PADRAIG THORNTON WASTE DISPOSAL LTD

THORNTONS RECYCLING CENTRE

Waste Licence Reg. No W0044-02

Certification Europe Ltd
Environmental Management System
I.S. EN ISO 14001

Certification Europe Ltd
Quality Management System
I.S. EN ISO 9001:2000

Certification Europe Ltd
Occupational Health and Safety Management System
OHSAS 18001

ANNUAL ENVIRONMENTAL REPORT 2010

SUBMITTED JANUARY 2011

Prepared By:

David Duff - Environmental Manager

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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) and includes emission details and reporting for the final quarter (Quarter 4) October, November and December of 2010.

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 and licensee 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
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1.2 REPORTING PERIOD

The reporting period for this Annual Environment Report (AER) is 12 months between the 01/01/10 and the 31/12/10.

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
Building Number 1.

All dry recyclables are weighed into the facility at the weigh bridge on site, tipped in Building 1 and inspected for non-conforming waste. Waste is loaded into a vibrating hopper, which feeds via a conveyor belt into a three tier ballistic separator, for mechanical sorting.

Material passes through the three separate tiers of the ballistic separator which separates two dimensional from three dimensional materials. Two dimensional materials such as paper and cardboard are mechanically shaken and remain at the top of the separator

where they travel onto a conveyor and then into a picking station where non-recyclable materials are removed manually for landfill disposal. Contaminants, plastic films and plastic bottles are picked out and paper is then conveyed continuously to the recyclables baler.

Three dimensional materials such as cans and bottles fall to the back of the separator and are conveyed past magnets which remove all ferrous metals i.e. separating any steel cans. Tetrapak and plastic bottles are removed manually and an eddy current then separates aluminium from other plastics and residual waste which is conveyed to the end of the line for disposal. Recyclable materials such as aluminium, steel and plastic bottles are stored in cages, separately baled in the dry recyclables baler and sent for further processing to facilities approved by the EPA. The environmental manager ensures that all the loads are loaded correctly, all destination paperwork is updated and that all end destinations used by the company have approval from the Environmental Protection Agency (EPA). A full detailed register of all waste destinations is available for inspection on site.

The dry recycling mechanical segregation process in Building 1 was closed down on the 18th December 2010, and fully dismantled in early January 2011. The dry recycling process will be moved to larger facility in 2011 under a permit from the local authority. The only remaining plant in Building 1 is the baler and the in floor conveyor. This is currently being used to bale the clean and pre segregated cardboard from commercial customers and also to bale plastic films. The mixed dry recyclables are bulked in building 1 for onward transport to a temporary third party sorting facility until our new facility is fully commissioned. The area in Building 1 will be used for storage and for loading SRF into trailers for onward transport to the end user.

Process – Cardboard and Plastic Bales
Building Number – 1

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

Process - Household Municipal Waste
Building Number – 3

Household waste is deposited in Building 3. Waste is inspected on tipping and bulky material is removed by a Fuchs grab. Non-conforming waste which may be present is also removed and placed in the quarantine area for later disposal with an approved third party. Suitable domestic material is loaded onto the baler conveyor, baled into 2 tonnes bales and conveyed automatically into white box trailers which are transported to a licensed landfill in County Kildare for disposal or bulked in trailers and sent to a licensed landfill in County Kildare. The process of baling waste at Killeen road ceased on the 21st December 2010, as Arthurstown landfill closed. The baler was dissembled and removed

during the last week of December and the first week in January 2011. Since then, MMW waste is being bulked up in Building 3 and is consigned to landfill in ejector trailers. Thorntons recycling has forwarded plans to the EPA to develop a processing line which will enable Thontons to recycle metals and aluminium from the black bin municipal waste, to produce a suitable SRF material from the dry proportion of the black bin (oversize material) and then landfill the remaining residue material (undersize). This will further boast recycling rates at the facility and assist in further diversion from landfill.

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

Thorntons Recycling accepts and collects source segregated compostable waste from domestic and commercial customers. This material is tipped in Building 3 in a designated bay and is separated from normal household municipal waste by a dividing wall. Waste is inspected on tipping and bulky material is removed by a grab and any non-conforming waste is removed for quarantine disposal such as large black plastics bags etc. Suitable compostable waste is reloaded into artic trailers using a grab, 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

All skip waste is accepted at the facility as per the waste acceptance procedure and is weighed at our weigh bridge and recorded in 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.

The remaining materials then passes through the first stage of the process under an over band magnet. The over band magnet removes all 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 attracted to the magnet, 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 C & D 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 construction and demolition 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 shredder. This shredder was installed at the facility in August 2009. The material once shredded to <25 mm falls to a conveyor under the shredder and is conveyed to a static hopper which continuously loads the shredded Solid Recovered Fuel (SRF) into a closed artic trailer.

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 to the SRF shredder. 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 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 soil which is removed from the C & D process is sent to landfills 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 2010

3.1 WASTE HANDLED IN THORNTONS RECYCLING CENTRE

The quantities of waste received during the current and previous AER reporting periods for the past three years are summarised in *Table 1*

Table 1 Summary of total waste received in 2010 and previous 2 years

Year	Waste Tonnes in
2008	207,307
2009	195,960
2010	199,035

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 which contains procedures, including our waste acceptance procedure, is certified to ISO 14001; information in relation to same can be located at any of the Thorntons Recycling offices.

All waste destinations used by Thorntons Recycling Centre in 2010 have been approved by the Environmental Protection Agency. A register of all EPA agreed facilities for recovery/disposal of waste is maintained on site.

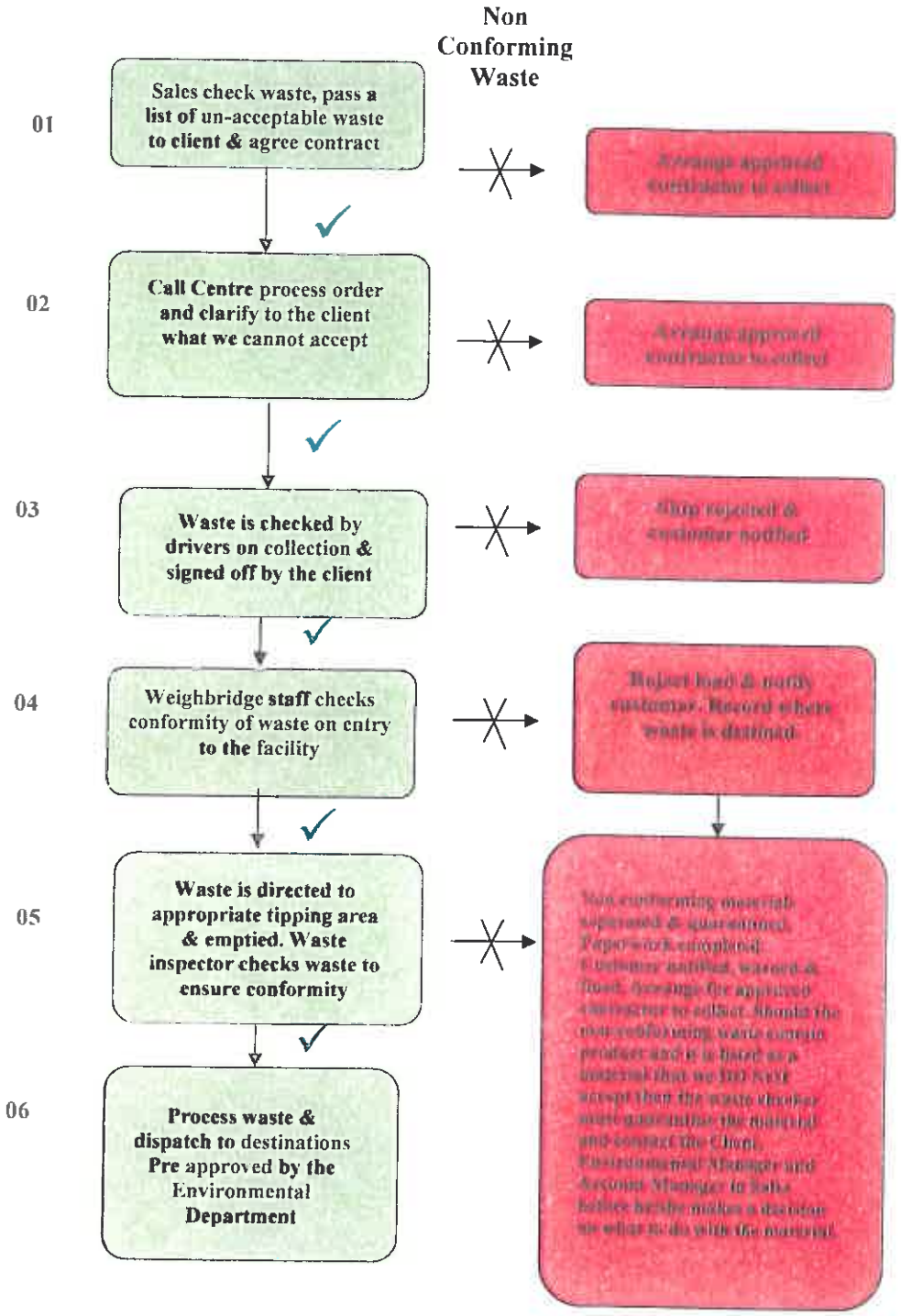
3.2 WASTE ACCEPTANCE

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

New staff employed by the company in 2010 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.


Non Conforming Waste
01
Sales check waste, pass a list of un-acceptable waste to client & agree contract
02
Call Centre process order and clarify to the client what we cannot accept
03
Waste is checked by drivers on collection & signed off by the client
04
Weighbridge staff checks conformity of waste on entry to the facility
05
Waste is directed to appropriate tipping area & emptied. Waste inspector checks waste to ensure conformity
06
Process waste & dispatch to destinations Pre approved by the Environmental Department

3.3 WASTE RECEIVED

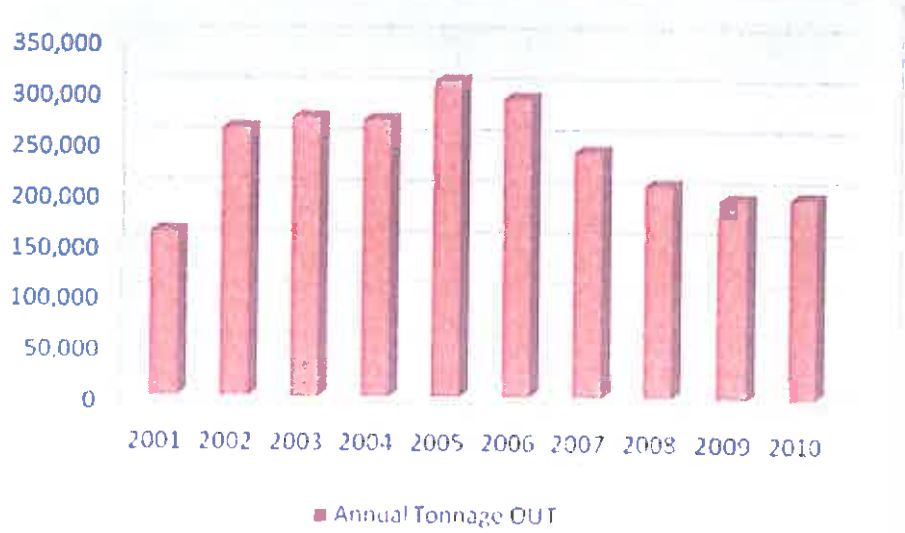
A total of 199,035.22 tonnes of waste was received at the facility in the reporting period of 2010. Details of which are contained in Appendix 2 of this report. Figure 1 illustrates the trend in waste received at the facility between the period 2001 and 2010.

Figure 1 Quantities of Waste received at the facility 2001-2010

3.4 WASTE CONSIGNED TO LANDFILL AND RECYCLING/RECOVERY FACILITIES

A total of 196,460.19 tonnes of waste was consigned from the facility in the reporting period of 2010. Details of which are contained in Appendix 3 of this report. Figure 2 illustrates the trend in waste consigned from the facility between the period 2001 and 2010.

