PADRAIG THORNTON WASTE DISPOSAL LTD

THORNTONS RECYCLING CENTRE

Waste Licence Reg. No W0044-02

ANNUAL ENVIRONMENTAL REPORT 2015

SUBMITTED February 2016

Prepared By:

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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).

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

1.1 OPERATOR

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

The address and contact details for the company headquarters are;

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

Telephone: 01- 623 5133
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1.2 REPORTING PERIOD

The reporting period for this Annual Environment Report (AER) is 12 months between the 01/01/15 and the 31/12/15.

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 - SRF
Building Number 1

Building 1 contains the metering drum for mixing the SRF suitable residual waste from both the dry recycling MRF (Park West) and the CID skip line (building 2&5, Killeen road) with the SRF suitable residual waste from the MSW line (building 3). Once all materials are shredded inside building 3 the resultant SRF material is conveyed via covered conveyors into Building 1, where it passes under a magnet to remove any remaining metals before it is loaded into a compactor and pushed into a closed artic trailer from where it is consigned to its end destination. The building also has a bay to temporarily store a quantity of dry material which is suitable for SRF and also a storage area for a quantity of produced SRF.

Process - Household and Commercial Municipal Waste
Building Number – 3

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

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

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

The Nihot separates the heavy MSW from the light MSW (which goes on to become SRF). The heavy MSW is discharged from the back of the Nihot and is fed into a ballistic separator. The ballistic separator removes any remaining fines and discharges them into a bay, which is emptied daily and consigned for stabilisation. Any remaining paper or plastic is bounced along the ballistic separator and is discharged and mixed with the light MSW that goes on to become SRF. The 3 dimensional materials, such as bottles, cans, nappies, shoes etc. rolls back off the ballistic separator and are conveyed under a magnet to remove the metal. The MSW then passes through an eddie current, which removes the

aluminium cans and the remaining material falls into a bay to be bulked and loaded into artic trailers and consigned to landfill or for incineration.

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

Thorntons Recycling accepts and collects source segregated compostable waste from third parties, domestic and commercial customers. This material is tipped in Building 3 in a designated bay and is stored separately from normal household and commercial municipal waste. Waste is inspected on tipping and bulky material is removed by a grab as non-conforming waste for processing as MSW. Suitable compostable waste is reloaded daily into artic trailers using a loading shovel, for further processing in Thorntons Recycling composting facility, Kilmainhamwood, Co Meath, waste licence W0195-02.

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

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

The remaining materials then passes through the first stage of the process under an over band magnet. The over band magnet removes ferrous metal which pass onto a metal conveyor into a picking station where contaminates such as small pieces of paper or plastic which have become tied up in the metals are manually removed. The trommel transfer conveyor then transports the remaining materials minus the ferrous metals through a trommel drum. The materials are turned in the trommel and the soil fines and small stones (<50mm in size) pass through the 50mm holes present in the trommel onto a trommel discharge conveyor which in turn passes through the back of building 2 into the construction and demolition processing area for further processing.

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

and tipped into building 1 where it is loaded into the metering drum for shredding to make SRF.

Timber which is separated from the nihot processing area is transported via a transfer conveyor through a picking station, where timber, wiring 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 and non-metallic objects before the paper and cardboard is conveyed to the compactor and loaded into an artic trailer. The remaining timber from the ballistic separator passes through a final picking station. The timber is manually picked and dropped into a bay. The contaminants falls into a separate bay and is taken into building 1 for further processing to separate out any suitable combustible material. The clean timber is transported to our wood chipping permitted facility in County Kildare for further processing.

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

Stone less than 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 before being consigned to its end destination.

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

2.3 WEIGHBRIDGE CALIBRATION

Precia Molen carried out a calibration on both weighbridges on the 26th May 2015 and they were verified on the 16th July 2015. Both bridges passed and are due to be re tested on the 26th May 2016.

3 QUANTITY AND COMPOSITION OF WASTE RECEIVED, RECOVERED AND DISPOSED OF IN 2015

3.1 WASTE HANDLED IN THORNTONS RECYCLING CENTRE

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

Table 1 Summary of total waste received in 2015

Year	Waste Tonnes in
2015	249,836.28

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

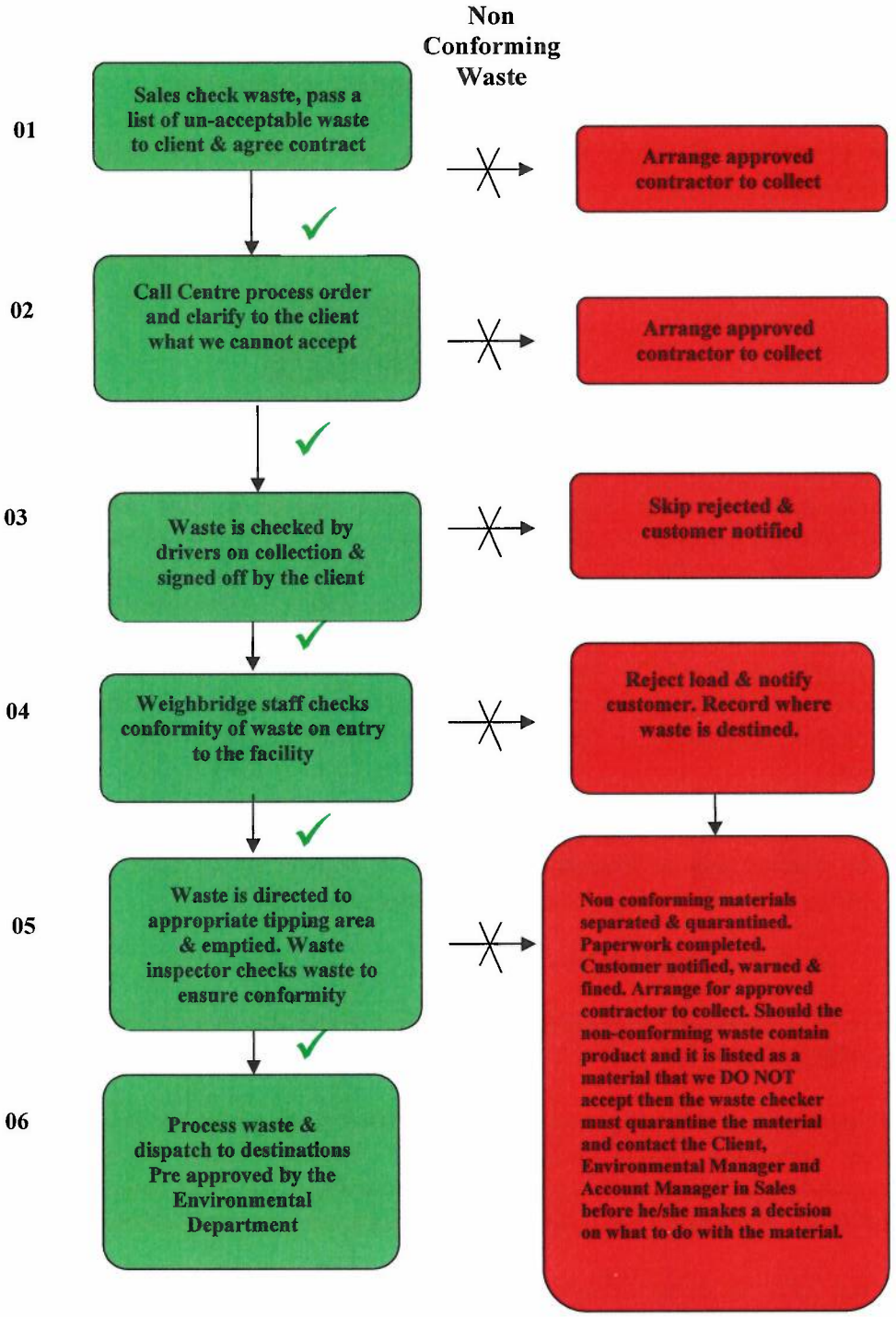
All waste destinations used by Thorntons Recycling Centre in 2015 have been approved by the Environmental Protection Agency. A register of all EPA agreed facilities for recycling, recovery or disposal of waste is maintained on site.

