011.

Figure 10 Break down of all complaints 2011 by month

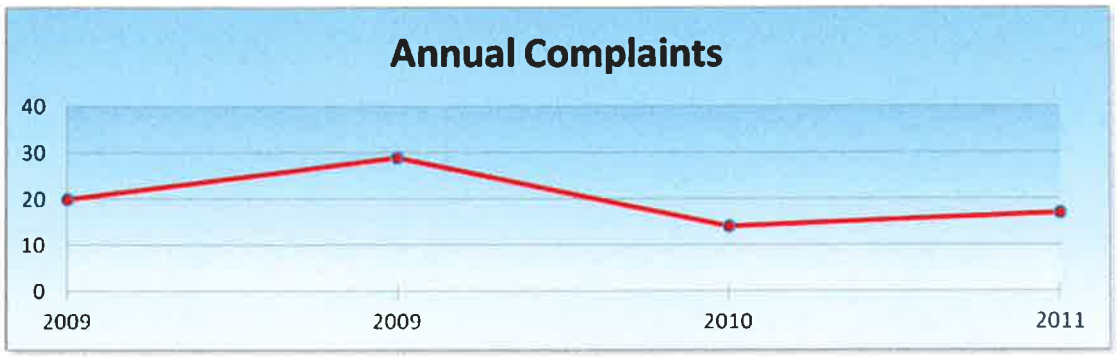


Analysis of the complaints during 2011, shows that 14 complaints were received in relation to odour, 1 in relation to fumes and 2 were in relation to vermin. 5 complaints were received by the EPA and 12 by Thornton's. 6 of the complaints although received and investigated by Thorntons Recycling could not be supported to be relating to Thorntons Recycling facility. The recorded wind direction was opposite to the complainant and could not have originated from the Killeen road site. These complaints could not be attributed to the operation of the Killeen road facility, but they are included in the reported figures as the complaint was made to the site.

PTWDL have worked very closely with the EPA and local residents over the past seven years to try and find the best possible solution for odour control at the facility. We believe that odour abatement has been successful at the facility in 2011. It can be seen from Figure 11 there has been an overall dramatic reduction in the number of complaints received from residents and businesses. Further mitigation works were completed in 2011 which included a complete change of activated carbon in the odour abatement system on the 9th April 2011. This was purposely changed ahead of the summer so as to ensure that there was maximum clean un-used carbon available for the warmer summer months. Additional works such as installing roller doors on building 1 and 3 and closing off part of the opening of building 3 has all helped to further reduce the potential for odour to escape from the building before it is treated.

As discussed in section 5.4 two odours assessment by an independent body has been carried out during 2011 on our odour treatment system which proves that the system is working effectively and Thorntons Recycling are not having any negative impact on residents and that the odour generated at the facility is being managed effectively.

Figure 11 Complaint trends from 2009 - 2011



Thorntons Recycling takes every complaint seriously and is committed to resolving all complaints to the facility. We feel that in 2011 we have done our utmost to be proactive in dealing with local complaints and we aim to continue this positive trend of having a decrease in the number of complaints during 2012.

12 REVIEW OF NUISANCE CONTROL

Potential generic nuisances at waste transfer and recycling facilities include dust, noise, odour, litter, birds, rodents, traffic. PTWDL do their utmost to control any nuisances which may occur at the facility. Checks on nuisances are carried out daily and corrective actions are carried out as required. A procedure in line with our IMS has been designed to ensure housekeeping is maintained in all areas and is carried out by supervisors (EP08 – Housekeeping Inspections).

12.1 DUST

PTWDL are required to carry out dust monitoring three times per year. Results of the dust monitoring have being detailed in section 5.1 of this report. Thorntons Recycling staff use power hoses to wet down yard surfaces at the facility during dry periods, dust curtains have been fixed to entrances and exits of the buildings; a dust suppression system is in operation on in Building 2 and a dust system RJP Pulse Plant, has been installed since March 2006 to remove dust from the air extracted from Building 3. PTWDL have a road sweeper on site at the Killeen Road and it is used twice daily in the facility or more frequently if deemed necessary. This is also used on the Killeen Road and Kylemore Park North to assist in reducing dust levels due to passing traffic and contributory factors.

12.2 NOISE

Noise monitoring surveys are conducted annually at the facility; see section 5.3 of this report.

12.3 ODOUR

Tipping of waste and subsequent segregation and processing occurs within the sealed building 3 which assists in preventing odours from escaping beyond the facility boundary. All putrescible waste is removed from the facility within 48 hours. An Odour Abatement System was installed in March 2005 which uses carbon filtration to extract and treat the molecules that cause odorous air. Further works such as sealing all buildings with polyutherane foam, the installation of an air curtain system and the installation of a pulse plant for dust extraction to improve operation efficiency of the odour treatment system were also carried out since this time. In 2011 a large previously open area of building 3 was closed off with a roller door and metal cladding. A roller door was installed on building 1 to further reduce emissions for the building escaping. Complaints to the facility have reduced dramatically since 2004 as show in section 11.2 of this report.

PTWDL have submitted odour progress reports to the Agency throughout 2011 and are confident that we have solved any alleged odour problem from the facility; we will continue to maintain the system and keep the EPA informed of same.

12.3 LITTER

Daily checks are carried out on litter within and around the site boundary any litter which may escape is cleared up as soon as is possible. All waste transportation vehicles are either enclosed or have a net which covers waste, preventing littering while waste is in transit. Thorntons Recycling owns and operates a road sweeper which sweeps inside and around the facility twice daily. Staff sweep and tidy picking areas constantly throughout the day and night and daily housekeeping checks are carried out by supervisors in all areas with further checks being carried out by the environmental department on a daily basis. All housekeeping checks are maintained on file in the Environmental Department at Thorntons Recycling Centre.

12.4 BIRDS

Constant moving machinery generally deters birds from causing any problems on site. The situation is being monitored and if necessary further action by the contracted pest control company will be arranged.

12.5 RODENTS

Complete Pest Control conduct fortnightly checks of all bait points around the facility which effectively controls rodents at the facility, all documentation for site visits and reports are maintained on site.

12.6 FLIES

Flies have not been a problem at the facility during 2011. During 2011, controlled fogging sprays were carried out in selected areas to reduce fly number during the warmer summer months. The presence of flies is checked as part of the daily environmental checks and if required additional action will be carried out by the contracted pest control company.

12.7 TRAFFIC

Thorntons Recycling Centre is bordered to the West of the facility by the busy Killeen Road which has an access entrance into Park West Industrial Estate and is bordered to the North of the facility by Kylemore Park North, both locations receive a considerable amount of traffic. Traffic volumes decreased on site with the removal of the mixed dry recycling process in 2011.

13 FINANCIAL PROVISIONS, MANAGEMENT STRUCTURE, PROGRAMME FOR PUBLIC INFORMATION

FINANCIAL PROVISIONS

PTWDL is insured by FBD Brokers (Appendix 7). PTWDL is insured for Employers Liability, Public/Products Liability and Motor Insurance and has also taken out a Pollution Insurance Policy. PTWDL is a financially secure company which is evident from the director's report and consolidated financial statements for the year ended 31st December 2010. Thorntons Recycling is insured under public liability for €12.5 million for sudden and accidental pollution incidents.

The company also have employed environmental management staff to ensure best practice guidelines and compliance with waste licence W0044-02 is being adhered to. A comprehensive emergency plan exists for all facilities operated by the company and the company has maintained certification to Environmental Standard ISO 14001 across all its sites in 2011. Environmental risk assessments are updated as part of the impact and aspects register for ISO14001. The Environmental Aspects Register (PM01-F02) for Thorntons Recycling, Killeen Road facility is available for inspection on site. All staff are trained in Health and Safety and Environmental Awareness at Thorntons Recycling Centre.

PROGRAMME FOR PUBLIC INFORMATION

Thorntons Recycling operates an open door policy at the facility and has carried out tours with journalists, Local Authorities and businesses in 2011. The environmental team have been actively involved in carried out recycling workshops and audits in schools, hospitals and industrial and commercial businesses in 2011 as well as giving presentations to the Department of the Environment and at waste events.