Figure 2 Quantities of Waste consigned from the facility 2001-2010



The facility displayed another increase in the recycling rates for 2010. The overall recycling/recovery rate for the facility was 70.83%, which is the highest figure recorded for the facility since operations began. This is an increase of 16.65% 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 installation of the new SRF production line in 2009, which was in operation for the first time for the whole year. The facility in 2010 accepted less material for landfill and increased the intake of material for processing and recycling on site through the CID line all of which has contributed to diverting material away from landfill. Thorntons Recycling has being producing an SRF (Solid Recovered Fuel) from the residue of the skip waste. The fuel is made to a high quality so that it meets the specifications of the receiving facility, which is a cement kiln in Co. Meath. The cement kiln uses the SRF as a substitute for coal which is a high carbon producer when burned. The use of SRF from a residue waste has enabled the cement kiln to lower its carbon footprint by using a sustainable fuel and also reduce its reliance on fossil fuels as a raw material in the production of cement. The SRF is tested on a regular basis to ensure that it meets the acceptance criteria. The production of the SRF has helped Thorntons reduce the quantity of material which would otherwise have being destined for landfill. Following surveys carried out on the SRF, 30% was found to be 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 70.83% in 2010, 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 2010

The total quantity of waste recovered or recycled has increased steadily at the facility. PTWDL process, sort and segregate all skip waste at Thorntons Recycling Centre, Killeen Road, Dublin 10 and strive to improve process efficiencies on a continuous basis. In recent years due to new processes and efficient and effective control in operations at the facility we now process all dry skip waste which enters the site; the results have had dramatic increases on recycling rates. 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.

It is hoped that Thorntons Recycling Centre will continue to increase its recycling and recovery rates in 2011 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.
- Planning to start processing the residual black bin waste, to separate suitable SRF material, biodegradable material and suitable recyclables such as metals and aluminium from the material which currently is all destined for landfill. This activity will take place within the confines of Building 3 and is hoped to commence in 2011.

- 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 2010 expanded their domestic collection services to include South Dublin.
- Integrated waste management service offered that encourages clients to opt for different types of bins for different waste types. The company has also introduced a tankering service division (TTS Thorntons Tankering Services), confidential shredding service and composting / brown bin service 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 customers. In 2010 Thorntons Recycling invested in a second vehicle for source segregated compostable waste collections. This service assists commercial customers in complying with the new Waste Management (Food Regulations) 2009 which will have been enforced since July 2010.
- 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 (WP98116).
- Continued education of 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 was a finalist in 2009 and 2010.
- Thorntons Recycling has entered the domestic market in South Dublin County Council in 2010 and plants on continuing to increase our base in this area in 2011 by offering potential customers an efficient and effective three bin collection service.
- Thorntons Recycling are developing a new state of the art dry recycling facility which will produce a high quality of segregated recyclates and recover 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 landfilled. 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 is restricted to landfilling 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 2008, an estimated 2,091,709 tonnes of biodegradable municipal waste was generated in Ireland in 2008 of which 57% 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 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 in 2008 the "Cre Best Composting Facility Award" 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 19,471.70 tonnes of Green Waste and Brown Bin Waste for composting in 2010 which after any contamination was removed the remaining was bulked at the Killeen Road facility and sent for composting in Kilmainhamwood Compost, Waste Licence W0195-01. This is an increase of 39.7% on the previous year. Thorntons Recycling diverted approximately 22,663.20 tonnes in 2010 of biodegradable waste in the form of cardboard, paper, Tetrapak and wood. In total 37,508.63 tonnes of biodegradable waste have been diverted from landfill by the facility in 2010. This represents a facility diversion rate of 39.56% of organic waste from landfill and demonstrates Thorntons Recycling ability to assist in meeting the national target for 2013. With the proposed processing of municipal solid waste in 2011 to segregate recyclates, organic fines and SRF, Thorntons Recycling will be able to divert more waste from landfill.

We offer all our customers the opportunity to segregate all biodegradable waste at source and the option of a composting alternative to all our customers. Kilmainhamwood Compost (Waste License W0195-01) has proven to be very successful. The facility accepts non-hazardous biodegradable wastes (household and commercial waste for composting) and accepted 20,815.65 tonnes of biodegradable waste in 2010 which was successfully diverted from landfill by Thorntons Recycling. 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. Planning is currently with An Bord Planeala. If approval is granted by both the EPA and An Bord Planeala 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 and be able to accept all the compostable waste with is bulked at Killeen road.

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.

All dry recyclables are weighed into the facility at the weigh bridge on site, tipped in Building 1 and is inspected for non-conforming waste. Waste is loaded into a vibrating hopper, which feeds via a conveyor belt into a three tier ballistic separator, for mechanical sorting.

Material passes through the three separate tiers of the ballistic separator which separates two dimensional from three dimensional materials. Two dimensional materials such as paper and cardboard are mechanically shaken and remain at the top of the separator where they travel onto a conveyor and then into a picking station where non-recyclable materials are removed manually for landfill disposal. Contaminants, plastic films and plastic bottles are picked out and paper is then conveyed continuously to the recyclables baler.

Three dimensional materials such as cans and bottles fall to the back of the separator and are conveyed past magnets which remove all ferrous metals i.e. separating any steel cans. Tetrapak and plastic bottles are removed manually and an eddy current then separates aluminium from other plastics and residual waste which is conveyed to the end of the line for disposal. Recyclable materials such as aluminium, steel and plastic bottles are stored in cages, separately baled in the dry recyclables baler and sent for further processing to facilities approved by the EPA. The environmental manager ensures that all the loads are

loaded correctly, all destination paperwork is updated and all the end destinations used by the company have approval from the Environmental Protection Agency (EPA).

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 2008 to 2010 for materials recycled at the site;

Table 2 – Comparison on recyclable material consigned 2008-2010

Total Materials Consigned	2008 Tonnes	2009 Tonnes	2010 Tonnes
Cardboard Out	4,135	4,250	4,294
Metals Out Packaging (Aluminium and Steel)	373	534	228
Plastics Out (Bottles, Film and Hard)	2,654	2,032	1,308
Tetrapak	13	5.6	0
Mixed Papers	16,338	13,848	8,109
Wood Out	10,550	10,653	9,746
Mixed Metals Out (Bulky)	4,021	3,787	4,193

Packaging waste in general consigned from Thorntons Recycling Centre has decreased in 2010, due to the decrease in the incoming tonnage of co mingled collections.

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.

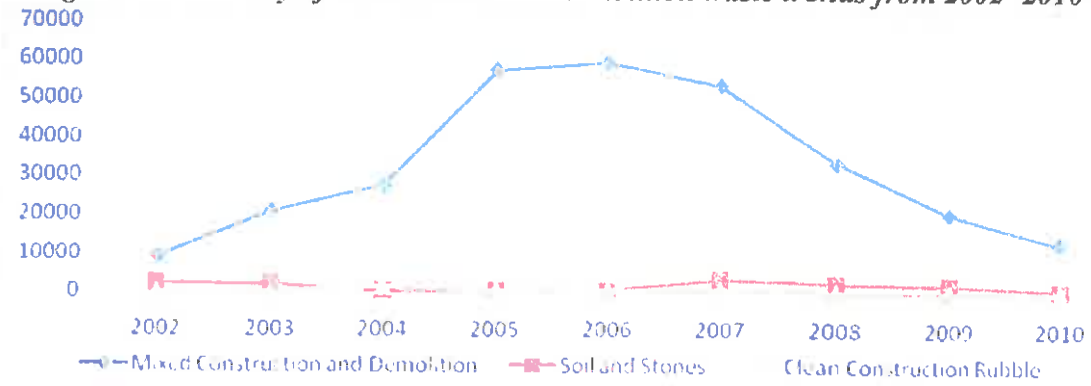
As stated in the National Waste Report 2008 published by the Environmental Protection Agency, Ireland had surpassed its 2005 target of 50%, in 2003 and the next target is for 60% by 2011, which was surpassed in 2007 when the national recovery rate was 63.6%. Thorntons recycling has played a significant part in the packaging recovery rate. During 2010 Thorntons Recycling carried out a Repak survey on the packaging content of the mixed paper bales, which are sold for recycling. Thorntons Recycling has also increased packaging diversion from landfill through the production of SRF material at the facility. A survey of the SRF carried out in 2009 found that 30% of the SRF is packaging waste.

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 to 57,501 in 2007 tonnes to 36,055 tonnes in 2008 to 22,799 tonnes in 2009 and a further decrease to 13,824 tonnes in 2010. This decrease in particular of construction and demolition waste can be attributed to the downturn in the economy and the slowdown in development projects nationally, which would have being a large part of the incoming material in 2004-2007.

Figure 4 – Recovery of construction and demolition waste trends from 2002- 2010



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, only 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 3 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 2010 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 on site for the 44.07 tonnes of tyres sent to the ELV facility in 2010 from Killeen road.

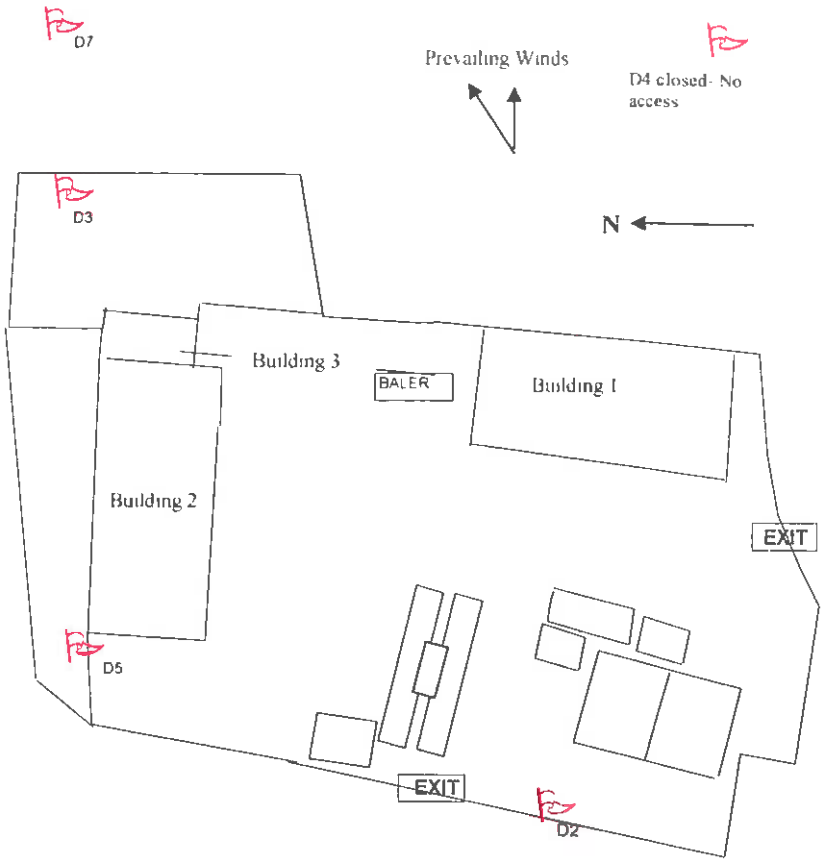
5 SUMMARY REPORT AND INTERPERTATIONS OF ENVIRONMENTAL MONITORING AND EMISSIONS DATA

In accordance with *Schedule D: Monitoring* of PTWDI. 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 2010. The following section details results obtained and interpretations of results for the year of 2010 including those for the last quarter of 2010. Due to the compilation of this report Quarter 4 monitoring reports have not been forwarded to the EPA and have been included in the main body of this report.

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. During the year monitoring location D4 was inaccessible due to the closure of the business where the monitoring point was located and the new owners has not given approval for monitoring to be carried out.

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, Nangor Road and Ballyfermot.