3.2 WASTE ACCEPTANCE

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

All new staff employed by the company in 2015 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.

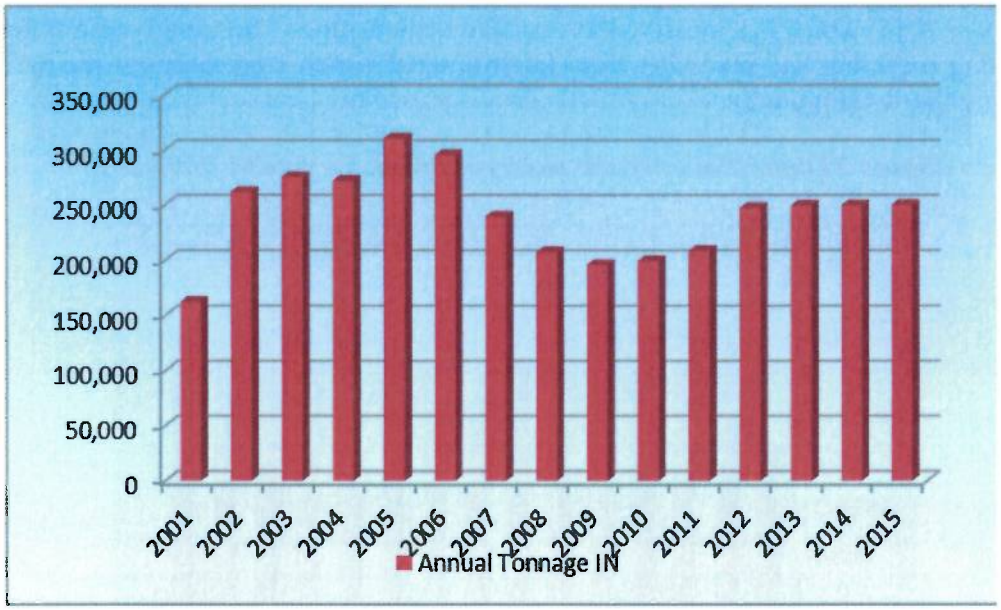
As the EPA is aware Thorntons Recycling has a certified management system for ISO14001 Environmental, ISO 9001 Quality, OHSAS 18001 Health and Safety. The Integrated Management System (IMS) is available for inspection on the IMS Drive at any of the companies' offices.


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

3.3 WASTE RECEIVED

A total of 249,836.28 tonnes of waste was received at the facility in the reporting period of 2015. Details of which are contained in Appendix 2 of this report. Figure 1 illustrates the trend in waste received at the facility between the periods 2001 to 2015.

Figure 1 Quantities of Waste received at the facility 2001-2015



3.4 WASTE CONSIGNED TO LANDFILL AND RECYCLING/RECOVERY FACILITIES

A total of 249,974.08 tonnes of waste was consigned from the facility in the reporting period of 2015. Details of which are contained in Appendix 3 of this report. Figure 2 illustrates the trend in waste consigned from the facility between the periods 2001 to 2015.

The facility displayed another increase in the recycling rate for 2015. The overall recycling/recovery rate for the facility was 91.49%. This is an increase of 4.91% on the previous year. The recycling rate has been largely consistent for the previous four years and this is an excellent achievement. The consistently high recycling rate is due to increased awareness, education and segregation of customer's wastes and also due to the expansion of the SRF process to include the processing of MSW at the facility. This material is blended with the residual material from skip waste to produce a fuel that meets the specifications of the two cement kilns in Ireland. Thorntons Recycling supplies SRF to cement kilns that use this material as a substitute for coal which is a high carbon producer when burned. The use of SRF from a residual waste has enabled the cement kilns to lower their carbon footprint by using waste material as a fuel and also reduce their reliance on imported fossil fuels as a raw material in the production of cement. The SRF was tested on a monthly basis to ensure that it met the acceptance criteria for the destinations. The production of the SRF has helped Thorntons reduce the quantity of

material which would otherwise have been destined for landfill. A waste characterisation survey was carried out on the SRF by independent consultants in 2015 and it was found that 14% of this waste could be classified as packaging waste, which is now being recovered as part of the national packaging recovery targets and diverted from landfill.