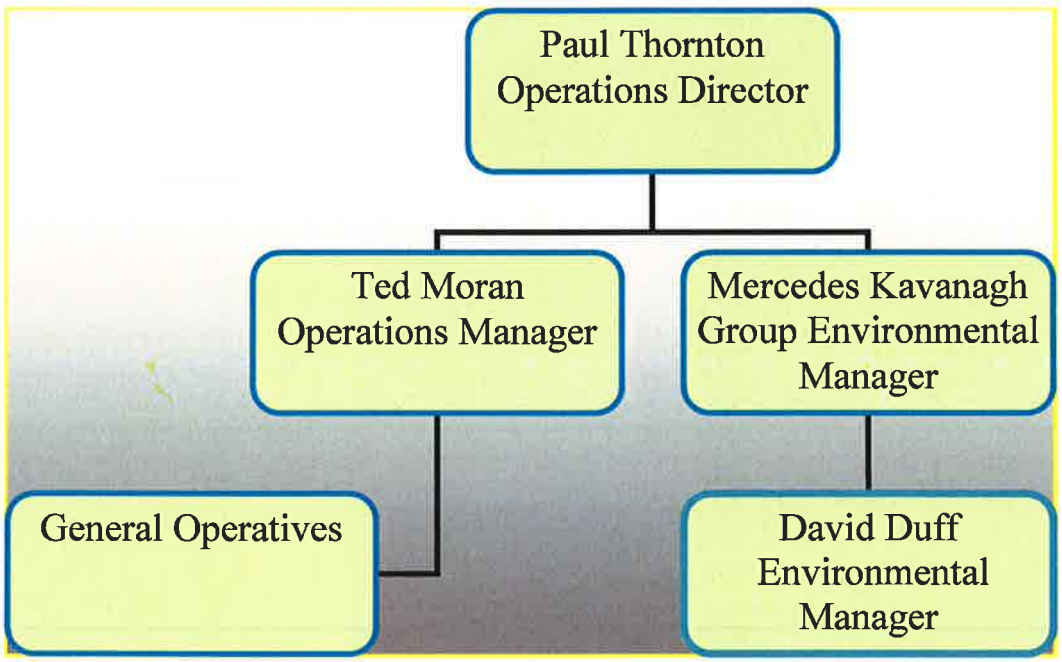
All new and existing clients are brought through our waste acceptance procedures on a daily basis and are supplied with information by sales representatives or customer care staff in relation to what waste types we can accept at the facility.

Thorntons Recycling Centre continues to upgrade its website so customers can access information such as waste collection permit numbers and facility waste licences etc. The companies on line skip service www.skip.ie provides our customers with services and information in relation to hiring a skip from Thorntons Recycling.

All information relating to activities carried out at Thorntons Recycling Centre is maintained on site. Public information is accessible at the site at all times or at the Office of Environmental Enforcement. Detailed Communications Procedures (PM04-Communications and EP01 – Communications Programme) has been implemented in our Integrated Management System and are used throughout the company.

MANAGEMENT STRUCTURE

The graph below details the 2011 management structure relating to the Killeen Road site.

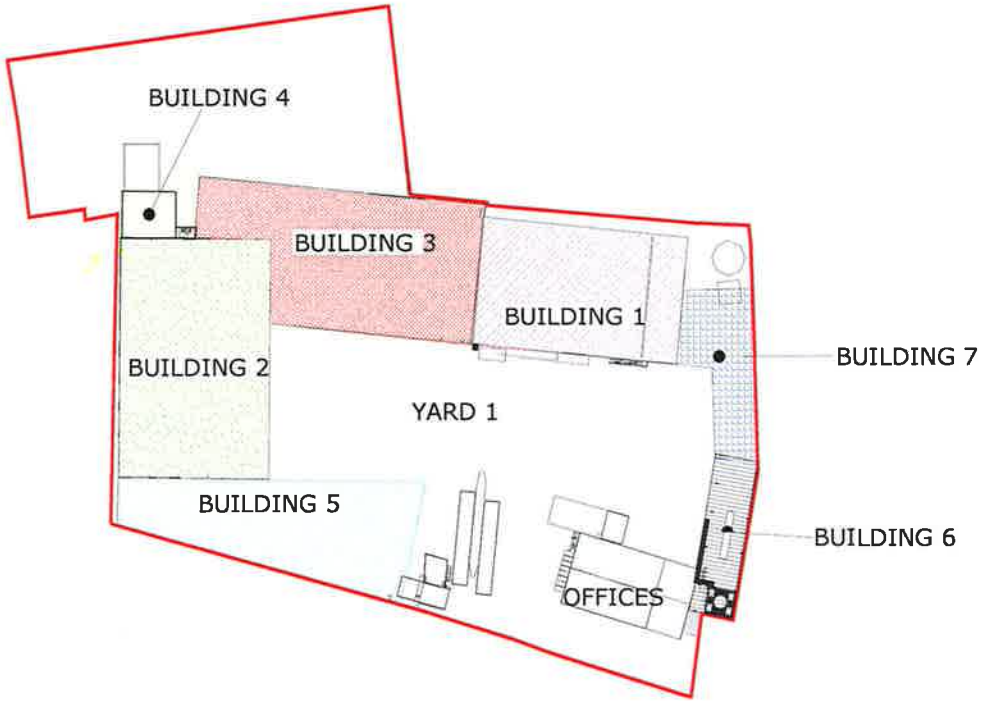


14 FOUL WATER PRODUCTION AND VOLUME OF WATER TRANSPORTED OFF SITE

Thorntons Recycling Centre are limited under schedule C4 of waste licence not to emit more than $20m^3$ per day to the sewer at emission point reference F2 which exits at the north of the facility at Kylemore Park North or $12m^3$ per day to the sewer at emission point reference F1 which exits at the south of the facility to Kylemore Industrial Estate. A daily log is maintained on site.

Both foul meters located on F1 and F2 locations are checked during daily checks at the facility and zeroed at the end of the year. A total of 1,733,535 litres was discharged from F1 during 2011 and 1,742,631 litres from F2. Both are below the max permissible annual discharge for the reporting period by 76.25% and 60.2% respectively. Thorntons Recycling Tankering Services is used for all onsite drainage maintenance and can be called in the event of an emergency if required. Approximately 83,080 litres of foul water from drain maintenance was removed by tankers from the facility in 2011. Job tickets are located in the drain maintenance file in the Environmental Department, Killeen Road, Dublin 10.