Table 3 Dust Results for 2010

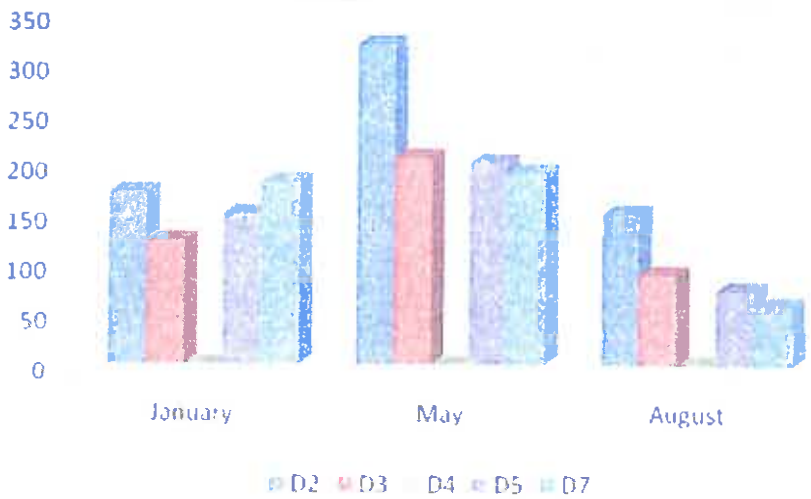
Monitoring Locations	Quarter 1 January	Quarter 2 May	Quarter 3 August	ELV
D2	171.5	321.5	150.7	350
D3	123.3	207.4	90.4	350
D4	n/a	n/a	n/a	350
D5	150.1	202.3	75.4	350
D7	182.2	191.9	60.3	350

The emission limit value for dust deposition is 350mg/m^2/day. During 2010 none of the dust emission levels exceeded the emission limits (Table 4). Monitoring dust at locations D2 and D5 has shown that the predominant dust source is from the roads which boarder the monitoring locations. Figure 7 shows the trends in dust deposition during the year and as expected dust deposition levels are highest during the drier months of May 2010.

Thorntons Recycling will aim to reduce dust deposition levels within our power to do so 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. In 2011 it is planned that dust curtains will be fixed to the exit of building 2 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. 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.

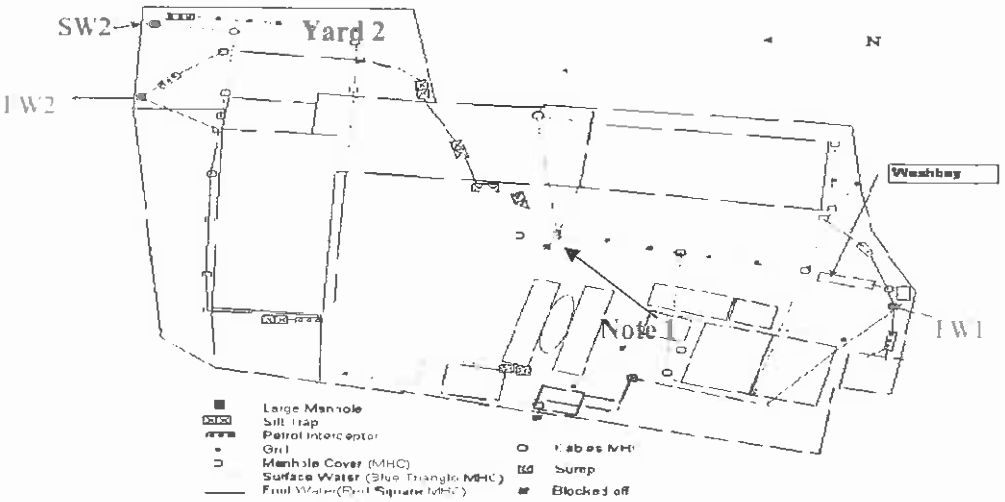
Figure 6 - Dust Monitoring Results per Monthly Sample 2010



5.2 EMISSION TO FOUL WATER AND SURFACE WATER

The monitoring points FW1 FW2 and SW1 are displayed in figure 8. 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 FW

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 (44-2/10/EPA/DD/13) Quarter 2 (44-2/10/EPA/DD/25) Quarter 3 (44-2/10/EPA/DD/34) have been forwarded to the Agency and this report will constitute Quarter 4 report for 2010. 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 2010. The results in 2010, shows that there was one exceedance in the limits at FW1 during the year this was reported to the EPA as per the licence conditions (W00-44-02/10/EPA/DD/36 and W00-44-02/10/EPA/DD/37). This exceedance was attributed to detergents being used to wash trailers and also the detergents being used in cleaning the staff facilities on site. The excess oil/grease was deemed to have come from the trailers being washed and the staff was informed to not wash grease off the trailers into the drains. Staff and management were informed of the lab results and the effect of using excess detergents and the follow up set of results six days after showed no exceedances. Full detailed quarterly reports have been forwarded to the EPA as detailed in section 5.2.1.

Table 4 Results of sampling from FW1 in 2010

Monitoring	Quarter 1 Thermore	Quarter 2 EPA Split	Quarter 2 Thermore	Quarter 3 EPA split	Quarter 3 Thermore	Quarter 4 EPA split	Quarter 4 Thermore	Units
Parameters	09.02.10	12.05.10	10.08.10	11.08.10	06.09.10	18.11.10	22.11.10	mg/L
BOD	134	263	75	-	278	585	201	4000
COD	272	522	211	115	735	1340	586	8000
Suspended Solids	76	268	46.7	36	364	163	204	1000
pH	8.17	8.21	8.07	8.16	8.1	7.96	7.24	6, - 10
Orthophosphate (asP)	2.88	1.09	1.83	1.94	2.94	1.66	0.0343	50
Surfactants/Detergents	0.255	0.273	0.698	0.76	0.644	145	0.675	50
Conductivity	0.661	0.98	0.527	0.503	0.95	0.754	0.557	n/a
Fats, oil, grease	21.2	7.73	42.2	7.77	29	468	12.3	100
Mineral Oil by GC	3.01	4.74	5.04	1.52	7.76	2.26	2.66	20

EMISSION TO SEWER (Foul 2) FW2

Samples were also taken from Foul Sewer 2 (FW2), results are in Table 5. The results highlighted in red display an exceedance in the emission limit value as set down in waste licence conditions. The exceedances occurred in quarter 2 and were reported to the EPA and the drainage division of DCC as per the licence condition. A follow up investigation was carried out for each exceedance and a full report was forwarded to the EPA.

During quarter 4 there was no exceedance noted on the emissions to sewer at FW2.

Table 5 Results of sampling from FW2 2010

Monitoring	Quarter 1 Thorntons	Quarter 1 EPA split	Quarter 1 EPA	Quarter 2 EPA Split	Quarter 2 EPA	Quarter 2 Thorntons	Quarter 3 Thorntons	Quarter 4 EPA split	Quarter 4 Thorntons	Units
Parameters	02 02 10	01 03 10	01 02 10	12 05 10	12 05 10	28 05 10	26 08 10	14 11 10	02 11 10	mg/l
BOD	2350	912	-	5830	5275	232	747	918	294	4000
COD	3830	1410	1498	8410	9095	441	1180	2130	782	8000
Suspended Solids	504	102	142	693	666	97.5	242	291	91	1000
pH	6.93	6.74	7.3	4.91	4.9	7.84	7.11	7.11	7.59	6. - 10
Orthophosphate (as P)	4.82	1.28	0.653	6.9	5.293	0.6	1.36	4.37	0.743	50
Surfactants/Detergents	0.659	1.83		1.79		0.586	0.746	0.356	47.4	50
Conductivity	2.88	1.6		3.99		0.903	1.31	1.83	0.446	
Fats, oil, grease	23.9	14.8	19	88.9	22	14.1	20.4	12	3.56	100
Mineral Oil by GC	5.14	0		4.76		4.48	11.1	2.91	1.73	20

5.2.2 SURFACE WATER (FW2)

The monitoring point for surface water is displayed in figure 8 and the results for each sample are in Table 6. PTWDL re-designed the drainage system on site in 2007 to ensure compliance with 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.

As discussed in previous reports to the EPA samples from surface water drains can only be taken when there is heavy rainfall, at any other time the drains are dry leaving samples virtually impossible to gather. During dry periods there is a build up of solids in and around the drains in the yard area, additionally dust builds up on roofs and gutters from up wind sources such as the cement plants. This sediment builds up and is then washed down the drains whenever there is a heavy shower which may attribute to high levels of suspended solids at the SW2 monitoring point during Quarter 3 (W00-44-02/10/EPA/DD/32 and W00-44-02/10/EPA/DD/33) and during Quarter 4 (W00-44-02/11/EPA/DD/01 and W00-44-02/11/EPA/DD/02). The elevated BOD results in Q3 were attributed to a delay in getting the samples to the lab for testing. This was a human error and going forward samples are to be delivered to the lab before 2:00pm on the same day of sampling.

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 2010

Monitoring Parameters	Quarter 1 24.03.10	Quarter 2 30.06.10	Quarter 3 27.09.10	[illegible]	[illegible]
BOD	2	6.82	53	26	25mg/l
COD	30.9	54.2	148	80.5	mg/l
Suspended Solids	3.5	9.5	64 5	43	35mg/l
pH	7.88	7.98	7.87	8	6, - 10
Orthophosphate (asP04)	0.03	0.061	0.016	0.03	mg/l
Surfactants/Detergents	0.156	0.205	0.157	0.496	mg/l
Conductivity	0.33	0.303	0.479	0.485	mS/cm
Fats, oil, grease	1	2.4	3.28	1	m
Mineral Oil by GC	0.0373	0.995	1.65	0.33	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 9th July 2010 and the night time survey was carried out between the 20th July and the 22nd July 2010. The results of the survey were submitted to the EPA on the 17th August 2010 (44-2/10/EPA/DD/29).

Table 7: Noise measurement results for Killeen road annual monitoring in 2010

Monitoring Locations	(9.07.10 & 20.07.10 & 22.07.10) LA eq (dB)	LA 10 (dB)	LA90(dB)	ELV (dB)
NP1	65.8	69.5	55.5	NA
NP2	71.3	76.3	65	NA
NP3	72.6	75.9	64.4	NA
NP4	68.6	69.5	54.9	NA
NP5	72.8	73.6	70.5	NA
NP6	73.7	78.2	62.8	NA
NP7	65.6	65.7	49.7	55
NP8	62.3	65.8	52.3	55
NP9	70.8	73.9	61.1	55
NP7 Night	54.2	54.5	54.1	45
NP8 Night	60.7	61	60.6	45
NP9 Night	66.6	67	66.6	45

The day time survey concluded that Thorntons Recycling was not responsible for the elevated noise levels at the noise sensitive receptors. 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 Thorntons related traffic, the odour system and the RJP (Regenerative Pulse Plant) at these locations but this was only audible when there was no traffic noise. Thorntons Recycling is not the main source of noise at these monitoring locations during the day time and as a result we believe that Thorntons is in compliance with noise emissions of the waste licence. The LA90 values for the day time monitoring shows that at NP7 & NP8 the noise level was below the ELV, which is a realistic assessment of the noise levels excluding the traffic, which generally occurs in the 10 percentile range.

The night time survey found that 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 not site activities from Thorntons Recycling. It was noted during the monitoring period that there was vehicular traffic at all locations. While Thorntons Recycling does contribute to the noise levels at N8 and N9, it should be noted that N8 and N9 are not in residential areas and they are not occupied during the

night time hours. These monitoring locations are within an industrial complex where there are other companies influencing the night time noise levels. The N7 night time monitoring recorded vehicular movements which attributed to the increased noise levels during the night time. The similarity between the LAeq and the LA90 values for the night time monitoring indicates that there was a persistent noise source with little fluctuation, such as traffic at a distance during the monitoring period.

Thorntons Recycling consider that although the noise levels at the noise sensitive locations are exceeded during day time and night time monitoring Thorntons Recycling are not the primary cause of the noise at the locations. Elevated noise readings can be attributed predominately 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 we believe that Thorntons Recycling is in compliance with its waste licence in relation to noise during 2010.

5.4 ODOUR

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

Two reports were forwarded to the EPA in 2010 for testing carried out on the 16th January 2010 (44-2/10/EPA/DD/13) and in 19th July 2010 (44-2/10/EPA/DD/27).

Reports issued to the EPA show that the system is working effectively, using Olfactometry testing and dispersion modeling the reports conclude that Odour from Thorntons Recycling Centre did not have any negative impacts on the surrounding environment on the days of testing during 2010.

6 RESOURCES AND ENERGY USAGE

The following section discusses resources such as Electricity, Fuel and Water used at Thorntons Recycling Centre in 2010.