Overall since 2003, the Killeen road facility has shown a positive trend in diverting a high percentage of material away from landfill, through continuously improving the sorting techniques. The recycling rate of waste has increased from 12.14% in 2003 to 91.49% in 2015, 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).

Figure 2 Quantities of Waste consigned from the facility 2001-2015

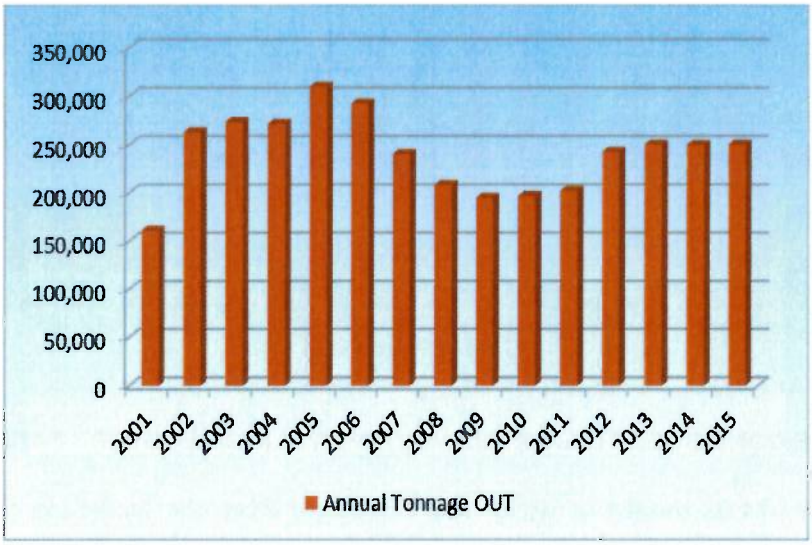


Figure 3 – Recycling rate trends for waste between 2003 & 2015

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

It is hoped that Thorntons Recycling Centre will continue to increase its recycling and recovery rates in 2016 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.
- Continuous training and education of staff at all levels on recyclable material types and the development of new outlets for new materials.
- Thorntons Recycling offers an integrated waste management service that encourages clients to opt for different types of bins for different waste types. The company also has a tankering service division (TTS Thorntons Tankering Services), confidential shredding service and composting / brown bin service which can be offered to all our customers.
- Our licensed composting facility Kilmainhamwood Compost is approved by the Department of Agriculture (Composting Approval Number COMP/6) and also approved in line with SI 612/2006 and EC 1774/2002. We will continue to reduce biodegradable material being sent to landfill by offering a three bin service to all our customers.
- Thorntons Recycling has invested in the latest technology for confidential shredding in situ with the purchase of a state of the art shredding vehicle with CCTV camera system and developed a secure shredding facility which is permitted by Dublin City Council (WFP-DC-11-0023-01). The facility received certification in 2014 "Secure Destruction of Confidential Material" to international standard EN15713:2009 on the 13th August 2014.
- Continued education with new and existing clients on new regulations and their obligations in relation to the law. Thorntons Recycling offer educational workshops to existing customers.
- Continue to offer reduced rates to customers who segregate their waste, for example wood, metal, dry recyclables, glass, plasterboard and compost bins.
- Continually improve on service and our after sales service.
- Offer presentations and demonstrations on our client premises and schools.
- Awareness through the publishing of on line news, continuous development and updating of the website for Thorntons Recycling.

- Thorntons Recycling won Repak Recovery Operator of the Year Award 2008 and 2011, 2012 and 2013 and was a finalist in 2009, 2010, 2014 and 2015.
- Thorntons Recycling was a finalist in the Repak Kerbside Collection Scheme of the Year Award in 2012 and 2013.
- Thorntons Recycling won the Green Awards in 2013 and 2015 and was a finalist in 2012 and 2014.
- Thorntons Recycling has entered the Dublin domestic market in 2010 and continues to increase our customer base by offering potential customers an efficient and effective three bin collection service.
- Thorntons Recycling has entered the domestic market in Wicklow in 2012.
- Thorntons Recycling developed a new state of the art dry recycling facility (WFP-DC-10-0021-02) in Parkwest Business Park which produces a high quality of segregated recyclates. During 2012 Thorntons Recycling were successful in its application to DCC to increase its production volume to 50,000 per annum. Thorntons Recycling invested in a third optical sorting machine in 2013 to further improve the quality of the output material and to increase the recycling rate. In 2014 Thorntons added in new picking positions which enable us to segregate additional materials and achieve higher quality outputs.

4 CONTRIBUTION TO THE ACHIEVEMENT OF RECOVERY TARGETS

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

Progressive targets have been set out in the Landfill Directive (1999/31/EC) to reduce the proportion of biodegradable municipal waste land filled. Biodegradable waste is waste that can undergo biological decomposition and is typically composed of food and garden waste, wood, paper, cardboard and textiles. By 16th July 2010 Ireland was restricted to land filling a maximum of 75% of the total weight of biodegradable municipal waste generated in 1995, the baseline year. This target is further reduced to 50% of the 1995 baseline by 16th July 2013 and 35% by 16th July 2016. According to the National Waste Report 2012, an estimated 589,260 tonnes of biodegradable municipal waste was sent to landfill in Ireland, this represents a BMW rate of 54%.

Thorntons Recycling own and operates an award winning compost facility in Kilmainhamwood, County Meath which is approved by the Department of Agriculture (Composting Approval Number COMP/6) and also approved in line with SI 612/2006 and EC 1774/2002. 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 and our household 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. Thorntons Recycling Killeen Road, accepted approximately 28,966.33 tonnes of Green Waste and Brown Bin Waste for composting in 2015 which after any contamination was removed the remaining material was bulked and sent for composting

in Kilmainhamwood Compost, Waste Licence W0195-02. Thorntons Recycling Centre diverted approximately 11,316 tonnes in 2015 of biodegradable waste in the form of wood and 17,309.80 tonnes of organic fines from landfill during 2015 as a result of an increase in investment and technology to process MSW material. The facility has also diverted 8,263.63 tonnes of biodegradable paper, cardboard and wood from landfill, by producing SRF for cement kilns. In total 65,885.76 tonnes of biodegradable waste have been diverted from landfill by the facility in 2015. This represents a facility diversion rate of 75.57% of organic waste from landfill and demonstrates Thorntons Recycling ability to assist in meeting the national target for 2016.