Appendix 1


BUILDING 4
BUILDING 3
BUILDING 1
BUILDING 7
BUILDING 2
YARD 1
BUILDING 5
BUILDING 6
OFFICES

Appendix 2

EWC Code	Materials Received	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total Year To Date
20 03 01	Private MMW For /Landfill/ Rounds	4644.06	3884.88	4644.06	4636.26	4758.80	4859.50	5014.37	5156.26	5148.88	6518.08	8720.95	8089.27	66075.37
20 03 01	MMW (CID)	4928.56	5421.88	7015.70	6194.58	6029.00	6093.09	6042.69	5982.67	5083.60	2678.66	1870.34	2275.14	59615.91
20 03 07	Bulky MMW		28.94	358.18	660.78	906.96	1352.65	1595.61	1113.67	1298.98	1201.57	1814.03	1174.34	11505.71
19 12 10	Combustible waste suit SRF in							65.38	163.60	1060.76	537.04	557.70	550.52	2935.00
20 03 02	Market waste		47.96	60.02	56.74	68.26	90.72	74.86	90.56	58.82	72.22	59.80	49.58	729.54
17 01 07	Clean Construction Rubble				20.78							24.38	1.50	46.66
17 09 04	Mixed C&D Waste	855.10	802.58	2131.96	2338.56	1938.32	1146.47	962.22	1489.12	2427.02	2907.20	3106.46	2339.15	22444.16
17 05 04	Soil and Stones	42.16	74.96	278.74	107.14	210.32	23.24	168.06	82.40	293.08	85.00	90.88	33.12	1489.10
02 06 01	Bakers Waste	63.94	62.26	32.74	49.60	42.04	30.42	46.08	45.60	50.76	61.28	36.82	54.40	575.94
18 01 04	Non Infectious Healthcare Waste	653.84	649.06	715.58	706.66	666.90	615.67	644.34	675.60	723.08	674.34	737.90	707.04	8170.01
02 03 99	Tobacco	29.62			3.50	9.56	16.78	7.24	9.10	143.88	57.32		27.80	304.80
02 03 04	Unsuitable food waste	25.74	11.84	5.46		11.12	10.98		10.94	21.64	17.84	20.14	47.28	182.98
16 03 04	Products for Destruction Inorganic							3.38			1.18		1.19	5.75
02 07 04	Unsuitable Alcohol and Liquid for Destruction	479.64	6.12				2.64				3.32		10.50	502.22
20 03 01	Mixed Dry Recyclables	1052.54	564.92	578.70	556.44	1183.53	1224.94	83.53	41.02	23.28	0.50	16.44		5325.84
20 01 40	Metal non ferous aluminium										0.62		2.64	3.26
20 01 40	Metallic Packaging steel		7.66							19.82	27.68	29.16	39.40	123.72
15 01 04	Metallic Packaging Aluminium			0.52				1.00		3.76	4.96	5.66	11.92	27.82
20 03 01	Mixed Packaking (dry MMW)	19.08	15.14	15.12	13.42	11.36	8.86	9.18	9.70	8.20	4.20	4.58	9.28	128.12
20 01 36	WEEE Recycling			0.04				0.24	2.88		2.58			5.74
15 01 01	Cardboard	291.56	257.34	307.70	215.86	213.88	154.23	14.86	9.06	2.16				1466.65
20 01 01	Paper	13.12	13.18	13.66	25.54	15.02	25.78	0.84		1.32				108.46
16 01 18	Non ferrous metal			1.26		1.52		0.82	0.52	3.04				7.16
20 01 40	Ferrous Mixed Metal	27.24	12.62	25.26	9.08	33.88	45.44	30.11	10.72	24.04	20.98	33.98	25.40	298.75
17 04 07	Metal Mixed C & D	8.58	4.32		12.36	51.86		25.88	9.36	21.52	45.58	1.16	0.62	181.24
15 01 03	Wood Packaging	88.18	135.40	129.84	103.50	136.32	107.02	111.58	95.96	124.70	139.02	174.32	112.60	1458.44
19 12 07	Processed Wood e.g. chipped	2.32	2.14	0.48		5.02			5.74		5.56		5.08	26.34

19 12 09	Trommel Fines	470.52											470.52
17 02 01	C & D Waste Wood	2.00	2.00	1.54	3.54	7.70	12.62	11.98	5.28	8.12	13.56	4.54	7.54	80.42
03 01 05	Wood Waste Manufacturing	5.00	3.90	3.68	9.48	2.02	11.22		6.30	10.26	10.40	24.18	14.78	101.22
15 01 02	Mixed Plastic Bottles	2.76	0.96	5.52	13.90	2.50	3.24	9.98	0.40			0.40		39.66
20 01 39	Mixed Plastic Film - High Grade	3.42		0.88	0.60	1.90	3.64							10.44
17 02 03	Mixed Hard Plastics	6.18	36.44	180.64	2.00	2.80	3.74	0.54			0.16			232.50
20 01 39	Mixed Plastics Wrap - Low grade	21.82	39.16	51.08	34.08	45.32	29.16	40.14	20.30	24.00				305.06
20 01 02	Glass					4.38		4.37	3.46	2.04				14.25
20 01 02	Glass Other	1.10	5.20	3.23		3.56	2.94			4.96	4.10	4.02	16.30	45.41
20 01 08	Brown Bin/ Seperately collected Food Run	1579.62	1351.66	1836.09	2081.36	2062.67	2020.32	1696.20	2268.04	1902.35	1959.16	2446.35	1817.77	23021.59
20 02 01	Green Waste	184.68	5.66	9.74	3.70	15.22	7.34	10.36	12.68	14.58	26.98	5.52	13.58	310.04
17 04 11	Metal Wiring Cable									0.62		0.54		1.16
20 01 11	Textiles / Clothes	2.76	3.24	32.48	2.14	17.36	2.02	7.24	2.70	0.52		3.66	7.46	81.58
17 08 02	Gypsum Products/Plasterboard		3.48		13.79	2.30	1.88	6.74	1.30			6.32	5.40	41.21
	TOTAL	15505.14	13454.90	18439.90	17875.39	18461.40	17906.55	16689.82	17324.94	18509.79	17081.09	19800.23	17450.60	208499.75

Appendix 3

EWC Code	Materials Consigned	Jan	Feb	Mar	Apr	May	June	July	August	Sept	October	Nov	Dec	Total Year To Date
20 03 01	MMW (A)			15.32										15.32
20 03 01	MMW (B)											65.68		65.68
20 03 01	MMW (C)											799.39	629.40	1428.79
20 03 01	MMW (D)									161.40				161.40
20 03 01	MMW (E)			190.50										190.50
20 03 01	MMW (F)	6297.48	4743.32	5866.32	2779.15	2308.18	1682.48	1643.90	1679.16	2132.16	1816.16	2915.60	2296.48	36160.39
20 03 07	Bulky MMW (A)			136.32										136.32
19 12 10	SRF (A)	105.20	1072.44	1093.12	1861.51	2850.22	2494.48	1551.90	2494.64	2404.02	2378.84	1818.16	2158.48	22283.01
19 12 10	SRF (B)				1331.18	802.38	504.64	972.11	687.44	192.68	424.46		778.56	5693.45
19 12 10	SRF (C)							316.42	644.94	645.58	1736.73	681.78	1849.90	5875.35
19 12 10	SRF (D)						1333.36	1158.60	86.82	1972.76	524.80	2740.88	180.88	7998.10
17 01 07	Stone for Sale	255.58	290.96	254.84	614.90	599.14	1001.34	2797.44	4020.26	2775.78	1332.90	787.62	1877.28	16608.04
17 01 07	Stone (A)					83.12								83.12
17 01 07	Stone (B)	824.42	363.16	738.22	1185.50	654.88	882.78	888.36	997.52	1433.84	1451.40	1739.16	889.50	12048.74
17 01 07	Stone (C)	59.18	1071.97	939.31	1479.20	2763.66	3683.57	1837.26	551.62	505.43	537.18			13428.38
17 05 04	Soil and Stone (D)					12.06		16.96					38.96	67.98
19 12 12	Organic Fines (A)										116.80			116.80
19 12 12	Organic Fines (B)				211.72	235.84	301.94	380.78	331.40	351.88	603.04	1184.14	920.90	4521.64
19 12 09	Trommel Fines (A)		1188.20	1840.78	85.49					305.35	362.32			3782.14
19 12 09	Trommel Fines (B)							66.24	506.70	254.40	20.02			847.36
19 12 09	Trommel fines (C)								716.36	41.50				757.86
19 12 09	Trommel Fines (D)	3927.52	1369.08	2477.34	3562.37	2800.04	2033.90	1935.28	667.40	1259.86	1620.43	2607.54	2331.54	26592.30
19 12 01	Cardboard Out (A)	94.10		90.38	92.74	67.78	48.50							393.50
19 12 01	Cardboard Out (B)	167.88	324.04	138.22	209.70	68.58	164.52							1072.94
19 12 01	Cardboard Out (C)	67.04												67.04
19 12 01	Cardboard Out (D)	120.18	119.08	203.28	23.08	194.70								660.32