6.1 ELECTRICITY

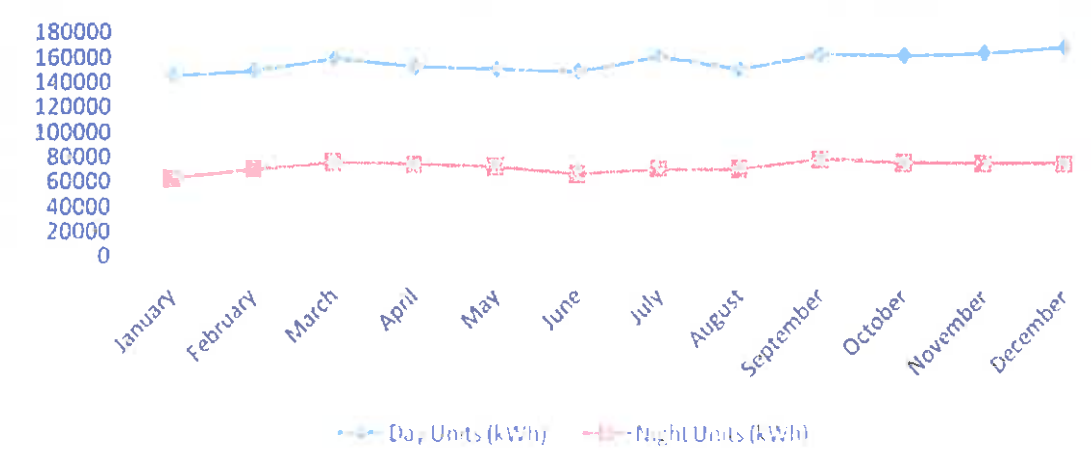
Electricity consumption in 2010 increased at the facility from a total of 2,275,188 kWh in 2009 to 2,760,613.88 (estimate for November and December used) in 2010. This increase in units used can be partly attributed to the increase in tonnage processed. The average usage of power per tonne produced is largely consistent throughout the year with only minor fluctuations. In early 2011 the facility will change over to full power being electrical which will be monitored by a separate tracking system and this will enable us to better determine energy usage trends and identify where energy saving measures can be made. During 2010, a monthly report on energy usage was forwarded to managers which

show the daily and nightly usage trends and also the usage per tonne processed for monthly comparisons.

An energy register of opportunities was created in 2010 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 2010 Thorntons Recycling began completing the opportunities from the register and has highlighted new areas to focus on in the first half of 2011. 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 2010. The graph shows a predictable patter with consistent energy being used month with a slight increase during the winter period, when more lights are required.

Figure 8 Day and Night Electricity usage by the month 2010



6.2 WATER

In 2010 the facility used 2,850m^3 of water compared to the 2,828 m^3 in 2009. This represents an increase of just 0.7% on the usage of 2009. Water is used on site to dampen down dust during dry period and to wash the floor and hardstanding 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

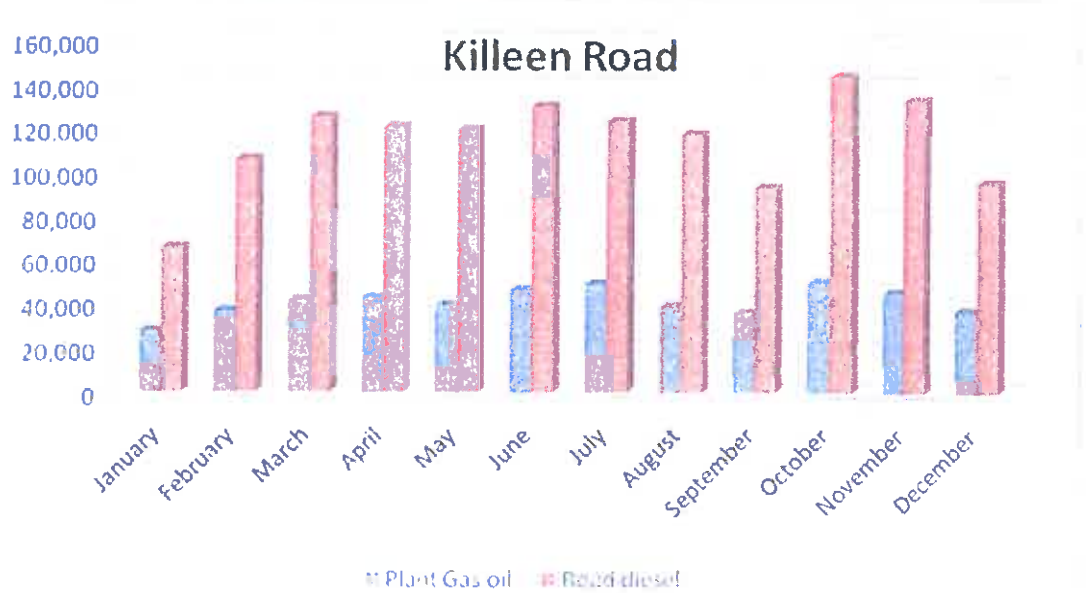
The main types of fuel used at Thorntons Recycling Centre include road diesel, plant diesel and machinery (Gas Oil) and heating oil (Kerosene). The breakdown of fuel

consumed is detailed in Figure 9 below. In 2010 a total of 493,297 litres of plant diesel and 1,378,430 litres of road diesel were consumed.

The consumption of road diesel decreased by 12,836 litres from 2009's consumption level. Plant diesel decreased by 182,363 litres from 2009's consumption. There was 1000 litres of kerosene purchased for the offices in 2010.

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 2010



7 DEVELOPMENT / INFRASTRUCTURAL WORKS

7.1 SITE DEVELOPMENTS 2010

The following summarises the main developments made at the facility in 2010;

Buildings and Waste Processing Equipment

- The installation of a raised conveyor in the CID building to allow material suitable of SRF production to be fed directly into the Linder shredder without been processed through the whole CID line. This allows for increased efficiency and energy usage within the processing line and enables a better quality of SRF to be produced at the site by blending suitable materials.

- The roof area of Building 2 was extended from the timber picking line to join the building cladding of where the skip waste is tipped. This increased roofed area assists in litter prevention, dust mitigation and also prevents rain blowing into the shed and processing lines. Thornton's recycling aim to erect dust curtains on the exit in early 2011 for dust.
- The mixed municipal waste baler was removed from Building 3 in late December, as the outlet for baled MMW closed i.e. Arthurstown landfill in County Kildare.
- The dry recycling line was decommissioned at the end of December 2010 to make way for planned new infrastructure in 2011.

Training

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

ISO

- Thorntons Recycling Centre passed a successful surveillance audit which was carried out by Certification Europe in 2010 to maintain standards for ISO 14001 Environmental, ISO 9001 Quality and OHSAS 18001 Health and Safety.

7.2 PROPOSED DEVELOPMENTS IN 2011

A number of developments are proposed for the forthcoming year of 2011. All developments are carried out with the intention of reducing environmental impacts of the facility and increasing waste processing efficiency at Thorntons Recycling Centre. Thornton's Recycling's 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 that dust curtains will be put on the new roofed area of the CID line. This will reduce the potential for any nuisances such as litter and dust to escape from the building.
- It is proposed that the MMW in building 3 will be processed to remove material suitable for SRF production and divert further waste from landfill. Letters detailing the process has being forwarded to the EPA during 2010 (Ref W0044-02/EPA/DD/04 and W0044-04/EPA/DD/12). The process will enable for metals and aluminium to be recycled form the black bin, for organic fines to be separated and for the light paper and plastic fraction to be used to produce an SRF material.
- 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 2010

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 permitted 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 state of the art 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 as required over a daily double shift, which enables plant which is required during the day to operate at full capacity and then have necessary maintenance carried out at night time.

8 SCHEDULE OF ENVIRONMENTAL OBJECTIVES AND TARGETS FOR 2011 AND PROGRESS REPORT FOR 2010

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 Agency 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 2010 is contained within Appendix 6 of this report. The schedule of environmental objectives and targets for 2011 has being included but may be amended and finalised after the management review in March of 2011. This schedule will be available for the EPA to inspect during any of their site audits in 2011 at any of our facilities.

9 SUMMARY OF PROCEDURES DEVELOPED BY THE LICENSEE IN 2010

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 2010 the system was continuously developed and improved. Two surveillance visits were carried out by Certification Europe in 2010 which the company were 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 Fehily Timoney and Company, environmental consultants to complete testing on the main diesel bund and the C & I bund. The C & I bund passed testing on the 23rd August 2007. This bund is due to be decommissioned in early February 2011 as the generator in this bund will no longer be in use as Thorntons Recycling will be changing all plant over to electrical power. The bund will remain in place as is a concrete structure and will be tested if in use at the same time as the main diesel bund on site. The main diesel bund passed its test on the 13th February 2008 and is not due to be re tested until the 13th February 2011. As per Condition 3.11.6 of waste licence these bunds are tested every three years. From 2011 onward the scheduling of the two bunds will take place at the same time for increased efficiency.

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.

11 SUMMARY OF INCIDENTS AND COMPLAINTS

11.1 INCIDENTS

The following table summarises incidents which occurred at the facility in 2010. These were reported to the Agency and actions were put into place to resolve the issues;

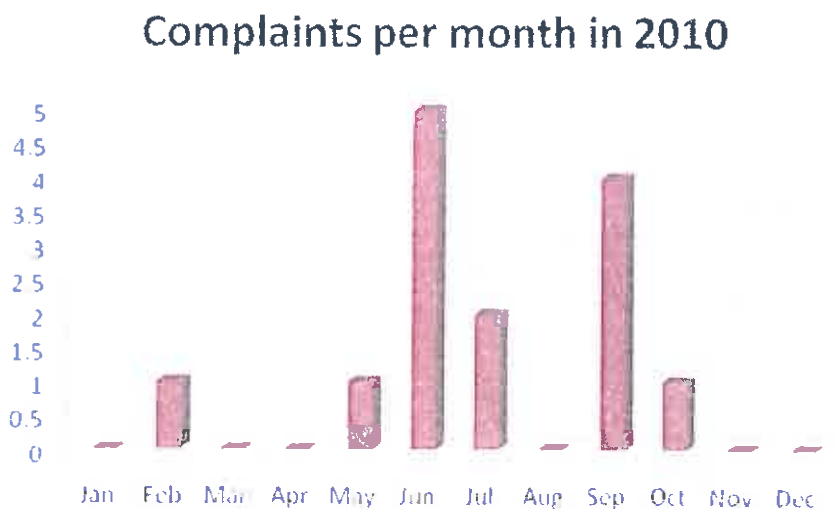
Table 8 Incidents 2010

Number	Incident Description	Incident Reported	Action
1	Exceedance on FW 2 in Q2	Fax to the EPA on the 27.05.10 (44-2/10/EPA/DD/18)	Report to the EPA (44-2/10/EPA/DD/19)
2	Exceedance on SW in Q3	Fax to the EPA on the 08.10.10 (44-2/10/EPA/DD/32)	Report to the EPA (44-2/10/EPA/DD/33)
3	Exceedance on FW1 in Q4	Fax to the EPA on the 03.12.10 (44-2/10/EPA/DD/36)	Report to the EPA (44-2/10/EPA/DD/37)
4	Exceedance on SW in Q4	Fax to the EPA on the 10.01.11 (44-2/11/EPA/DD/01)	Report to the EPA (44-2/11/EPA/DD/02)

11.2 COMPLAINTS

Complaints were reported either directly to the EPA or to Thorntons Recycling Centre during 2010. Figure 10 shows the breakdown of complaints by the month in 2010. There were a total of 14 complaints received during 2010. This is a reduction of 44% on the reporting period of 2009 and is the lowest number of complaints in a single reporting period for the facility.

Figure 10 Break down of all complaints 2010 by month



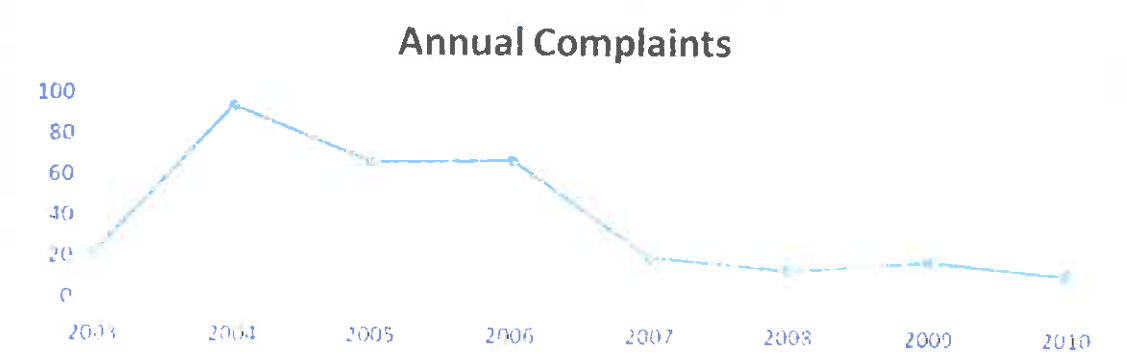
Analysis of the complaints during 2010, shows that 13 complaints were received in relation to odour and 1 was in relation to vermin. Four of the complaints although received and investigated by Thorntons Recycling were not in any way attributed to the site as the complainants detailed that the smell they detected was of burning rubbish, on

two occasions and the other two was for vermin and odour not related to the site. These complaints cannot be attributed to the operation of the Killeen road facility, but they are included in the above reported figures as the complaint was made to the site.