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

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

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

Dry recycling material is no longer processed on the Killeen Road site. Dry recycling is now processed in our facility in Parkwest Business Park. This facility operates under a waste facility permit from Dublin City Council.

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 2013 to 2015 for materials recycled at the site;

Table 2 – Comparison on recyclable material consigned 2013-2015

Total Materials Consigned	2013 Tonnes	2014 Tonnes	2015 Tonnes
Cardboard Out	0	0	57
Metals Out Packaging (Aluminium and Steel)	1040.62	747.86	545.06
Plastics Out (Bottles, Film and Hard)	123	102	199
Mixed Papers	0	0	1
Wood Out	12,002	11,624	11,316
Mixed Metals Out (Bulky)	5,501	6,999	7,834

Packaging waste consigned from Thorntons Recycling Centre increased in 2015 on 2014's levels.

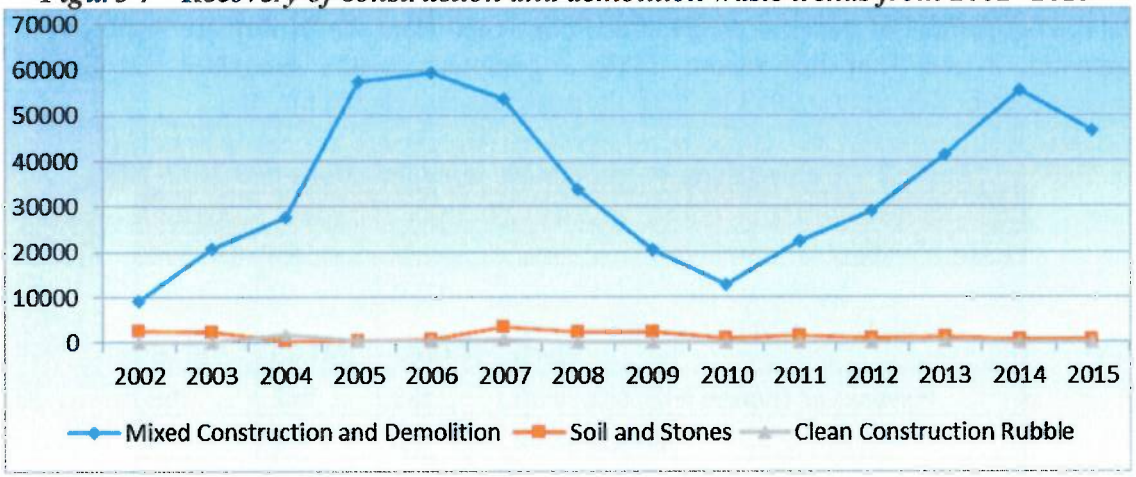
Since March 2003, producers of packaging are obliged to segregate for recovery specified packaging waste materials at source. Thorntons Recycling has a team of account managers who educate customers on the advantages and their legal obligations for segregating packaging waste.

As stated in the National Waste Report 2012 published by the Environmental Protection Agency, Ireland had a packaging recycling rate of 87% and well exceeded the directive target of 60%. Thorntons recycling has played a significant part in the packaging recovery rate. During 2015 Thorntons Recycling carried out a Repak survey on the packaging content of the SRF which is used for energy generation in cement kilns. The survey carried out in 2015 found that 14% of the SRF is packaging waste or 12,307.54 tonnes. The production of such material on site attributes to further diversion of recyclable material from landfill

4.3 THE RECOVERY OF CONSTRUCTION AND DEMOLITION WASTE

Under National and European waste policies, Ireland was 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 and 2006. However, 2007 to 2010 showed a decrease in the quantity of this material accepted from 60,214 tonnes in 2006 13,824 tonnes in 2010. Between the years 2011 and 2014 the volumes of C&D waste accepted on site for processing increased, but decreased in 2015 to 47,337.03 tonnes from 56,200.19 tonnes in 2014. Thorntons Recycling utilised the Dunboyne Facility for the latter half of 2015 to divert some C&D materials and to enable us to accept more materials suitable for SRF production at the Killeen Road facility.

Figure 4 – Recovery of construction and demolition waste trends from 2002- 2015



Quite often construction and demolition material arrives at the facility as a mixture of soil, rubble and is 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. If incoming skips are mixed with numerous different waste types, they are weighed in as mixed municipal waste. Waste which originated from construction or demolition sites is weighed in as Mixed C&D waste when the skip contains construction like material.

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 skips and sent to approved destinations in Ireland where they are further segregated into different types i.e. Copper, Aluminium etc. Quantities of metals recycled can be noted in Table 2 above. Thornton's Recycling offers a reduced price to customers who segregate metal completely.

4.5 CONVERSION OF WASTE VEGETABLE OIL INTO A BIO FUEL

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

4.6 RECOVERY FACILITIES PROPOSED TO ACCEPT SHREDDED OR WHOLE TYRES

Tyres normally arrive at the facility mixed in with other materials, for example in household skips. In 2015 these were segregated and stockpiled until a sufficient volume to warrant transport off site is achieved.

5 SUMMARY REPORT AND INTERPERTATIONS OF ENVIRONMENTAL MONITORING AND EMISSIONS DATA

In accordance with *Schedule D: Monitoring* of PTWDL waste licence W0044-02, monitoring of dust, noise, surface water and foul water must be carried out. Odour monitoring is also completed by an independent consultant bi annually. All monitoring has been completed as required for the reporting period of 2015. The following section details results obtained and interpretations of results for the year of 2015.

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.

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 input from passing traffic and vehicles accessing Park West Industrial Estate and Ballyfermot.