19 12 01	Cardboard Out (E)						22.87		1.74				7.48	32.09
19 12 02	Ferrous Mixed Metals (A)						28.50							28.50
19 12 02	Ferrous Mixed Metals (B)	206.90	218.06	279.76	309.12	301.74	250.40	198.98	176.06	218.66	102.40	79.48	52.84	2394.40
19 12 02	Ferrous Mixed Metals (C)	85.60					55.68	67.62	22.38	15.66	129.58	242.94	217.64	837.10
19 12 02	Ferrous Mixed Metals(D)										44.62			44.62
19 12 02	Ferrous Mixed Metals (E)	12.46		12.28	40.69	29.18		40.94	5.72	34.54	27.58	25.32	25.42	254.13
19 12 02	Ferrous Mixed Metals (F)						20.52			21.16	19.88	15.90		77.46
19 12 03	Non-ferrous metals (A)	14.84	27.06	10.98		25.11	25.06	19.66	15.74	24.14	15.76	17.54	16.26	212.15
17 04 11	Metal cabling (A)		1.04	0.96	0.24						0.42	0.38		3.04
17 04 01	Copper and bronze (A)											1.08		1.08
15 01 04	Metallic Packaging Steel (A)					52.44					26.54	26.44	45.12	150.54
15 01 04	Metallic Packaging Steel (B)									81.44		27.58		109.02
15 01 04	Metallic Packaging Steel (C)							23.92						23.92
15 01 04	Metallic Packaging Steel (D)							56.70		39.38	45.73	59.74	15.78	217.33
15 01 04	Metallic Packaging Steel (E)						25.32	18.06						43.38
15 01 04	Metallic Packaging Aluminium (A)							19.64	10.94	5.92	12.80	31.72	21.84	102.86
15 01 04	Metallic Packaging Aluminium (B)										14.68			14.68
15 01 04	Metallic Packaging Aluminium (C)							18.70						18.70
20 01 39	Mixed Plastics Film High Grade (A)				23.34									23.34
20 01 39	Mixed Plastics Film High Grade (B)							19.50						19.50
20 01 39	Mixed Plastics Film High Grade (C)		24.32											24.32
20 01 39	Mixed Plastics Film High Grade (D)	23.42												23.42
20 01 39	Mixed Plastics High Grade Film (E)					23.66								23.66
20 01 39	Mixed Plastics High Grade Film (E)						1.26							1.26
20 01 39	Mixed Plastics Film Low Grade (A)		23.92											23.92

20 01 39	Mixed Plastics Low Grade Film (B)							0.50	3.44					3.94
20 01 39	Mixed Plastics Low Grade Film (C)				16.74	27.08		15.42						59.24
20 01 39	Mixed Plastics Low Grade Film (D)						6.84							6.84
15 01 02	Plastic Bottles (A)	60.14												60.14
15 01 02	Plastic Bottles (B)					16.54								16.54
15 01 02	Plastic Bottles (C)						0.32							0.32
17 02 03	Hard Plastic (A)		4.15											4.15
17 02 03	Hard Plastic (B)			24.22										24.22
17 02 03	Hard Plastic (C)										8.66			8.66
17 02 03	Hard Plastic (D)			93.02	4.46									97.48
17 02 03	Hard Plastic (E)	3.92	11.86	5.58		8.34	3.10	3.58	5.24	3.28			10.30	55.20
20 01 01	Paper (A)		26.02		49.20		25.00							100.22
20 01 01	Paper (B)						11.98							11.98
03 03 08	Shredded office waste to (A)		7.04	2.30	1.20		2.80							13.34
20 03 01	Mixed Dry Recyclables (A)					654.12								654.12
20 03 01	Mixed Dry Recyclables (B)	487.60	196.30	198.38	243.38	162.50	265.22	28.34	16.98					1598.70
20 03 01	Mixed Dry Recyclables (C)	43.94	331.14	102.08	24.44									501.60
20 03 01	Mixed Dry Recyclables (D)	301.68	12.02	76.00	43.62	269.54	617.08	47.84	81.02	4.24				1453.04
20 03 01	Mixed Dry Recyclables (E)						0.64		16.24					16.88
20 03 01	Mixed Dry Recyclables (F)						284.34							284.34
17 09 04	Mixed C&D (A)												152.25	152.25
16 02 11	ELV Fridges (A)							0.58	0.40		2.58	0.50	0.80	4.86
20 01 36	WEEE Out SDA (A)							0.36	1.51	0.36	0.90	1.03		4.16
16 02 11	ELV Fridges (B)	1.30				0.30								1.60
16 01 03	ELV Tyres (A)	2.20	8.24	2.68	2.83	1.10	1.82	4.14	2.26	2.30	1.00	6.64	0.52	35.73
20 01 36	WEEE Out SDA (B)													0.00
16 02 13*	WEEE CRT TV's monitors (A)	0.90	1.60	3.38	0.70	0.68								7.26

20 01 02	Glass (A)				1.06	6.98	4.64							12.68
20 01 08	Compostable Food Waste (A)	1233.16	1020.94	1611.82	1997.84	1767.67	1778.14	1661.36	1853.54	1595.39	1675.42	1917.08	1011.60	19123.96
21 01 08	Compostable Food Waste (B)											25.34	99.58	124.92
20 01 08	Compostable Food Waste (C)											256.30	383.48	639.78
20 02 01	Green waste (A)	5.96												5.96
20 02 01	Green waste (B)	20.84												20.84
16 05 05	Gas Cylinders (A)	0.40	0.84	0.76	0.58	1.22		1.22		0.72	0.66		1.00	7.40
20 01 27*	Paint (A)					0.74								0.74
17 08 02	Gypsum (A)	5.68	6.48	13.92										26.08
19 12 07	Wood (A)	1036.08	757.04	830.90	817.24	943.10	813.04	841.88	669.34	1141.42	1148.12	1253.18	947.60	11198.94
	TOTAL	15465.60	13220.32	17253.57	17013.22	17732.62	18376.08	16654.19	16266.81	17625.25	16202.41	19328.14	16961.39	202099.60

Appendix 4

PLANT CAPACITY REPORT JANUARY 2012

INTRODUCTION

Thorntons Recycling Centre, Killeen Road, Dublin 10 is currently licensed under waste licence W0044-02 to accept 250,000 tonnes per annum of Domestic, Commercial, Industrial Non Hazardous and Construction Demolition Waste. To handle such large waste quantities efficiently and without significant environmental emissions, adequate plant machinery has to be in place to quickly handle and dispatch the materials delivered.

To quantify the processing capabilities of the facility this capacity report has been produced to estimate the quantities of waste the transfer station can currently accept before waste begins to accumulate and potentially effect the surrounding environment. This capacity report has identified spare plant that can be substituted for critical plant in the event of a breakdown. Furthermore, sufficient essential spare parts and staff who are capable of rectifying faults are also detailed and available to bring critical plant machinery back online after initial breakdown.

THORNTONS RECYCLING CENTRE PLANT CAPACITY

The following tables specify all plant on site and their individual capacity along with standby capacity of all substitute machinery (see tables 1, 2, 3)

Table 1 capacity of waste handling machinery

THORNTONS RECYCLING CENTRE HANDLING CAPACITY 2012					
Area	**Details**	**Machine**	**Capacity (tonnes per day)**	**Spare**	**Spare Capacity (tonnes per day)**
Waste Handling	Handling Skip Waste (B2)	Fuchs 1	1500	Fuchs 6 (PDM)	1500
Waste Handling	Loading Trailers Oversize (B2)	Fuchs 2	1500	Fuchs 7 (Dunboyne)	1500
Waste Handling	Loading MSW line (B3)	Fuchs 3	1500	CAT Fuchs – MDR	1200
Waste Handling	Unloading trailers in the yard	Fork lift 1 (7 Tonne)	1000	Forklift 3 MDR centre	1000
Waste Handling	Moving full and empty waste trailers	Shunter 1	1200 (* Based on 100 tonnes per hour for 12 hours)	Forklift 4 ELV centre	1000
Waste Handling	Moving waste in Building 3	Shovel 10 - Volvo L120G	2000	Teleporter in MDR	1000
Waste Handling	Moving waste in Building 1	Shovel 5 - Volvo L120E	2000	Shovel 5 & 1 L90C (Dunboyne & Kilmainhamwood)	2000
Waste Handling	Moving waste in Building 1	Cat 360B Teleporter	1000	Shovel 2 - JCB loading shovel 456	2000
Waste Handling	Moving full and empty waste trailers	Shunter 2	1200 (* Based on 100 tonnes per hour for 12 hours)	Shovel 3 & 4 Cat (PDM x 1,	4000
			12,900		**15,2**

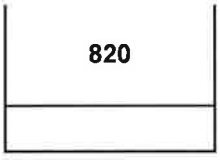
Table 2: Current Capacity of Waste Processing Machinery.