PTWDL have worked very closely with the EPA and local residents over the past six 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 2010. As you can see 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 2010 which included a complete change of activated carbon in the odour abatement system on the 26th June 2010. This was purposely changed ahead of schedule to ensure that there was maximum clean un-used carbon available for the warmer summer months.

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

Figure 11 Complaint trends from 2004- 2010



Thorntons Recycling takes every complaint seriously and is committed to resolving all complaints to the facility. We feel that in 2010 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 2011.

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 superior 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 at all times and it is used 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 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 fully contained buildings which assist 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 curtains 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. 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 2010 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. All 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. However during 2010 an additional pest control was carried out to eradicate pigeons at the 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 2010. During 2010, new fly control units were erected in the dry recycling building and staff was informed on the most effective measures for reducing fly numbers. Both these measures combined helped ensure that fly numbers were controlled at a minimum and that no fogging was necessary.

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.

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 2009.

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 2010. 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 2010. The environmental team have been actively involved in financing a number of local projects and carried out recycling workshops in schools, hospitals and Industrial and commercial businesses in 2010.

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 call centre agents in relation to what waste types we can accept at the facility.

Thorntons Recycling ran an "Ask the Expert" day, where by John Gormley, Minister of the Environment was present to give a talk on "What the new food regulations means for business" to staff and major commercial customers of Thorntons Recycling. Gary Brady MD of Thorntons Recycling gave a talk on "What happens to your waste now and in the future and how Solid Recover Fuel and Organic Waste Technologies are diverting waste from landfill". Alan Gallagher, Operations manager of Croke Park Stadium, gave a talk on "The benefits of partnership with Thorntons Recycling top deliver green awareness initiative and a more sustainable stadium". On the day there were live presentations and demonstrations of ELV cars being crushed, shredding of confidential paper waste, tankers and drain CCTV surveys and the company food waste collection lorry. Expert staff in the various departments of Thorntons also had stands with information for customers and were present to answer any queries in relation to their business.

Thorntons Recycling Centre has also upgraded its website so customers can access information such as waste collection permit numbers and waste licences etc.. The company also launched a new on line skip ordering service skip service www.skip.ie

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 IMS and are used throughout the company.

MANAGEMENT STRUCTURE

Below details the current management structure relating to the Killeen Road site.

Paul Thornton
Operations Director

Ted Moran
Operations Manager

Mercedes Kavanagh
Group Environmental Manager

Yard Staff

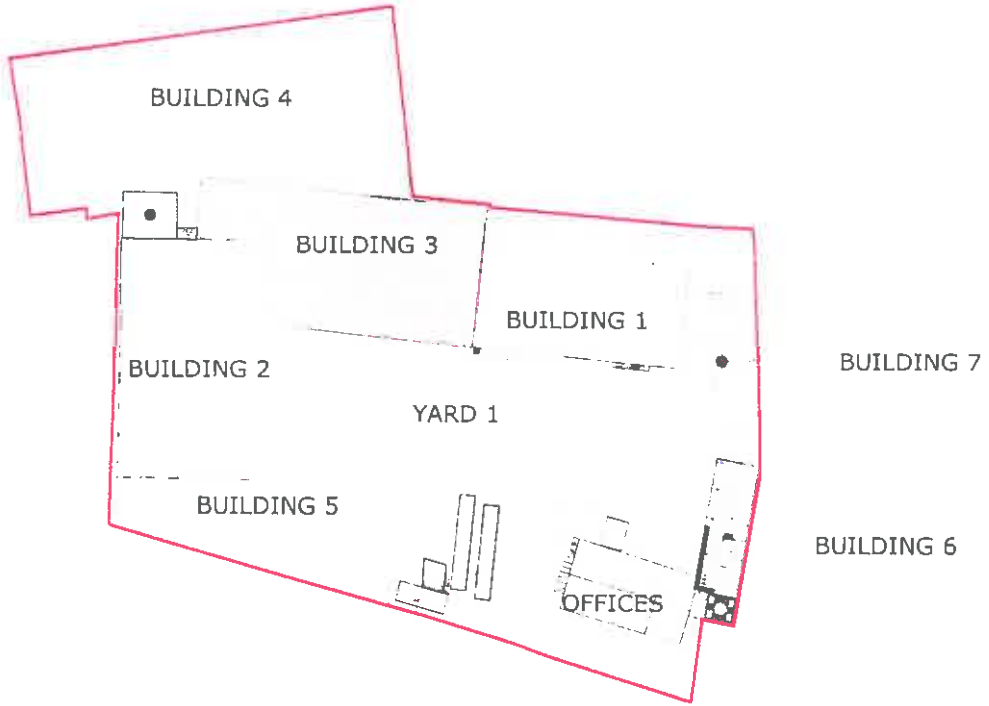
David Duff
Environmental Manager

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 were calibrated on the 15th July 2008 and are checked during daily checks at the facility. Both are below the max permissible annual discharge for the reporting period. Both meters are scheduled for calibration in early 2011. Thorntons Recycling Tankering Services are used for all on site maintenance and can be called in the event of an emergency etc. Approximately 114,488 litres of foul water from drain maintenance was removed by tankers from the facility in 2010. 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 2
BUILDING 7
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	Average per Month
20 03 01	OC MMW Baling SITE 2 and SITE 8	845.02	830.20	550.92	902.66	602.04	543.84	1773.26	549.76	510.90	532.76	568.50	1498.97	9708.83	882.62
20 03 01	KCC MMW Baling SITE 4				174.60									174.60	15.87
20 03 01	KCSH MMW Baling SITE 6	1656.92	1581.04	1668.52	1918.92	75.46								7185.86	653.26
20 03 01	Private MMW For Baling/Landfill/ Rounds	3834.60	5097.68	5591.46	4370.83	4298.32	5292.84	4291.78	3598.49	5293.27	4088.65	3958.20	4136.74	53853.06	4895.73
20 03 01	MMW (CID)	3803.81	3755.14	4174.53	4631.87	5636.13	6253.08	7963.61	7893.20	7400.82	6125.04	5717.52	3815.73	66971.08	6088.28
20 03 07	Bulky MMW	86.28	83.60	63.88	22.56	15.78		10.56	8.74	6.86		1.40		293.70	26.70
20 03 02	Market waste						10.90							10.90	0.99
17 05 04	Clean Construction Rubble						13.56						139.64	153.20	13.93
17 09 04	Mixed C&D Waste	1177.02	1184.95	791.52	1545.09	1060.34	1309.02	420.70	1695.74	1501.24	1168.24	512.80	487.22	12853.68	1168.52
17 05 04	Soil and Stones	155.98	18.80	115.34	25.82	34.50	5.66	55.72	51.98	165.40	114.08	73.84		817.12	74.28
02 07 01	Bakers Waste	56.46	58.74	54.80	68.28	73.86	64.96	69.18	58.14	68.82	71.00	44.70	77.84	763.66	69.42
18 01 04	Non Infectious Healthcare Waste	518.62	502.38	527.70	585.10	554.46	582.67	490.25	644.38	698.68	650.28	730.82	674.65	7159.31	650.85
02 01 99	Tobacco	3.22	16.72		202.86	9.42		2.46	59.94	1.34				290.06	26.37
20 01 08	Unsuitable food waste	35.80	4.88		10.52	8.20	29.70	9.12	22.32	8.42	30.20	1.64	10.90	171.66	15.61
20 01 29	Unsuitable Alcohol and Liquid for Destruction			10 90		5.04							50.94	66.88	6.08
20 01 01	Mixed Dry Recyclables	1229.02	1214 83	1278.61	1177.43	899.88	977.39	1015.59	860.78	1188.54	1187.53	1161.61	1049.08	13159.27	1196 30
15 01 04	Metallic Packaging Aluminium	0.78		0.46		0.46			0 66			1.20	0.70	4 26	0 39
20 01 36	WEEE Recycling		0.73		5.40	3.14	1.08	0 81	0.90					12.06	1 10
15 01 01	Cardboard	291.18	235.80	254 36	226.77	212.44	243.54	212.21	272.32	265.74	259 13	296.10	224.78	2994 37	272 22
20 01 01	Paper	35.88	17.04	29.60	21.52	18.00	21.50	24 28	29.14	27.04	17.36	25.54	25.06	287.28	26 12
20 01 40	Non Ferrous Mixed Metals	2.10		5.06	2.28	2.52	3.20	1.02				47.58		63.76	5 80
20 01 40	Ferrous Mixed Metals	23.16	13.76	5.92	8 94	16.74	36.38	8 58	12.48	14.90	8.54	7.90	14.96	171.88	15 63
15 01 03	Wood Packaging	109.56	147 16	155 44	116.72	62.32	124.64	94 58	108.18	108.04	104 84	114.28	82.34	1306.10	118 74
19 12 07	Processed Wood e.g. chipped	7.34				7.02		1 28	5.28	3.08	1.76	5.78	1.76	33.10	3 01
17 02 01	C & D Waste Wood	31.40	42.68	40.40	40.68	24.51	10.56	5.92	6.60	2.14	0 84			207.76	18 89
03 01 05	Wood Waste Manufacturing	7.68	6 64	7.68	0.74	3.16	9.18	3 72		14.94	3.86	3.78		60.78	5 53
15 01 02	Mixed Plastic Bottles	3.98	3.10	3.78	3.68	2.90	4.50		14.92	1.62	2.10	1.54	2.62	44.94	4 09
20 01 39	Mixed Plastic Film	69.20	26.46	62.48	28.84	26.26	43.70	53.32	26.46	58.14	27.72	43.70	23.42	493.70	44 88
17 02 03	Mixed Hard Plastics	0.74	0.86	8.46	0.26		5.44		1.94	0.46	7.35	10.84		37.09	3 37
20 01 02	Glass	2.28		1.70	1.96	0.98	0.44	3.76	4.78	4.98		2.52	3.82	26.92	2 45
20 01 08	Brown Bin/ Seperately collected Food Run	1427.68	1203.60	1380.12	1930.98	1945.08	1975.84	1542.54	1863.60	1767.36	1585.10	1534.62	1024,73	19060 93	1734 63
20 02 01	Green Waste	146.75	9.92	12.24	22.72	7.84	20.72	66.46	40 42	6.82	16.44	32.08	11.56	390.77	35 52
20 01 11	Textiles / Clothes	15.66		16.00	1.02	1.88	21.38	17.22	26.44	4.66	1.68	27.00	5.42	140.30	12 75
16 01 03	ELV Tyres								1.32			0.14		1.46	0 13
16 01 04	Products for Destruction - In organic	0.64		0.34	0.78	1.34		0.02				1.58		4.70	0 43
17 06 05	Gypsum Products/Plasterboard		5.14		5.42						14.77	11.86	1.96	40.19	3 65
	TOTAL	15378.10	16052.80	17095.22	17856.49	15612 04	17606.74	18138.17	17865.89	19114.57	15939.39	14939.07	13338.74	199035.22	18094 11