Figure 5 - Dust Monitoring Locations

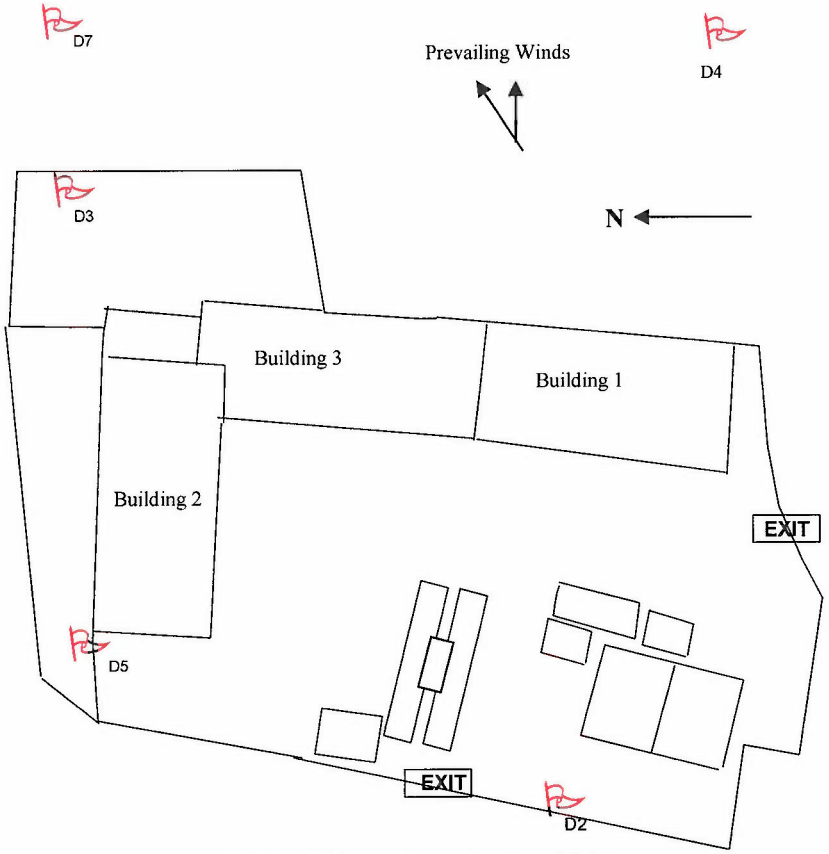


Table 3 Dust Results for 2015

Monitoring Locations	Sample 1 February / March	Sample 2 May / June	Sample 3 June / July	ELV mg/l
D2	140	161	164	350
D3	99	108	106	350
D4	97	110	114	350
D5	134	146	150	350
D7	164	178	164	350

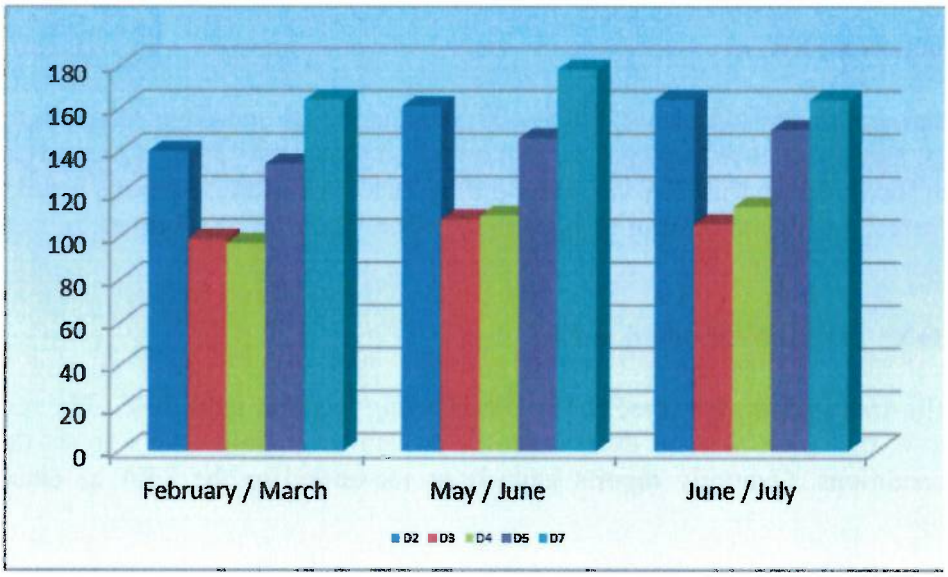
The emission limit value for dust deposition is 350mg/m^2/day. During 2015 none of the dust emission levels exceeded the emission limits (Table 3). Figure 6 shows the trends in dust deposition during the year.

Thorntons Recycling 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 entrances and exits of the buildings where dust is generated. During 2010 the roof cladding was extended over the corner of building 2 on the CID building. During 2011 dust curtains were fixed to the exit of building 5 to reduce the likelihood of dust escaping from the building during the drier months. During 2012 dust curtains were fixed around the exit at the SRF compactor to reduce dust emissions from building 1 and also on the exit on building 3 to further reduce the likelihood of dust escaping from the buildings

A new mist air dust suppression system was erected in 2013 in Building 2. An automatic fast roller door was erected on the exit from building 1. In 2013 an extended roofed area between building 3 and building 5 was erected. Upon completion a dust curtain was erected in addition to a mist air system, to further militate against dust emissions. Dust curtains on site in 2015 were replaced where necessary. 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 2015.

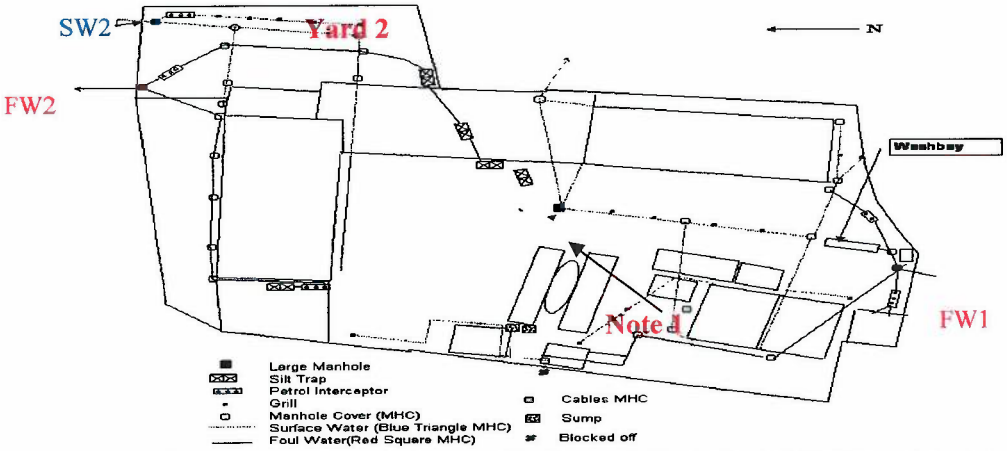
Figure 6 - Dust Monitoring Results per Monthly Sample 2015



5.2 EMISSION TO FOUL WATER AND SURFACE WATER

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

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



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

5.2.1 FOUL WATER

In accordance with Waste Licence W0044-02 Schedule D all emissions to sewer must be monitored. Emissions to sewer must be monitored on a quarterly basis. Quarterly reports have been forwarded to the EPA via Alder during 2015. 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 2015. The results in 2015, shows that there was no exceedance in the emission limit levels as set down in licence conditions. Quarterly reports have been forwarded to the EPA as detailed in section 5.2.1.