THORNTONS RECYCLING CENTRE CURRENT DAILY PROCESSING CAPACITY 2012						
Area	**Details**	**Machine**	**Capacity (tonnes per day) Based on 14 hr day**	**Spare**	**Spare Capacity**	**Emergency Spare Parts In Store**
Processing	C.I.D line- crusher, 2 x trommels, 2 x Nihots, flip flop and picking lines (14 hr day)	C.I.D line	490	Diversion of waste to another facility or work alonger shift	Yes	Yes Motors, Belts and rollers
Processing	MSW line- crusher, trammel and Nihots (14 hour day)	MSW line	476	Bulking material and consigning to landfill	Yes	Yes Motors, Belts and rollers

966

Table 3 Current Capacity of Waste Transportation

THORNTONS RECYCLING CENTRE CURRENT TRANSPORT CAPACITY 2012						
Area	**Details**	**Machine**	**Capacity (tonnes per day)**	**Spare**	**Spare Capacity**	**Emergency Spare Parts In Store**
Transport	Moving waste to landfill - Loose Waste	7 Open Brown Trailers	(2 driver, 5 lds * 25t per ld) **125**	Spare Brown Trailers x 2	Yes	Yes
Transport	Moving SRF to outlet	6 Closed trailers and 3 walking floor trainers	(3 driver, 10ld 24t per ld) **240**	Spare trailerX1 in yard	Yes	Yes
Transport	Moving Compostable waste	2 sealed trailers	(2 driver, 4lds 25t per day) **100**	Spare x2 aluminum trailers	Yes	N/A
Transport	Moving Wood to PDM	Open top Bulkers	(1 drivers,3 lds * 25t per ld) **75**	Spare open top bulker	Yes	N/A
Transport	Moving mixed metals	1 Open top bulker	(1 drivers,2 lds * 16t per ld) **32**	Spare open top bulker	Yes	N/A
Transport	Moving Organic Fines	1 Open top bulker	(1 drivers,2 lds * 25t per ld) **50**	Spare open top bulker	Yes	N/A
Transport	Moving Trommel Fines and Stones	2 rigid tipper trucks	(2 drivers,9lds*22t per ld) **198**	N/A	N/A	Yes



As can be seen from Tables 1, 2 and 3 Thorntons Recycling has sufficient plant capacity to process above the current licence quantity of 250,000 tonnes per annum. Table 2 and 3 display current capacity of waste processing machinery and current capacity in transport, should the facility be required to handle more than that displayed in Table 2 and 3, hours of processing can be increased as the facility is licenced to operate under a twenty four hour licence and extra drivers and trailers can be hired to accommodate transport of materials.

PTWDL operates other facilities such as Thorntons Recycling PDM, Thorntons Recycling Dunboyne, Kilmainhamwood Composting, Thorntons Recycling ELV, Thorntons Recycling Security Shredding and Thorntons Recycling MDR. All these facilities have similar mobile plant on site which can be used at Thorntons Recycling Centre Killeen Road if required.

PTWDL employs a maintenance team who are responsible for ordering and cataloguing all essential spare parts. The team consists of qualified fitters and electricians, who have their own maintenance workshop and service bay onsite at the Killeen Road facility. A state of the art garage has been developed in Park West Industrial Estate where a team of 11 are employed. The garage is equipped with all necessary specialized equipment and an emergency service vehicle for call out or to fix mechanical breakdowns. PTWDL have 24 hour access to Hose Doctor who can be on site within the hour to replace any damaged hydraulic fittings.

CONCLUSION

It is apparent from the information supplied that the facility and its workings have sufficient capacity to handle the current tonnages permitted to enter the facility and indeed could handle an increase in tonnage if required.

Appendix 5

PM03- F01 Management Programme 2011

COMPLETED		CARRIED FORWARD FROM 2010			ON HOLD			
Ref Number	**Date**	**Type**	**Objective and Target**	**Location**	**Responsibility**	**Method**	**Time Frame**	**Status**
EP 04	Jan'11	Environmental	To put up dust curtains on the new roofed area of the CID line	Killeen road	DD	1. Attach dust curtains	April'11	Completed- to reduce dust escaping the building
EP 05	Jan '11	Environmental	Energy Systems/ Natural Resource Consumption - Management Systems	All Sites	DD	1. Energy Study completed in 2010 2. Recommendations from study to be implemented on all sites	Quarterly Review	Started - Ongoing EMS project- Tracking file set up for each site and reports being forwarded to relevant management
EP 07	Jan '11	Environmental	SRF Development	Killeen road	MK/DD	1. Assess developments of additional material to the line and new additons, monitor quality and report.	Jun-11	Started - Third Party Coontractor assisting with development - New procedures etc to be put in to place for pre sorting. Project completed March 2011 and started producing SRF from domestic in Arpil 2011. EPA garnt technical amendment and permission for operation May 2011.
EP 09	Jan '11	Environmental	Waste Collection Permit - Fleet audit	All Sites	MK/DD	1 Review paperwork in trucks in line with national permit	Dec-11	Started - Fleet list to be updated on WCP first. Transport passed list of active fleet to MK to liase with DCC. Completed by MK new revision scanned to x drive with appendix of fleet covered under

								WCP
EP 12	Jan '11	Environmental	Environmental Guidance File for all Staff - Legal register	All Sites	MK	1. Complete Environmental Review of Guidance files and Environmental Legal Register - Required for Internal communications and ISO14001 register	Dec-11	Not Started, moved to 2012
EP 13	Jan '11	Environmental	ISO Development - successfuly pass two certification europe audits for ISO14001	All Sites	MK	1. IMS in place review and ensure all procedure, policies and plans are up to date 2. Management Review to be completed on IMS for 2010 - Completed March 2011 3. New procedures relating to new SRF development/changes in testing contract etc to be implemented etc	Dec-11	Completed
EP 16	Jan-11	Environmental	Carry out an updated energy audit on Killeen road and incorporate the findings into the Objectives and tragets	Killeen road	DD	1. Revise and udate the previous energy audit 2 Update the energy register 3. Incorporate the energy register into the Objectives and targets	Jun-11	Completed - updated ROI, on the EMS folder for all sites. Projetcs to be picked from the register as continous improvement.

PM03- F01 Management Programme 2012

COMPLETED		CARRIED FORWARD FROM 2011			ON HOLD			
Ref Number	**Date**	**Type**	**Objective and Target**	**Location**	**Responsibility**	**Method**	**Time Frame**	**Status**
EP 07	Feb-12	Environmental	Export SRF	Killeen Road	DD	1. Feasibility update on export of SRF	Dec-12	Not Started - On hold
EP 08	Feb-12	Environmental	Store SRF	Killeen Road	DD	1. Feasiblity study on possible locations, in particular Dunboyne	Dec-12	Not Started - On hold
EP 10	Feb-12	Environmental	Monitoring and measurement - Calibration Register	All Sites	MA	Domestic Lorries etc to be updated on register	Dec-12	Not Started - MA to do in Q2
EP 11	Jun-12	Environmental	Environmental Guidance File for all Staff - Legal register	All Sites	MK	1. Complete Environmental Review of Guidance files and Environmental Legal Register - Required for Internal communications and ISO14001 register	Dec-12	Not Started, Carried from 2011, Start in Q3
EP 12	Feb-12	Environmental	MSW residual survey	Killeen Road	DD/JL	1. Characterisation survey on 300kg of residual waste and create a summary report and P&L	Jun-12	Work in Progress-finalise report
EP 13	Feb-12	Environmental	CID hand picked residual survey	Killeen Road	DD/JL	1. Characterisation survey on 300kg of residual waste and create a summary report and P&L	Jun-12	Work in Progress-finalise report

Appendix 6

FBD Brokers

Corporate Insurance Brokers
& Risk Management Consultants

FBD House
Bluebell
Dublin 12
Ireland

T +353 1 409 3201
F +353 1 478 3108
www.fbdbrokers.ie

6 July, 2011

Re: ***Padraig Thornton Waste Disposal Ltd and Thornton Recycling Centre Ltd***

To Whom It May Concern:

This is to confirm that we act as Insurance Brokers for the above client and that we currently hold the following covers in place on their behalf:-

Employers Liability:
Covering the legal liability of the Insured to employees for death or bodily injury or disease arising out of and in the course of their employment by the Insured in the business as described **(Waste Collection, Recycling and Disposal and Property Owners)** during the period of Insurance.