Appendix 3

EWC Code	Materials Consigned	Jan	Feb	Mar	Apr	May	June	July	August	Sept	October	Nov	Dec	Total Year To Date
20 01 01	MMW to A	3499.92	2269.10	2776.34	1991.78	1389.00	602.90	1825.24	633.52	515.00	523.10	693.04	1365.52	17014.44
20 03 04	MMW to B						23.30							23.30
20 03 01	MMW to C	3872.39	4067.60	3363.46	3615.87	2002.20	4636.00	2936.12	3668.62	3703.80	2392.34	2619.02	3385.56	40272.60
19 12 10	SRF to A	186.96	1122.96	1386.04	1499.04	1630.84	1582.36	1757.22	1457.20	1640.22	1393.14	1799.90	758.54	16412.47
19 12 10	SRF to B	128.16					33.82							161.98
17 01 07	Stone for Sale	544.24	424.28	677.49	1547.24	545.42	896.54	599.42	819.82	2509.60	1259.64	709.30	256.98	11189.37
17 01 07	Stone to A					20.18	20.74							40.92
17 01 07	Stone to B	549.86	867.46	732.80	992.78	776.52	863.56	862.20	759.38	962.98	603.76	512.36	453.22	8736.92
17 01 07	Stone to C			45.16		649.36	332.44		842.10	241.46	2226.16	1914.42	1836.60	8087.70
17 01 07	Oversize stone to D	24.76	95.64	114.56	32.34		16.38							283.88
19 12 09	Trommel fines to A	1311.60	2351.52	3393.66	3285.16	2906.68	3602.08	5181.42	3667.42	3550.12	3793.76	3512.78	2138.14	38897.22
19 12 09	Trommel Fines to B		60.64		17.24					72.52		24.18		174.58
19 12 09	Trommel Fines to C	1291.46	832.92	865.84	754.32	1481.72	795.66	776.40	861.24	1771.22	902.35	772.56	695.06	11753.81
15 01 01	Cardboard to A			80.60		111.14	48.62	94.38	178.48	116.28	176.46	95.32	88.34	1031.62
15 01 01	Cardboard to B	247.60	227.96	285.15	285.78	172.40	270.62	156.60	203.16	89.36	192.56	160.52	91.40	2373.13
15 01 01	Cardboard to C		63.66											63.66
15 01 01	Cardboard to D	112.14			85.54	21.44		87.62		95.48		67.14		469.36
15 01 01	Cardboard to E									122.46		119.28	114.26	356.40
19 12 02	Ferrous Mixed Metals to A	37.04	20.16	0.56	16.30	11.96	22.98	2.71	30.62	3.12	2.81		9.26	157.53
19 12 02	Ferrous Mixed Metals to B	76.08		208.80	153.82	226.32				25.16		23.20	70.18	783.56
19 12 02	Ferrous Mixed Metals C							165.00	89.10					254.10
19 12 02	Ferrous Mixed Metals to D	134.04	211.02	75.10	128.42	57.68	379.00	237.75	184.50	399.73	306.97	348.74	67.94	2530.94
19 12 02	Ferrous Mixed Metals to E	17.92												17.92
19 12 03	Non-ferrous Mixed Metals to A	17.32	27.94	50.68	51.21	48.30	91.68	61.86	26.80	25.48	19.12	9.90	8.96	439.25
17 04 01	Metal, Copper, Bronze to A				0.84									0.84
17 04 11	Metal cabling to A		0.50		0.46					2.50	3.83	1.33	0.56	9.26
15 01 04	Metallic Packaging Tin to A						23.92			24.80			23.80	72.52
15 01 04	Metallic Packaging Tin to B	24.92		24.18	24.52							24.74		98.36
15 01 04	Metallic Packaging Aluminium to A		19.24						18.84				18.86	56.96
20 01 39	Mixed Plastics Film High Grade to A									24.22				24.22
20 01 39	Mixed Plastics Film High Grade to B						23.46	22.82		23.58	24.84		23.68	118.18
20 01 39	Mixed Plastics Film High Grade to C	45.48				22.40								67.88
20 01 39	Mixed Plastics Film High Grade to D											24.48		24.48
20 01 39	Mixed Plastics High Grade Film to E		20.96	20.48	44.86						24.78			111.08
20 01 39	Mixed Plastics Film Low Grade to A	1.60		21.80	24.18			21.66			35.72		12.16	107.34

20 01 39	Mixed Plastics Film Low Grade to B		23.34				24.14							47.48
20 01 39	Mixed Plastics Film Low Grade to C							24.22		25.00		24.54	24.18	97.94
15 01 02	Plastic Bottles to A	22.56		37.78										60.44
15 01 02	Plastic Bottles to B	36.54		18.00	63.06	19.00				21.96	20.20			178.76
15 01 02	Plastic Bottles to C							21.14		20.82	19.80	18.76		79.92
15 01 02	Plastic Bottles to D			22.26										22.26
15 01 02	Plastic Bottles to E				16.32	20.32	19.24				19.12	21.78		96.88
15 01 02	Plastic Bottles to F								37.78					37.78
15 01 02	Plastic Bottles to G	19.12	39.32				39.16	19.26	19.22	20.88			20.22	177.22
17 02 03	Hard Plastic to A						2.14	5.66	5.88	5.74				18.92
17 02 03	Hard Plastic to B										12.26	19.60	4.00	35.86
20 01 01	Paper to A	617.36	597.47	563.62	492.95	420.92	492.36	497.44	496.28	595.46	690.24	623.06	494.62	6572.70
20 01 01	Paper to B		123.10	173.40	171.12	172.82	126.32	124.00	22.72	176.78				1141.16
20 01 01	Paper to C	248.18			122.38					24.56				395.12
20 03 01	Mixed Dry Recyclables to A												203.62	203.62
20 03 01	Mixed Dry Recyclables to B												174.94	174.94
20 03 01	Mixed Dry Recycables to C		106.80	13.33										120.13
16 02 117	ELV Fridges to A		1.68			0.42		0.99	1.84	0.76	0.89		1.60	8.18
16 01 03	ELV Tyres to A	0.62	3.82	1.70	1.32	2.62	1.46	0.83	8.18	8.00	8.48	7.02	2.22	44.07
20 01 36	WEEE SDA Mixed to A			0.40	0.42	0.60	1.82	1.21	1.86	3.52	2.40	2.78	0.20	15.57
20 01 36	WEEE SDA mixed to B							1.87						1.87
20 10 08	Compostable waste to A	1145.56	968.30	1042.36	1483.50	1466.42	1671.16	1382.43	1506.86	1356.52	1265.76	1136.82	439.74	14875.43
20 02 01	Trees to PDM to A	15.28												15.28
16 05 05	Gas Cylinders to A				0.80	0.66		1.22		0.78		1.02		4.46
17 05 03	Contaminated soil and stones to A									3.36				3.36
16 06 01	Batteries to A					0.84								0.84
17 02 02	Gypsum Products/Plasterboard to A		2.94	2.64	5.00	1.32	2.52	6.20		4.46		39.02		64.10
19 12 07	Processed Wood to A	766.76	890.52	836.71	701.92	820.24	1011.84	967.55	784.58	908.90	678.22	802.46	356.08	9746.08
	TOTAL	14095.41	15461.27	16853.94	17578.39	15309.11	17638.38	17859.58	16655.30	19291.93	16789.33	15727.17	13202.38	196460.19

Appendix 4

THORNTONS RECYCLING CENTRE
PLANT CAPACITY REPORT JANUARY 2011

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 2011						
Area	**Details**	**Machine**	**Capacity (tonnes per day)**	**Spare**	**Spare Capacity (tonnes per day)**	**Emergency Spare Parts In Store**
Waste Handling	Handling Skip Waste (B2)	Fuchs 1	1500	Fuchs 6 (PDM)	1500	Yes
Waste Handling	Loading Trailers Oversize (B2)	Fuchs 2	1500	Fuchs 7 (Dunboyne)	1500	Yes
Waste Handling	Loading Baler (B3)	Fuchs 3	1500	CAT Fuchs – Spare between sites	1200	Yes
Waste Handling	Unloading trailers in the yard	Fork lift 1 (5 Tonne)	1000	Forklift 3 WEEE centre	1000	Yes
Waste Handling	Moving Cages at the CID line	Fork lift 2 (7 Tonne)	1000	Forklift 4 ELV centre	1000	Yes
Waste Handling	Forklift 4 - Clamps - loading trailers	Forklift with clamps (3 tonne)	1000			
Waste Handling	Loading trailers of recyclables and mainteance work	Teleporter 1	1000	Shovel 2 - JCB loading shovel	2000	Yes
Waste Handling	Teleporter 2 Dry Recyclables-loading the ballistic separator	Teleporter 2	1000	Shovel 3 & 4 Cat (PDM x 1,	4000	Yes
Waste Handling	Moving waste in waste reception areas at Killeen Road	Shovel 6 - Volvo L120	2000	Shovel 5 & 1 L90e (Dunboyne & Kilmainhamwood)	2000	Yes
Waste Handling	Moving full and empty waste trailers	Shunter 1	1200 (* Based on 100 tonnes per hour for 12 hours)	Shunter 2	1200 (* Based on 100 tonnes per hour for 12 hours)	Yes
			12700		**15400**	

Table 2 Current Capacity of Waste Processing

THORNTONS RECYCLING CENTRE CURRENT DAILY PROCESSING CAPACITY 2011						
Area	**Details**	**Machine**	**Capacity (tonnes per day) Based on 12 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 (12 hr day)	C.I.D line	720	Diversion of waste to another facility or work a 24 hours shift	Yes	Yes Motors, Belts and rollers
Processing	SRF Shredder(11 tonne / hour x 12 hours)	C.I.D line	132	No shredding, load material into artic trailer and re shred when operational	N/A	Yes, set of knives, set of drive belts and two stator bars
Processing	Recyclable baler (30 tonnes/hr x 12 hours)	Baler 2	360	Baler 1	Yes	Yes Motors, Belts and rollers
			1212			

Table 3 Current Capacity of Waste

THORNTONS RECYCLING CENTRE CURRENT TRANSPORT CAPACITY 2011						
Area	**Details**	**Machine**	**Capacity (tonnes per day)**	**Spare**	**Spare Capacity**	**Emergency Spare Parts In Store**
Transport	Moving waste to landfill - Loose Waste	10 Open Brown Trailers	(5 driver*4 lds * 20t per ld) **320**	Spare Brown Trailers x 2	Yes	Yes
Transport	Moving SRF to outlet	3 Closed trailers	(1 driver*4ld 24t per ld) **96**	Spare trailerX1	Yes	Yes
Transport	Moving Compostable waste	2 sealed trailers	(1 driver*3lds 22t per day) **66**	N/A	N/A	N/A
Transport	Moving Wood to PDM	Open top Bulkers	(1 drivers*3 lds * 20t per ld) **60**	N/A	N/A	N/A
Transport	Moving mixed metals	Open top bulkers	(1 drivers*2 lds * 16t per ld) **32**	N/A	N/A	N/A
Transport	Moving Trommel Fines and Stones	2 rigid tipper trucks	(2 drivers*5lds*22t per ld) **220**	N/A	N/A	Yes
			794			

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 could 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 Kylemore WEEE Centre on behalf of Dublin City Council. All these facilities have similar 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. Critical spares for the baler are pooled with other baling facilities in Dublin and are available as required.