Table 4 Results of sampling from FW1 in 2015

Monitoring	Quarter 1	Quarter 2	Quarter 3	Quarter 4	ELV
	Thorntons	Thorntons	Thorntons	Thorntons	
Parameters	16.02.15	29.04.15	28.07.15	23.10.15	mg/l
BOD	40	314	168	23	4000
COD	127	794	460	50	8000
Suspended Solids	29	286	140	12	1000
pH	7.80	8.70	8.60	7.60	6-10
Phosphate (as P)	1.30	3.51	2.40	0.62	50
Phosphate (as PO4-P)	4.01	10.79	7.63	1.89	50
Surfactants/Detergents	0.20	0.20	0.20	<0.2	50
Fats, oil, grease	1.00	59	6.80	2.80	100
Mineral Oil by GC (mg/l)	0.39	10.9	3.40	1.71	20
Temperature °C	8.0	10.0	17.0	12.00	

EMISSION TO SEWER (Foul 2) FW2

Samples were also taken from Foul Sewer 2 (FW2) and the results are detailed in Table 5. The results show that there was no exceedance recorded during the annual monitoring.

Table 5 Results of sampling from FW2 2015

Monitoring	Quarter 1	Quarter 2	Quarter 3	Quarter 4	ELV
	Thorntons	Thorntons	Thorntons	Thorntons	
Parameters	16.02.15	29.04.15	28.07.15	23.10.15	mg/l
BOD	113.0	429	534	271	4000
COD	329.0	858	828	325	8000
Suspended Solids	104.0	176	456	82	1000
pH	6.5	6.50	6.50	7.10	6-10
Phosphate (as P)	0.4	1.29	2.19	0.85	50
Phosphate (as PO4-P)	1.3	3.98	6.72	2.61	50
Surfactants/Detergents	0.2	0.20	0.20	<0.2	50
Fats, oil, grease	14.8	18.80	33.20	6.4	100
Mineral Oil by GC (mg/l)	1.8	9.22	3.11	0.63	20
Temperature °C	8.0	10.00	17.00	14.00	

Monitoring was carried out by the EPA on the 16.06.15 and the reported results showed that there was an exceedance of the BOD trigger levels. The drains were cleaned as part of their regular maintenance and the exceedance was not noted on the following FW2 sample.

5.2.2 SURFACE WATER (SW2)

The monitoring point for surface water is displayed in figure 7 and the results for each sample are in Table 6. PTWDL re-designed the drainage system on site in 2007 to ensure compliance with waste license 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.

During 2015 there was no exceedances reported on the surface water emissions for the reporting period of 2015. 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 2015

Monitoring Parameters	Quarter 1 16.02.15	Quarter 2 06.07.15	Quarter 3 28.07.15	Quarter 4 23.10.15	ELV
BOD	6	5	4	4	25mg/l
COD	26	19	29	5	mg/l
Suspended Solids	30	23	21	<10	35mg/l
pH	7.7	7.3	7.4	7.4	6-10
Conductivity	278.00	110	417	381	mS/cm
Fats, oil, grease	1	1	1	<1	mg/l
Mineral Oil by GC	0.164	0.646	1.76	0.279	5mg/l
Temperature	7	16	17	13	

5.3 NOISE

In accordance with Condition 8 and Schedule D3 of waste licence W0044-02 annual environmental noise monitoring was carried out. Monitoring was carried out on the 18th June 2015, with additional frequency monitoring been carried out on the 25th June for locations N7, N8 and N9. Noise monitoring was undertaken by David Duff of Thorntons Recycling Environmental Department in compliance with Condition 8 of the licence (W0044-02). The results of the survey were submitted to the EPA via alder on the 30th June 2015.

Thorntons Recycling is not fully responsible for the elevated noise levels at the noise sensitive locations. The predominant noise source at these three locations, N7, N8 and

N9, was from non-site related vehicular movements on the nearby roads. This is reiterated in the similarity between the LA_{eq} readings and the LA_{10} readings at these monitoring locations during the surveys and also by the near continuous traffic movements recorded.

There was audible noise from Thorntons Recycling, such as from Thorntons related traffic, the odour system and the RJP (Regerative Pulse Plant) at these locations but one could only hear these noises when there was no traffic on the roads. Normal traffic noise was the significant noise source and was more audible than the operation of the recycling centre. Thorntons Recycling is located in an industrial area and traffic is busy on these roads with heavy-duty vehicles contributing largely to the high LA_{eq}, as well as some noises from other surrounding businesses that contributed to the noise result.

The LA_{90} gives an accurate level of the noise for 90% of the monitoring period at the locations and largely excludes the effect of passing traffic, provided that traffic is not constant. It should be noted that at N7 and N8 noise levels are below the 55dB limit. These results are representative of background noise levels present for the majority of the sampling period. N9 was still above the noise limit, however there was a very high number of traffic movements passing close by to the monitoring location.

The survey concludes that whilst the noise levels are exceeding the day time emission limit value, the daytime noise levels at the noise sensitive locations are not being negatively impacted upon by the activities of Thorntons Recycling and that the predominant noise sources originates from factors external to the operations of the recycling centre. From the results of the daytime noise monitoring we have concluded that Thorntons Recycling is in compliance with its waste licence (W0044-02).

The night time noise levels were exceeded at all three noise sensitive locations during the monitoring period. The main sources of noise at these locations were from passing traffic and external sources that are not related to Thorntons Recycling. While Thorntons' activities and the odour system do add to the noise at the noise sensitive locations N7, N8 and N9 it should be noted that traffic is still the major contributor to the noise levels recorded.