Insurers: FBD plc
Policy No.: 00433053/04/01
Renewal Date: 1st July 2012

Limit of Indemnity:
€13,000,000 any one occurrence inclusive of all costs and expenses.

Public / Products Liability:
Covering the legal liability of the Insured for accidental bodily injury to third party persons or accidental damage to third party material property arising in connection with the business and subject to the limit of indemnity specified. Including legal liability arising out of goods sold or supplied.

Insurers: FBD plc
Policy No.: 00433053/04/01
Renewal Date: 1st July 2012

Limit of Indemnity:
Public Liability €2,600,000 any one accident
Products Liability €2,600,000 any one period

Motor Insurance
Covers the Insured's Liability to Third Parties for vehicles being used in connection with the insured's business. Personal Injury cover is unlimited and Third Party Property Damage limit is €1,300,000 and €30,000,000 for private cars.

Insurers: FBD Insurance Plc
Policy No: 00433053/22/01
Renewal Date: 1st July 2012

Excess Public/Products Liability, Motor TPPD and Employer's Liability
Insurers: QBE
Policy No.: TBA
Renewal Date: 1st July 2012

Limit of Indemnity:
Increases the underlying limits up to a maximum of €12.5m, €6.5m and €20m respectively.
Cover follows the underlying policy and is subject to Insurers policy terms and conditions.
All policies include Indemnity to Principals Clause applies to all policies.

We trust that this is in order but if you require further details, please do not hesitate to contact the undersigned.

Yours sincerely

Fergal Britton
Service Executive
FBD Brokers

\\Brok03\CMS Reports\CMS Client Letters\2249\EL_PL_Confirmation_clearym_22-05-08.Doc

Appendix 7

Environmental Protection Agency

Guidance to completing the PRTR workbook

AER Returns Workbook

Version 1.1.13

REFERENCE YEAR	2011

1. FACILITY IDENTIFICATION

Parent Company Name	Padraig Thornton Waste Disposal Limited
Facility Name	Thornton's Recycling Centre
PRTR Identification Number	W0044
Licence Number	W0044-02

Waste or IPPC Classes of Activity

No.	class_name
3.13	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.
3.11	Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.
3.12	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.
4.11	Use of waste obtained from any activity referred to in a preceding paragraph of this Schedule.
4.13	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.
4.2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
4.3	Recycling or reclamation of metals and metal compounds.
4.4	Recycling or reclamation of other inorganic materials.
4.8	Oil re-refining or other re-uses of oil.
4.9	Use of any waste principally as a fuel or other means to generate energy.
Address 1	Killeen Road
Address 2	Ballyfermot
Address 3	Dublin 10
Address 4	
	Dublin
Country	Ireland
Coordinates of Location	-6.35373 53.3348
River Basin District	IEEA
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	David Duff
AER Returns Contact Email Address	dduff@thorntons-recycling.ie
AER Returns Contact Position	Environmental manager
AER Returns Contact Telephone Number	01 6235133
AER Returns Contact Mobile Phone Number	086 8371959
AER Returns Contact Fax Number	01 2635151
Production Volume	250000.0
Production Volume Units	Tonnes
Number of Installations	3
Number of Operating Hours in Year	8000
Number of Employees	40
User Feedback/Comments	Treatment and transfers tab is largely a duplication of the WTS report submitted to the EPA
Web Address	www.thorntons-recycling.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(c)	Installations for the disposal of non-hazardous waste
5(c) 50.1	Installations for the disposal of non-hazardous waste General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	No
Have you been granted an exemption ?	No
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4.1 RELEASES TO AIR

Link to previous years emissions data

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR					Please enter all quantities in this section in KGs							
POLLUTANT		METHOD			QUANTITY							
			Method Used		D2	D3	D4	D5	D7			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	Emission Point 5	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
210	Dust	M	OTH	30 Composite sample measured in mg/m2/day using Standard Method VDI2119	0.05	0.02	0.03	0.03	0.05	0.18	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Thornton's Recycling Centre

Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Used: Method Code	Method Used: Designation or Description	Facility Total Capacity m3 per hour	
Total estimated methane generation (as per site model)	0.0				N/A	
Methane flared	0.0				0.0	(Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0	(Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0				N/A	

4.2 RELEASES TO WATERS

Link to previous years emissions data

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
No. Annex II	Name	M/C/E	Method Used: Method Code	Method Used: Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
No. Annex II	Name	M/C/E	Method Used: Method Code	Method Used: Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT					QUANTITY			
Pollutant No	Name	M/C/E	Method Used: Method Code	Method Used: Designation or Description	SW2 Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
303	BOD	M	OTH	Standards Methods for the examination of waster and wastewater. APHA 20th Ed	0.006	0.006	0.0	0.0
305	COD	M	OTH	Standards Methods for the examination of waster and wastewater. APHA 20th Ed	0.021	0.021	0.0	0.0
314	Fats, Oils and Greases	M	OTH	Standards Methods for the examination of waster and wastewater. APHA 20th Ed	0.0009	0.0009	0.0	0.0
324	Mineral oils	M	OTH	Standards Methods for the examination of waster and wastewater. APHA 20th Ed	0.0003	0.0003	0.0	0.0
340	Suspended Solids	M	OTH	Standards Methods for the examination of waster and wastewater. APHA 20th Ed	0.0036	0.0036	0.0	0.0
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs				
POLLUTANT		METHOD			QUANTITY				
			Method Used		FW1	FW2			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
303	BOD	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	840.76	1313.07	2153.83	0.0	0.0
306	COD	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	1261.14	2173.93	3435.07	0.0	0.0
308	Detergents (as MBAS)	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	1.73	1.12	2.85	0.0	0.0
314	Fats, Oils and Greases	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	59.98	47.7	107.68	0.0	0.0
324	Mineral oils	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	15.82	3.35	19.17	0.0	0.0
332	Ortho-phosphate (as PO4)	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	16641.9	24501.38	41143.28	0.0	0.0
240	Suspended Solids	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	312.03	525.4	837.43	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.4 RELEASES TO LAND