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 2010

COMPLETED | CARRY FORWARD FROM 2009 | ON HOLD | STARTED IN 2010

Ref Number	Date	Type	Objective and Target	Location	Responsibility	Method	Time Frame	Status
ENVIRONMENTAL								
EP 01	Jan '09	Environmental	Site Expansion to 80,000 tonnes	Kilmainhamwood	TMCD/SF	1. Meeting with EPA 2. Meeting with MCC re planning 3. Appoint consultants 4. Liaise with EPA and MCC	Dec-10	Started - Work in Progress. Planning received Feb '10. ABP appeal has been completed. Licence lodge end May '10. Awaiting decision from ABP.
EP 02	Jan-09	Environmental	Landscape Plan to be completed at Kilmainhamwood Compost re conditions of the planning	Kilmainhamwood	TMCD	1. Kilmainhamwood landscape plan to be completed as part of the new expansion	Dec-10	Not Started - Plans previously drawn up from initial planning awaiting new planning conditions from ABP before commence the landscape plan
EP 03	Jan '09	Environmental	Upgrade of odour system - Investigate possibility of scrubber etc	Kilmainhamwood	TMCD	1. Quotes for consultants and assess same 2. Appoint Consultant 3. Tender out the installation of technology 4. Assess options available 5. Installation	Jul-10	Simeadeam appointed work to commence end May '10. Works to completed end October 2010. Commissioning and EPA
EP 04	Jan '10	Environmental	PDM - Permit renewal due in August 2010. council to be informed by May 2010 on intention to renew. Permit by Wally to be carried out. Planning to be received for retention	PDM	MK	1. Complete feasibility study on PDM 2. Look at alternatives	Dec '10	Started P & L completed. Met two other wood processors re gate fee final decision week ens April '10. Will try and get retention for planning permission on site. MK to do permit and Consultants employed for planning. Both lodged awaiting permit decision and planning response to retention. RFI to be sent in by March 2011
EP 05	Jan '10	Environmental	Anerobic Digestion Study	Kilmainhamwood	MK/TMCD/WL	1. Obtain Quotes 2. Carry out Feasibility Study	Dec '10	Started. TMCD project Manager Team internally appointed. Final report end June '10
EP 06	Jan '10	Environmental	Energy Systems Annual Resource Consumption	All Sites	MK/OD	1. Energy study to see if we can reduce resource consumption on all sites	Quarterly Review	Started Kilmainhamwood, Head Office and Killeen Road. Team appointed internally Jan 10. OD appointed as Project Manager
EP 07	Mar '10	Environmental	Energy Alternative	All Sites	MK	1. SRF Low 2. Organic fines use power production	Dec-10	Alternative power plants. Met BEG Dec 2010 dealt with again in Dec 2011 no spare
EP 08	Jan '10	Environmental	SRF Quality Development / new waste additions. SRF Additional Outlet	Killeen road	MK/OD	1. Assess characteristics of additional material at the site and new additions. Monitor quality and report. Charlotte to be monitored closely on material	Dec-10	Started - Training to be carried out on quality with ground staff. Review loss and European blankets for outlets. Lecterberg consultant in Sept 2010 to assess engineering and report on SRF production process and quality. Dec 2010 no other outlet required for volume we are producing in 2011
EP 09	Jan '10	Environmental	SRF Storage Facility - COR/Permit	New Facility	MK/OD	1. Apply to SDCC for COR/Permit for storage building when found 2. Storage for SRF materials in event of breakdowns, contingency plan	May 10	Lodged with SDCC awaiting permit from SDCC - Permit rejected awaiting decision from RTI re same. Decision not to proceed on planning at Killeen Road may change and will use B1 for storage of SRF
EP 10	Jan '10	Environmental	Waste Acceptance Procedures - Training Refresher for office staff	All Sites	MK/OD Killeen Road	1. Organise groups for tours at Killeen Road 2. Training to incorporate the importance of attention to detail, show staff how errors affect business and end up as credit notes	Dec 10	Draft presentation and started in 2010 to train on site staff in Killeen road
EP 11	Jan '10	Environmental	ELV Expansion on Permit	ELV	CD/MK	1. Await decision from Cindy contact	Dec 10	No longer awarded ELV submission not required Dec 2010
EP 12	Jan '10	Environmental	Fleet audit	All Sites	OD/MK	1 Review paperwork in place in line with new national permit, received on the 26th March 2010	Jun 10	26/5 - Started need for submit to attend supervisor at Killeen Road audit will be carried out then. Completed
EP 13	Jan '10	Environmental	Environmental Drawings - Update all required	All Sites	Team	1. Hire in Draughtsperson to update all drawings	May-10	Started 26th March 2010. Stephen Sheridan employed to update drawings on Completed
EP 14	Jan '10	Environmental	EHS Newsletter	All Sites	Team	1 New newsletter to be developed for website permits	Dec-10	WIP
EP 15	Mar '10	Environmental	Fleet Risk Newsletter	All Sites	Team	1 Specific newsletter to final producing customers e-mail	Apr-10	Completed - Completed with returns in April. Monthly issued in Environmental publishes folder on the X Drive
EP 16	Jan '10	Environmental	Repak System	Killeen road	MK/OD	1. Repak refresher Station required now and at 2010	Dec 10	Not Started not requested by Repak in 2010
EP 17	Aug '09	Environmental	Inspection Sampling Chamber to be created on Surface Water discharge as EA	Outcome	TR	1. TR to investigate best sampling method to ensure we obtain a representative sample 2. Purchase additional apparatus 3. Test and ensure works	Jun-10	Completed
EP 18	Aug 10	Environmental	Development of new site for Mixed Dry recyclables - Tarmac building	Tarmac Building	MK	1. Assess planning and see if covered 2. Meet DCC re planning and permit 3 Permit application finalise 4 Planning application through cost 5. Tarmac doing design on plant	Oct-10	Met DCC in Sept '10. Permit application in draft cannot lodge until receive section 8 validation

PM03- F01 Management Programme 2011

COMPLETED | CARRY FORWARD FROM 2010 | ON HOLD

Ref Number	Date	Type	Objective and Target	Location	Responsibility	Method	Time Frame	Status
				ENVIRONMENTAL				
EP 01	Jan '09	Environmental	Site Expansion to 40,000 tonnes	Kilmainhamwood	TMCD/MF	1 MCC planning received Feb 2010 2 ABP Appeal lodged March 2010 3 Lodged licence with EPA in May 2010	Jun-11	Started - Work in Progress - Planning received Feb '10 ABP appeal top be completed Licence lodge end May '10 Awaiting decision from ABP and the EPA
EP 02	Jan-09	Environmental	Landscape Plan to be completed at Kilmainhamwood Compost re conditions of the planning	Kilmainhamwood	TMCD	1 Kilmainhamwood landscape plan to be completed as part of the new expansion	Jun-11	Not Started - Plans previously drawn up from initial planning, awaiting new planning conditions from ABP before commence the landscape plan
EP 03	Jan '09	Environmental	Upgrade of odour system and installation of an acid scrubber to improve efficiencies - investigate possibility of scrubber etc	Kilmainhamwood	TMCD	1 Smeadean Appointed	Feb-11	Smeadean appointed commissioning and handover to be completed by Feb 2011
EP 04	Jan '10	Environmental	PDM - Permit renewal applied for and planning retention for change of use	PDM	MK	1 Planning Lodged 2 Permit lodged	Jun-11	RFI for planning to be sent in by 06/03/11 permit cannot be issued until planning is finalised
EP 05	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	Not started
EP 06	Jan '11	Environmental	Energy Systems/ Natural Resource Consumption - Management Systems	All Sites	MK/DD	1 Energy Study completed in 2010 2 Recommendations from study to be implemented on all sites	Quarterly Review	Not Started for 2011
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
EP 08	Jan '11	Environmental	Waste Acceptance Procedures - Training Refresher for staff	Head Office	MK/DD Killeen Road	1 Organise groups for tours of Killeen Road - Presentations to groups on different waste types etc 2 Training to incoporate the importence of attention to detail on WIMS show staff how errors affect business and end up as credit notes	Jun-11	Started - Draft presentation completed
EP 09	Jan '11	Environmental	Waste Collection Permit - Fleet audit	All Sites	DD/MK	1 Review paperwork in trucks in line with national permit	Jun-11	Not Started
EP 10	Jan '11	Environmental	Shredding Permit	Shredding	MK	1 Renewal of Permit notify DCC in Feb 2011	Feb-11	Not Started
EP 11	Jan '11	Environmental	Dunboyne - Review of Environmental Files on site	Dunboyne	MK	1 Complete Environmental Review of Licence and site issues	Feb-11	Not Started
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
EP 13	Jan '11	Environmental	ISO Development - successfuly pass two certification europe audits for ISO14001	All Sites	MK/DD	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	Dec-11	Ongoing
EP 14	Jan-11	Environmental	ELV- Review of Environmental files on site	ELV	DD	1 Complete review to the files for 2010 on site in Review of the permit conditions	Mar-11	Not started
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 update the previous energy audit 2 Update the energy register 3 Incorporate the energy register into the Objectives and targets	Jun-11	Started
EP 17	Aug-10	Environmental	Development of new site for Mixed Dry recyclables - Techrec building	Techrec Building	MK	1 Meet DCC re planning and permit 2 Permit application Internal completed and lodged 3 Planning re lodge	Apr-11	Started Permit Lodged Planning in process to be lodged Feb 2011 New systems to be put in place for MDR on receiving Permit and Planning

Appendix 6

FBD Brokers

15 July 2010

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	1 July 2011

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	1 July 2011

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 cover is €1 300 000 and €30 000 000 for private cars

Insurers	FBD Insurance plc
Policy No	00433053 22 01
Renewal Date	1 July 2011

Excess Public/Products Liability Motor TPPD and Employer's Liability

Insurers	XL
Policy No	TBA
Renewal Date	1 July 2011

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 Bolton
Service Executive

Environmental Protection Agency

Guidance to completing the PRTR workbook

AER Returns Workbook

REFERENCE YEAR	2010

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	
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 (W0044)
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	01 620 2248
Production Volume	250000.0
Production Volume Units	Tonnes
Number of Installations	3
Number of Operating Hours in Year	8000
Number of Employees	55
User Feedback/Comments	
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) ?	No
Is the reduction scheme compliance route being used ?	No

4.1 RELEASES TO AIR

Link to previous years emissions data

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR		METHOD			Please enter all quantities in this section in KGs	QUANTITY		
POLLUTANT		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		METHOD			Please enter all quantities in this section in KGs	QUANTITY		
POLLUTANT		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		METHOD			Please enter all quantities in this section in KGs					QUANTITY	
POLLUTANT		Method Used			D2	D3	D5	D7		A (Accidental)	F (Fugitive)
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	T (Total) KG/Year	KG/Year	KG/Year
259	Dust	M	OTH	30-Composite sample measured on night/day using Standard Method VD02119	0 078	0 081	0 039	0 052	0 233	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

Note: Emissions resulting from storm surface water or groundwater monitored as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases from your facility.

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT		Method Used			QUANTITY			
No.	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

* 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		Method Used			QUANTITY			
No.	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

* 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		Method Used			QW2			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
[illegible]	[illegible]	M	OTH	Standards Methods for the examination of water and wastewater. APHA 20th Ed	0.0064	0.0064	0.0	0.0
[illegible]	[illegible]	M	OTH	Standards Methods for the examination of water and wastewater. APHA 20th Ed	0.022	0.022	0.0	0.0
[illegible]	[illegible]	M	OTH	Standards Methods for the examination of water and wastewater. APHA 20th Ed	0.00056	0.00056	0.0	0.0
[illegible]	[illegible]	M	OTH	Standards Methods for the examination of water and wastewater. APHA 20th Ed	0.0002	0.0002	0.0	0.0
[illegible]	[illegible]	M	OTH	Standards Methods for the examination of water and wastewater. APHA 20th Ed	0.0087	0.0087	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

0

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	459717.0	4998115.0	5457832.0	0.0	0.0
306	COD	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	1102259.0	8656179.0	9758438.0	0.0	0.0
308	Detergents (as MBAS)	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	49732.0	16109.0	65841.0	0.0	0.0
314	Fats, Oils and Greases	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	194286.0	88003.0	282289.0	0.0	0.0
324	Mineral oils	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	8242.0	499610.0	507852.0	0.0	0.0
332	Ortho-phosphate (as PO4)	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	13536.0	24097.0	37633.0	0.0	0.0
24[illegible]	Suspended Solids	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	328821.0	853796.0	1182617.0	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		
No. Annex II	Name	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		
Pollutant No	Name	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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