There are similarities between the LA_{eq} and the LA_{10} in all three of the noise sensitive locations, thus indicating that traffic is a large influencing factor at these locations. The LA90 value recorded for all three locations was reported to be above the emission limit value of 45dB.

Thorntons Recycling considers that, although the noise levels at the noise sensitive locations are exceeded, Thorntons Recycling is not the primary cause of the noise at the locations. Elevated noise readings can be attributed predominately to the high levels of un-associated traffic in the area and the presence of numerous other industrial businesses and residential units in the immediate vicinity all of which are not under the control of Thorntons Recycling. As a result, it is concluded that Thorntons Recycling is not having a negative effect on night-time noise at the three noise sensitive receptors.

Table 7: Noise measurement results for Killeen road annual monitoring in 2015

Monitoring Locations	16th June 2015			ELV
	LA, eq (dB)	LA 10 (dB)	LA90(dB)	(dB)
NP1	63	66	57	NA
NP2	67	69	63	NA
NP3	72	72	62	NA
NP4	62	63	59	NA
NP5	64	65	59	NA
NP6	72	67	62	NA
NP7	62	65	54	55
NP8	66	69	52	55
NP9	70	73	58	55
NP7 Night	57	62	48	45
NP8 Night	62	64	49	45
NP9 Night	71	75	57	45

5.4 ODOUR

In order to assess efficiency of the odour treatment system Thorntons Recycling contracted Odour Monitoring Ireland to carry out independent monitoring of the Odour treatment system in 2015. It was agreed with the EPA following a request (W0044-02/15/EPA/DD/03) that the bi annual monitoring report would be carried out annually. The annual test would be scheduled when the carbon is due to be replaced during the warmer months of the year. This was to determine the most probable worst case odour treatment scenario.

The annual report was forward to the EPA, following the test which was carried out on the 12th June 2015 (44-2/15/EPA/DD/20). The report issued to the EPA shows that the system is working effectively, using olfactometry testing and dispersion modeling.

The activated carbon used in the air treatment system was also changed 2 times throughout the year, on the 25th March 2015 and the 15th June 2015.

6 RESOURCES AND ENERGY USAGE

The following section discusses resources such as electricity, fuel and water used at Thorntons Recycling Centre in 2015.

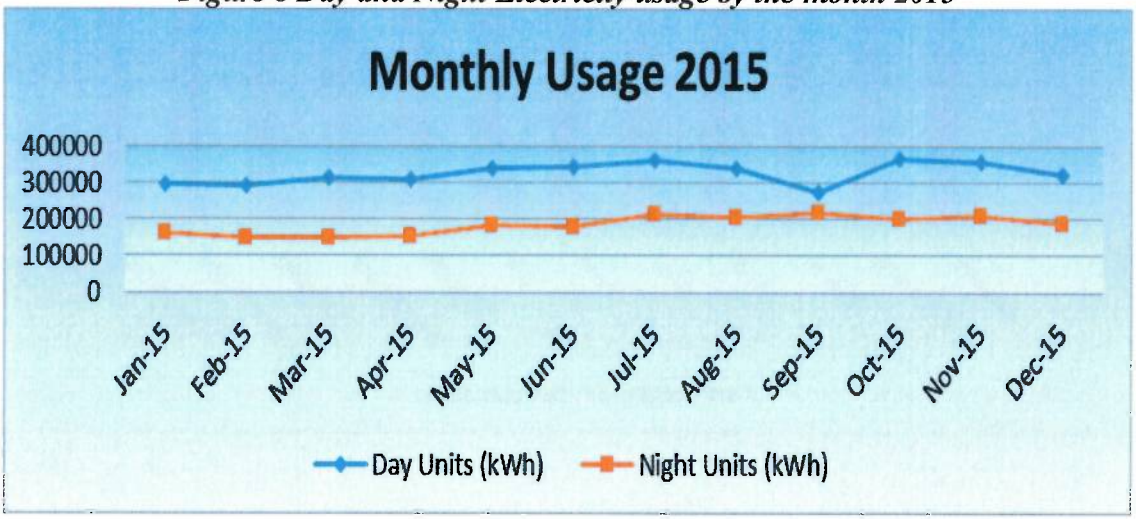
6.1 ELECTRICITY

Electricity consumption in 2015 increased by 15.2% from the levels in 2014 to 6,135,925 KW. The average energy unit cost per tonne processed decreased in 2015 when compared to 2014 levels. During 2015, a quarterly report on energy usage was forwarded to managers which show the daily usage trends and also the usage per tonne processed for monthly comparisons which enable efficiency decisions to be made.

An energy register of opportunities was created when the energy management system was created which details potential energy saving opportunities on site. The register allows for all the opportunities to be ranked by cost saving, carbon dioxide saving potential, ease of implementation etc. The register will be reviewed as necessary and updated accordingly to ensure continual improvement in energy efficiency on site.

Figure 8 illustrates the monthly daily and nightly usage of electricity on site during 2015.

Figure 8 Day and Night Electricity usage by the month 2015



6.2 WATER

In 2015 the facility used approximately 2,678m^3 of water compared to the 2,537 m^3 in 2014. Water is used on site to dampen down dust during dry periods and to wash the floor and hard standing area and also to wash plant and vehicles. The use of water on site is necessary to assist with keeping the site clean and tidy.