Link to previous years emissions data

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
			Method Used				
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO LAND					Please enter all quantities in this section in KGs		
POLLUTANT		METHOD			QUANTITY		
			Method Used				
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste Name and Licence/Permit No of Next Destination Facility Non Haz Waste Name and Licence/Permit No of Recover/Disposer	Haz Waste Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	20 03 01	No	15.32	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Knockharley Landfill,W0146-02	Knockharley ,Navan,Co. Meath,,,Ireland		
Within the Country	20 03 01	No	65.68	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Greyhound Waste Recycling,W0205-01	Crag Avenue,Clondalkin Industrial Estate,Dublin,22,Ireland		
Within the Country	20 03 01	No	1428.79	mixed municipal waste	R1	M	Weighed	Offsite in Ireland	Indaver,W0167-02	Carranstown,Duleek,Co. Meath,,,Ireland		
Within the Country	20 03 01	No	161.4	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Oxigen Environmental Ltd,W0205-01	Ballymount Industrial Estate,Clondalkin,Dublin ,22,Ireland		
Within the Country	20 03 01	No	190.5	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Access Waste Recycling,W0227-01	Unit 28 JFK Industrial Estate,Naas Road,Dublin ,12,Ireland		
Within the Country	20 03 01	No	36160.39	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Bord na Mona Drehid landfill,W0201-01	Carbury,,,Co. Kildare,,,Ireland		
Within the Country	20 03 07	No	136.32	bulky waste	D1	M	Weighed	Offsite in Ireland	KTK Landfill Ltd,W0081-02	Brownstown & Carnalway,Kilcullen,Co. Kildare,,,Ireland		
Within the Country	19 12 10	No	22283.01	combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Lagan Cement,P0487-05	Kinnegad,,,Co. Meath,,,Ireland		
Within the Country	19 12 10	No	5693.45	combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Oxigen Environmental Ltd,W0205-01	Ballymount Industrial Estate,Clondalkin,Dublin,22, Ireland		
Within the Country	19 12 10	No	7998.1	combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Irish Cement Ltd,P0030-04	Drogheda,,,Co. Louth,,,Ireland		
Within the Country	19 12 10	No	5875.35	combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Greyhound Waste Recycling,W0205-01	Crag Avenue,Clondalkin Industrial Estate,Dublin,22,Ireland		
Within the Country	17 01 07	No	16608.04	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Various farmers,,	,,,,,,,,Ireland		
Within the Country	17 01 07	No	83.12	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Dunboyne,W0206-01	Dunboyne, ,Co. Meath,,,Ireland		
Within the Country	17 01 07	No	12048.74	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Bord na Mona Drehid landfill,W0201-01	Carbury,,,Co. Kildare,,,Ireland		
Within the Country	17 01 07	No	13428.38	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Arthurstown Landfill,W0004-03	Kill,,,Co. Kildare,,,Ireland		
Within the Country	17 05 04	No	67.98	soil and stones other than those mentioned in 17 05 03	R5	M	Weighed	Offsite in Ireland	Kiernan Sand and Gravel Ltd,WMP2007/22	Foxtown,Summerhill,Co. Meath,,,Ireland		
Within the Country	19 12 12	No	116.8	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R3	M	Weighed	Offsite in Ireland	Midland Waste Disposal,W0131-02	Clonmageddan,Proudstown, Navan,Co. Meath,Ireland		
Within the Country	19 12 12	No	4521.64	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R3	M	Weighed	Offsite in Ireland	Enrich Environmental Ltd,WMP2004/57	Newtown,Rathganley,Kilcock,Co. Meath,Ireland		
Within the Country	19 12 09	No	3782.14	minerals (for example sand, stones)	R5	M	Weighed	Offsite in Ireland	Arthurstown Landfill,W0004-03	Kill,,,Co. Kildare,,,Ireland		
Within the Country	19 12 09	No	847.36	minerals (for example sand, stones)	R5	M	Weighed	Offsite in Ireland	Knockharley Landfill,W0146-02	Knockharley ,Navan,Co. Meath,,,Ireland		

Within the Country	19 12 09	No	757.86	minerals (for example sand, stones)	R5	M	Weighed	Offsite in Ireland	KTK Landfill Ltd,W0081-02	Brownstown & Carnalway,Kilcullen,Co. Kildare,,,Ireland
Within the Country	19 12 09	No	26592.3	minerals (for example sand, stones)	R5	M	Weighed	Offsite in Ireland	Bord na Mona Drehid landfill,W0201-01	Carbury,,,Co. Kildare,,,Ireland
Within the Country	19 12 01	No	393.5	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Marwin Environmental Trading Ltd,N/A	The Rubicon Centre,CIT Campus,Bishopstown,Co. Cork,Ireland
To Other Countries	19 12 01	No	1072.94	paper and cardboard	R13	M	Weighed	Abroad	Peute Papierrecycling,N/A	Baanhoekweg 4,3313 LA Dordrecht,,,,Netherlands
To Other Countries	19 12 01	No	67.04	paper and cardboard	R13	M	Weighed	Abroad	Highlander International Recycling Ltd,N/A	1 Teign Grove,East Kilbride,,,G75 8UZ,United Kingdom
Within the Country	19 12 01	No	660.32	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Panda,W0263-01	Ballymount Road,Walkinstown,Dublin,12,Ireland
Within the Country	19 12 01	No	32.09	paper and cardboard	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling MDR,WFP-DC-10-0021-01	Unit 51 Henry Road,Parkwest Business Park,Dublin ,12,Ireland
Within the Country	19 12 02	No	282.63	ferrous metal	R4	M	Weighed	Offsite in Ireland	Cummins/ National Recycling ,WPR 002	Station Road,Clondalkin,Dublin,22,Ireland
Within the Country	19 12 02	No	2394.4	ferrous metal	R4	M	Weighed	Offsite in Ireland	Hammond Lane,WP 98107	Pigeon House Road,Ringsend,Dublin,4,Ireland
Within the Country	19 12 02	No	837.1	ferrous metal	R4	M	Weighed	Offsite in Ireland	Multimetals,WFP-WW-09-0014-01	Blessington,,,Co. Wicklow,,,Ireland
Within the Country	19 12 02	No	44.62	ferrous metal	R13	M	Weighed	Offsite in Ireland	Midland Waste Disposal,W0131-02	Clonmageddan,Proudstown, Navan,Co. Meath,Ireland
Within the Country	19 12 02	No	77.46	ferrous metal	R4	M	Weighed	Offsite in Ireland	Wilton Waste Recycling,0630B	Ballyjamesduff, ,Co. Cavan,,,Ireland
Within the Country	16 01 18	No	212.15	non-ferrous metal	R4	M	Weighed	Offsite in Ireland	Cummins/ National Recycling ,WPR 002	Station Road,Clondalkin,Dublin,22,Ireland
Within the Country	17 04 11	No	3.04	cables other than those mentioned in 17 04 10	R4	M	Weighed	Offsite in Ireland	Cummins/ National Recycling ,WPR 002	Station Road,Clondalkin,Dublin,22,Ireland
Within the Country	17 04 01	No	1.08	copper, bronze, brass	R4	M	Weighed	Offsite in Ireland	Cummins/ National Recycling ,WPR 002	Station Road,Clondalkin,Dublin,22,Ireland
Within the Country	20 01 40	No	150.54	metals	R4	M	Weighed	Offsite in Ireland	Multimetals,WFP-WW-09-0014-01	Blessington,,,Co. Wicklow,,,Ireland
To Other Countries	20 01 40	No	109.02	metals	R13	M	Weighed	Abroad	Marwin Environmental Trading Ltd,N/A	The Rubicon Centre,CIT Campus,Bishopstown,Co. Cork,Ireland
To Other Countries	20 01 40	No	23.92	metals	R13	M	Weighed	Abroad	Highlander International Recycling Ltd,N/A	1 Teign Grove,East Kilbride,,,G75 8UZ,United Kingdom
Within the Country	20 01 40	No	217.33	metals	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling MDR,WFP-DC-10-0021-01	Unit 51 Henry Road,Parkwest Business Park,Dublin ,12,Ireland
To Other Countries	20 01 40	No	43.38	metals	R13	M	Weighed	Abroad	WRC Recycling,N/A	Auchans Farm,Johnstone,Renfrewshire,PA6 7EE,United Kingdom
Within the Country	15 01 04	No	102.86	metallic packaging	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling MDR,WFP-DC-10-0021-01	Unit 51 Henry Road,Parkwest Business Park,Dublin ,12,Ireland
Within the Country	15 01 04	No	14.68	metallic packaging	R4	M	Weighed	Offsite in Ireland	Multimetals,WFP-WW-09-0014-01	Blessington,,,Co. Wicklow,,,Ireland
To Other Countries	15 01 04	No	18.7	metallic packaging	R13	M	Weighed	Abroad	WRC Recycling,N/A	Auchans Farm,Johnstone,Renfrewshire,PA6 7EE,United Kingdom
To Other Countries	20 01 39	No	23.34	plastics	R13	M	Weighed	Abroad	Peute Papierrecycling,N/A	Baanhoekweg 4,3313 LA Dordrecht,,,,Netherlands