Please enter all quantities on this sheet in Tonnes

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 Final 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 Licence / Permit No and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recoverer / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	20 03 01	No	17934.44	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Arthurstown landfill,W0004-03	Kill, , Co Kildare,Ireland		
Within the Country	20 03 01	No	23.3	mixed municipal waste	D15	M	Weighed	Offsite in Ireland	Padraig Thornton Waste Disposal Ltd WO206-01	Dunboyne Industrial Estate,Dunboyne , ,Co Meath,Ireland		
Within the Country	20 03 01	No	40272.6	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Bord Na Mona Ltd.WO201-02	Drehid Landfill, , ,Co Offaly,Ireland		
Within the Country	19 12 10	No	18412.47	combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Lagan Cement.PO487/05	Kinnegad, , ,Co Meath,Ireland		
Within the Country	19 12 10	No	161.95	combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Padraig Thornton Waste Disposal Ltd.WO206-01	Dunboyne Industrial Estate,Dunboyne , ,Co Meath,Ireland		
Within the Country	17 01 07	No	11189.37	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Various Farmers.	, ,Co Meath,Ireland		
Within the Country	17 01 07	No	40.92	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Padraig Thornton Waste Disposal Ltd.WO206-01	Dunboyne Industrial Estate,Dunboyne , ,Co Meath,Ireland		
Within the Country	17 01 07	No	9736.92	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Bord Na Mona Ltd.WO201-02	Drehid Landfill, , ,Co Offaly,Ireland		
Within the Country	17 01 07	No	9067.7	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 01 07	No	283.88	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R5	M	Weighed	Offsite in Ireland	Murphy Environmental,WO129-02	Hollywood,Naul, ,Co Dublin,Ireland		
Within the Country	19 12 09	No	38697.22	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	174.65	minerals (for example sand, stones)	R5	M	Weighed	Offsite in Ireland	Knockharley Landfill,WO146-02	Knockharley Landfill,Kentstown, ,Co Meath,Ireland		
Within the Country	19 12 09	No	11753.81	minerals (for example sand, stones)	R5	M	Weighed	Offsite in Ireland	Bord Na Mona Ltd.WO201-02	Drehid Landfill, , ,Co Offaly,Ireland		
To Other Countries	15 01 01	No	1031.62	paper and cardboard packaging	R13	M	Weighed	Abroad	Marwin Trading	Rubicon Cnetre,CIT Campus, ,Co Cork,Ireland		
To Other Countries	15 01 01	No	2373.13	paper and cardboard packaging	R13	M	Weighed	Abroad	Peute Paper	baenhoekweg,Le Dordrechy,,,,,Netherlands		
To Other Countries	15 01 01	No	63.86	paper and cardboard packaging	R13	M	Weighed	Abroad	Stirling Fibre.	Century Court,Riverside Way,Ayrshire,KA11 5DD,United Kingdom		
To Other Countries	15 01 01	No	482.95	paper and cardboard packaging	R13	M	Weighed	Abroad	Highlander International Ltd.	1 Teigh Grove,East Kilbride,Glasgow,G67 8UZ,United Kingdom		
To Other Countries	15 01 01	No	356.4	paper and cardboard packaging	R13	M	Weighed	Abroad	Irish Packaging Recycling,WPR 021/2	Ballymount Road,Walkinstown, ,Dublin 12,Ireland		
Within the Country	19 12 02	No	157.53	ferrous metal	R4	M	Weighed	Offsite in Ireland	National Recycling,WPR 002	Station Road,Clondalkin, ,Dublin 12,Ireland		
Within the Country	19 12 02	No	783.96	ferrous metal	R4	M	Weighed	Offsite in Ireland	Hammond Lane Recycling,WFP-DC-0013-01	Pigeon House Road,Ringsend, ,Dublin 4,Ireland		
Within the Country	19 12 02	No	254.1	ferrous metal	R4	M	Weighed	Offsite in Ireland	A1 Metals- Tech Rec,WP08099	Henry Road,Parkwest Business Park, ,Dublin 12,Ireland		
Within the Country	19 12 02	No	2530.94	ferrous metal	R4	M	Weighed	Offsite in Ireland	Multimetals recycling,ESS/15/8/12319	Blessington,,,,,Co Wicklow,Ireland		
Within the Country	19 12 02	No	17.92	ferrous metal	R4	M	Weighed	Offsite in Ireland	Wilton Waste Recycling,06308	Ballyjamesduff, , ,Co Cavan,Ireland		
Within the Country	19 12 03	No	436.25	non-ferrous metal	R4	M	Weighed	Offsite in Ireland	National Recycling,WPR 002	Station Road,Clondalkin,,,Dublin 12,Ireland		
Within the Country	17 04 01	No	0.84	copper, bronze, brass	R4	M	Weighed	Offsite in Ireland	National Recycling,WPR 002	Station Road,Clondalkin, ,Dublin 12,Ireland		
Within the Country	17 04 11	No	9.28	cables other than those mentioned in 17 04 10	R4	M	Weighed	Offsite in Ireland	National Recycling,WPR 002	Station Road,Clondalkin, ,Dublin 12,Ireland		

To Other Countries	15 01 04	No	72 52 metallic packaging	R4	M	Weighed	Abroad	WRC Recycling.	Auchens Farm,Johnstone, ,PA6 7EE,United Kingdom		
To Other Countries	15 01 04	No	98.36 metallic packaging	R4	M	Weighed	Abroad	Marwin Trading.	Rubicon Cnetre,CIT Campus, , ,Co Cork,Ireland		
To Other Countries	15 01 04	No	56 98 metallic packaging	R4	M	Weighed	Abroad	WRC Recycling.	Auchens Farm,Johnstone, ,PA6 7EE,United Kingdom		
To Other Countries	20 01 39	No	48.7 plastics	R13	M	Weighed	Abroad	AWS .	Britannia Business park ,Wallsend ,Tyne and Wear,NE28 6HA,United Kingdom		
To Other Countries	20 01 39	No	118 18 plastics	R13	M	Weighed	Abroad	Peute Paper.	baanhoekweg,La Dordrechy, , ,Netherlands		
To Other Countries	20 01 39	No	67 88 plastics	R13	M	Weighed	Abroad	WRC Recycling.	Auchens Farm,Johnstone, ,PA6 7EE,United Kingdom		
Within the Country	20 01 39	No	111 08 plastics	R13	M	Weighed	Offsite in Ireland	Leinster Environmental,WP2008/06	Clermont Business park ,haggardstown,Dundalk,Co Louth,Ireland		
Within the Country	20 01 39	No	107 34 plastics	R13	M	Weighed	Offsite in Ireland	Leinster Environmental WP2008/06	Clermont Business park ,haggardstown,Dundalk,Co Louth,Ireland		
To Other Countries	20 01 39	No	47 48 plastics	R13	M	Weighed	Abroad	WRC Recycling.	Auchens Farm,Johnstone, ,PA6 7EE,United Kingdom		
To Other Countries	20 01 39	No	97 94 plastics	R13	M	Weighed	Abroad	Peute Paper.	baanhoekweg,La Dordrechy, , ,Netherlands		
To Other Countries	15 01 02	No	60 44 plastic packaging	R13	M	Weighed	Abroad	Highlander International Ltd.,	1 Teigh Grove,East Kilbride,Glasgow,G67 8UZ,United Kingdom		
To Other Countries	15 01 02	No	178 78 plastic packaging	R13	M	Weighed	Abroad	Cherry Polymers,WMEX01/31	Unit 5,Nutts Corner Business Park,Dundrod Road,BT29 4SR,United Kingdom		
To Other Countries	15 01 02	No	79 82 plastic packaging	R13	M	Weighed	Abroad	AWS .	Britannia Business park ,Wallsend ,Tyne and Wear,NE28 6HA,United Kingdom		
To Other Countries	15 01 02	No	22 26 plastic packaging	R13	M	Weighed	Abroad	Peute Paper.	baanhoekweg,La Dordrechy, , ,Netherlands		
To Other Countries	15 01 02	No	98.88 plastic packaging	R13	M	Weighed	Abroad	WRC Recycling.	Auchens Farm,Johnstone, ,PA6 7EE,United Kingdom		
To Other Countries	15 01 02	No	37 78 plastic packaging	R13	M	Weighed	Abroad	Choice Waste Management,	Denmark House,Bricks Close,Milton Keynes,MK11 3DP,United Kingdom		
Within the Country	15 01 02	No	177 22 plastic packaging	R13	M	Weighed	Offsite in Ireland	Leinster Environmental,WP2008/06	Clermont Business park ,haggardstown,Dundalk,Co Louth,Ireland		
Within the Country	17 02 03	No	18 92 plastic	R5	M	Weighed	Offsite in Ireland	Danelle Recycling WP01/08	Kinock,Ballon, ,Co Carlow,Ireland		
Within the Country	17 02 03	No	35 86 plastic	R5	M	Weighed	Offsite in Ireland	Polymer Recovery,WFP-LS-09-0001-01	Portlaoighon , ,Co Laois,Ireland		
To Other Countries	20 01 01	No	6572.7 paper and cardboard	R13	M	Weighed	Abroad	Peute Paper	baanhoekweg,La Dordrechy, , ,Netherlands		
To Other Countries	20 01 01	No	1141 16 paper and cardboard	R13	M	Weighed	Abroad	Highlander International Ltd,	1 Teigh Grove,East Kilbride,Glasgow,G67 8UZ,United Kingdom		
To Other Countries	20 01 01	No	395 12 paper and cardboard	R13	M	Weighed	Abroad	Marwin Trading,.	Rubicon Cnetre,CIT Campus, ,Co Cork,Ireland		
Within the Country	20 03 01	No	203 62 mixed municipal waste	R13	M	Weighed	Offsite in Ireland	AES WO194-02	Portlaoise, . ,Co Laois,Ireland		
Within the Country	20 03 01	No	174 94 mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Dillon Waste and Recycling,WFP-KY-10-0001	The Kerries,Tralee, ,Co Kerry,Ireland		
To Other Countries	20 03 01	No	120 13 mixed municipal waste	R13	M	Weighed	Abroad	Regen Ltd.	Newry, , ,Co Down,United Kingdom		
Within the Country	16 02 11	Yes	discarded equipment containing 8.18 chlorofluorocarbons, HCFC, HFC	R13	M	Weighed	Offsite in Ireland	WEEE Centre DCC,xxx	Kylemore Park West, , ,Dublin 10,Ireland	Natural World Products,LN/06/11,55 Cargeckougher Road,Keady,Armagh,BT60 3RA,United Kingdom	55 Cargeckougher Road,Keady,Armagh,BT60 3RA,United Kingdom
Within the Country	16 01 03	No	44 07 end-of-life tyres	R13	M	Weighed	Offsite in Ireland	Padraig Thornton Waste Disposal Ltd,WFP-DC-09-0005-01	Kylemore Park West, , ,Dublin 10,Ireland		
Within the Country	20 01 36	No	discarded electrical and electronic equipment other than those mentioned in 20 15 57 01 21, 20 01 23 and 20 01 35	R13	M	Weighed	Offsite in Ireland	WEEE Centre DCC,	Kylemore Park West, , ,Dublin 10,Ireland		

Within the Country	20 01 36	No	1 87	discarded electrical and electronic equipment other than those mentioned in 20 01 21 20 01 23 and 20 01 36	R13	M	Weighed	Offsite in Ireland	Rehab Recycling,WMP 004	Ballymount Avenue,Clondalkin ,Dublin 24,Ireland		
Within the Country	20 01 08	No	14875 43	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	Kilmeanhamwood Compost,WO195-01	Kilmeanhamwood,Nobber, ,Co Meath Ireland		
Within the Country	20 02 01	No	15 28	biodegradable waste	R3	M	Weighed	Offsite in Ireland	Padraig Thornton Waste Disposal Ltd WP 2007/01	Kill, ...Co Kildare,Ireland		
Within the Country	16 05 05	No	4 46	gases in pressure containers other than those mentioned in 16 05 04	R13	M	Weighed	Offsite in Ireland	Calor Gas	Long Mil road, . .,Dublin 10,Ireland		
Within the Country	17 05 03	Yes	3 36	soil and stones containing dangerous substances	R13	M	Weighed	Offsite in Ireland	Rialta Environmental WO192-02	Unit 402,Greenogue Business Park,Rathcoole,Co Dublin ,Ireland	Rialta Ltd,W0192-02 Block 402,Grant Drive,Greenogue,Dublin,Ireland	Block 402,Grant Drive,Greenogue,Dublin,Ireland
Within the Country	16 06 01	Yes	0 89	lead batteries	R13	M	Weighed	Offsite in Ireland	Enva,WO184-01	Clonminam Industrial Estate,Portlaoise, ,Co Laois,Ireland	Enva Ltd,xxxx,Campine, . . .,Belgium	Campine . . .,Belgium
Within the Country	17 08 02	No	64 1	gypsum-based construction materials other than those mentioned in 17 08 01	R3	M	Weighed	Offsite in Ireland	Gypsum Recycling,WPT 95 Padraig Thornton Waste	Cappagh Road,Finglas, ,Dublin 11,Ireland		
Within the Country	19 12 07	No	9746 08	wood other than that mentioned in 19 12 06	R3	M	Weighed	Offsite in Ireland	Disposal Ltd,291/2007	Kill . . .,Co Kildare,Ireland		

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