Within the Country	20 01 39	No	31.54	plastics	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling MDR,WFP-DC-10-0021-01	Unit 51 Henry Road,Parkwest Business Park,Dublin ,12,Ireland
To Other Countries	20 01 39	No	48.24	plastics	R13	M	Weighed	Abroad	WRC Recycling,N/A	Auchans Farm,Johnstone,Renfrewshire,PA6 7EE,United Kingdom
To Other Countries	20 01 39	No	23.42	plastics	R13	M	Weighed	Abroad	AWS Eco Plastics Ltd,N/A	Unit 2 Britannia Business Park,Wallsend,Tyne & Wear,NE28 6HA,United Kingdom
Within the Country	20 01 39	No	82.9	plastics	R13	M	Weighed	Offsite in Ireland	Leinster Environmentals,WP 2003/24	Clermont Park,Haggardstown,Dundalk ,Co. Louth,Ireland
Within the Country	15 01 02	No	60.14	plastic packaging	R3	M	Weighed	Offsite in Ireland	Shabra Recycling Ltd,WFP-MN-08-0022-01	Killycard Industrial Estate,Bree,Castleblaney,Co. Monaghan,Ireland
To Other Countries	15 01 02	No	16.54	plastic packaging	R13	M	Weighed	Abroad	CWM,N/A	Denmark House,Kiln Farm,Milton Keynes,MK1 13DP,United Kingdom
Within the Country	15 01 02	No	0.32	plastic packaging	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling MDR,WFP-DC-10-0021-01	Unit 51 Henry Road,Parkwest Business Park,Dublin ,12,Ireland
Within the Country	17 02 03	No	4.15	plastic	R13	M	Weighed	Offsite in Ireland	Leinster Environmentals,WP 2003/24	Clermont Park,Haggardstown,Dundalk ,Co. Louth,Ireland
To Other Countries	17 02 03	No	24.22	plastic	R13	M	Weighed	Abroad	CWM,N/A	Denmark House,Kiln Farm,Milton Keynes,MK1 13DP,United Kingdom
Within the Country	17 02 03	No	8.66	plastic	R13	M	Weighed	Offsite in Ireland	Oxigen Environmental Ltd,W0205-01	Ballymount Industrial Estate,Clondalkin,Dublin,22,Ireland
Within the Country	17 02 03	No	97.48	plastic	R13	M	Weighed	Offsite in Ireland	(IPR) Panda Waste Services,WPR 021	Ballymount Road,Walkinstown,Dublin,12,Ireland
Within the Country	17 02 03	No	55.2	plastic	R3	M	Weighed	Offsite in Ireland	Polymer Recovery,WFP-LS-09-0007-01	Portarlington Industrial Estate,East Canal Road,Portarlington ,Co. Laois,Ireland
To Other Countries	20 01 01	No	100.22	paper and cardboard	R13	M	Weighed	Abroad	Highlander International Recycling Ltd,N/A	1 Teign Grove,East Kilbride,.,G75 8UZ,United Kingdom
Within the Country	20 01 01	No	1465.02	paper and cardboard	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling MDR,WFP-DC-10-0021-01	Unit 51 Henry Road,Parkwest Business Park,Dublin ,12,Ireland
Within the Country	20 01 01	No	13.34	paper and cardboard	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Confidential Shredding,WFP-DC-11-0023-01	Unit 6 S3B Henry Road,Parkwest Business Park,Dublin,22,Ireland
To Other Countries	20 01 01	No	654.12	paper and cardboard	R13	M	Weighed	Abroad	Regen Ltd,LN/10/50/50	Unit 7 Shephards Drive,Carbane Industrial Estate,Co. Down, .,United Kingdom
Within the Country	20 01 01	No	1598.7	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Dillon Waste and Recycling,WFP-KY-10-001	The Kerries,Tralee,Co. Kerry,.,Ireland
Within the Country	20 01 01	No	501.6	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Dublin City Council,W0238-01	Merrywell Industrial Estate,Ballymount,Dublin ,12,Ireland
Within the Country	20 01 01	No	16.88	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Midland Waste Disposal,W0131-02	Clonmageddan,Proudstown, Navan,Co. Meath,Ireland
Within the Country	20 01 01	No	284.34	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Panda,W0263-01	Ballymount Road,Walkinstown,Dublin,12,Ireland
Within the Country	17 09 04	No	152.25	mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Dunboyne,W0206-01	Dunboyne, .,Co. Meath,.,Ireland

Within the Country	16 02 11	Yes	4.86	discarded equipment containing chlorofluorocarbons, HCFC, HFC	R13	M	Weighed	Offsite in Ireland	Rehab Ltd,WFP-DS-10-0008-03	Unit 77 Broomhill Road,Tallaght,Dublin,24,Ireland
Within the Country	20 01 36	No	4.16	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R13	M	Weighed	Offsite in Ireland	Rehab Ltd,WFP-DS-10-0008-03	Unit 77 Broomhill Road,Tallaght,Dublin,24,Ireland
Within the Country	20 01 02	No	12.68	glass	R5	M	Weighed	Offsite in Ireland	Rehab Ltd,WFP-KE-08-0357-01	Unit 4 Osberstown industrial Park,Caragh Road,Naas,Co. Kildare,Ireland
Within the Country	20 01 08	No	19123.96	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Kilamainhamwood,W0195-01	Ballynalurgan,Nobber,Co. Meath, ,Ireland
Within the Country	20 01 08	No	124.92	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	Waddock Composting Ltd,WFP-CW-11-05-01	Kilamaster, , ,Co. Carlow, , ,Ireland
Within the Country	20 01 08	No	639.78	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	O' Toole Composting,WFP-CW-10-0003-01	Ballintrane,Fenagh,Co. Carlow, , ,Ireland
Within the Country	20 02 01	No	5.96	biodegradable waste	R3	M	Weighed	Offsite in Ireland	Enrich Environmental Ltd,WMP2004/57	Newtown,Rathganley,Kilcock,Co. Meath,Ireland
Within the Country	20 02 01	No	20.84	biodegradable waste	R3	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Kilamainhamwood,W0195-01	Ballynalurgan,Nobber,Co. Meath, , ,Ireland
Within the Country	16 05 05	No	7.4	gases in pressure containers other than those mentioned in 16 05 04	R13	M	Weighed	Offsite in Ireland	Calor Gas,N/A	Long Mile Road, ,Dublin,12,Ireland
Within the Country	20 01 27	Yes	0.74	paint, inks, adhesives and resins containing dangerous substances	D15	M	Weighed	Offsite in Ireland	Guardian Silver Lining,N/A	Unit 61 Cookstown Industrial Estate,Tallaght,Dublin,24,Ireland
Within the Country	17 08 02	No	26.08	gypsum-based construction materials other than those mentioned in 17 08 01	R3	M	Weighed	Offsite in Ireland	Gypsum Recycling,WMP238/2006 (WPT 95)	Cappagh Road,Finglas,Dublin,11,Ireland
Within the Country	19 12 07	No	11198.94	wood other than that mentioned in 19 12 06	R3	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Woodchipping,WFP-KE-10-0061-01	PDM,Kill,Co. Kildare, , ,Ireland
Within the Country	**16 02 11**	**Yes**	1.6	discarded equipment containing chlorofluorocarbons, HCFC, HFC	R13	M	Weighed	Offsite in Ireland	Dublin City Council WEEE Centre,N/A	Kylemore Park, , ,Dublin ,10,Ireland
Within the Country	16 01 03	No	35.73	end-of-life tyres	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling ELV,WFP-DC-09-0005-01	Kylemore Park West, , ,Dublin,10,Ireland
Within the Country	20 01 36	No	7.26	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R13	M	Weighed	Offsite in Ireland	Dublin City Council WEEE Centre,N/A	Kylemore Park, , ,Dublin ,10,Ireland

* Select a row by double-clicking the Description of Waste then click the delete button

Link to previous years waste data
Link to previous years waste summary data & percentage change