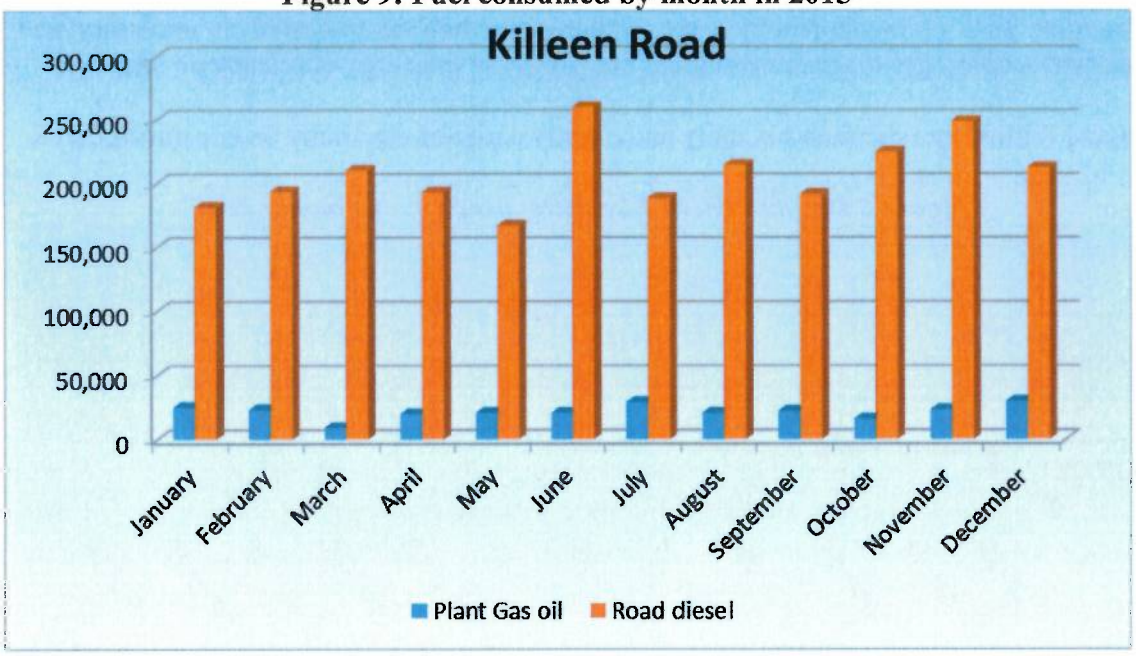
6.3 DIESEL

The main types of fuel used at Thorntons Recycling Centre include road diesel and machinery diesel. The breakdown of fuel consumed is detailed in Figure 9 below. In 2015 a total of 261,093 litres of plant diesel and 2,485,071 litres of road diesel were consumed. In an effort to reduce the volume of plant diesel, Thorntons has purchased two Liebherr grabs which has a smaller engine than the original fuch machines and thus use less fuel per hour. These machines were purchased in late 2014 and there has been decrease in the annual plant fuel usage for 2015 compared to 2014. A number of new bin lorries and skip lorries was purchased in 2015 and these lorries have higher fuel efficiency than older versions.

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 2015



7 DEVELOPMENT / INFRASTRUCTURAL WORKS

7.1 SITE DEVELOPMENTS 2015

The following summarises the main developments made at the facility in 2015;

Buildings and Waste Processing Equipment

* The MSW trommel was replaced with a waste screener
* The Linder shredder was replaced with a larger model and the control cabin placed outside at a height.
* Concrete hard standing was repaired under the fuchs in building 3 and under the compactor for SRF in Building 1.
* Locked cage area created along building 1 for precious metal bulking every 2 weeks.
* Building 1 was sealed with polyurethane foam following the removal of the old concrete shredding floor. This enables better storage of SRF. The cladding on the wall was also repaired, sealed up and sprayed.
* Steel bay around the inert fines repaired and strengthened.
* Concreted area in the main yard at the entrance to building 3.
* Replaced steel walls around the compostable food bay in building 3 with concrete walls.

* Concrete hard standing in the middle of the yard around the foul water pumping chamber and at the corner of the entrance to Building 3, next to the compostable food waste bay.
* Pedestrian door way put beside the lorry entrance to building 1 for quick access on foot.
* Sealed around the pedestrian door way on the stairs into Building 1 and around the top of the dust curtain on the door way above the SRF compactor trailer. (Following comments from the EPA during a site visit).
* Concrete hard standing at bay 1 and bay 2 of building 5 repaired and replaced.

Training

- Staff training - ISO Training and auditing carried out
- Emergency Response Training – Fire drills
- Tool box talks carried out

ISO

- Thorntons Recycling passed two successful surveillance audits which were carried out by Certification Europe to maintain the company standards for ISO 14001 Environmental, ISO 9001 Quality and OHSAS 18001 Health and Safety.

7.2 PROPOSED DEVELOPMENTS IN 2016

It is proposed that the original linder shredder will be reconditioned and positioned on site to act as a backu when maintenance work is required on the main linder shredder. No planning permission is required.

There is a trial of new odour abatement technology planned for February 2016. The new technology is planned to work in addition to the current odour abatement measures. The trail is being carried out by OMI and if it is deemed successful the EPA will be informed prior to a more permanent installation been purchased.

Any developments are proposed with the intention of reducing environmental impacts of the facility, improving the appearance and increasing waste processing efficiency at Thorntons Recycling Centre. Thorntons Recycling main aim is to reduce as much waste as possible for landfill disposal in line with national policy and further increase recycling and recovery rates at the facility by:

- Continuous Development on company procedures in line with ISO certification
- Review environmental checks and procedures

Prior to new installation works being carried out the environmental department completes the environmental aspects for the project and identifies for operations and maintenance any environmental aspects to be considered during installation. This process is part of the company ISO procedures but also allows us to mitigate against unforce events during the installation process.

Any planned infrastructural developments will be notified in advance to the EPA in compliance with the facility licence.

7.3 PLANT CAPACITY 2016

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

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

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

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

8 SCHEDULE OF ENVIRONMENTAL OBJECTIVES AND TARGETS FOR 2016 AND PROGRESS REPORT FOR 2015

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

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

A detailed report table on progress towards the achievement of the Environmental Objectives and Targets for 2015 is contained within Appendix 6 of this report. The schedule of environmental objectives and targets for 2016 has been included but may be amended and finalised after the management review in March 2016. This schedule will be available for the EPA to inspect during any of their site audits in 2016 at any of our facilities.

9 SUMMARY OF PROCEDURES DEVELOPED BY THE LICENSEE IN 2015

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 ISO 14001, ISO 9001 and OHSAS 18001. In 2015 the system was continuously developed and improved. The company was audited twice during the year by Certification Europe and all three certificates were maintained across the whole company including the Killeen road facility.

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.

There were no new procedures developed for the Killeen road facility in 2015.

10 TANK, DRUM AND PIPELINE TEST

10.1 TANK BUNDING

Thorntons Recycling commissioned FTC consultants to complete testing on the main diesel bund. The main diesel bund passed its test on the 3rd – 5th June 2014 and a certificate is maintained on site. The bund is not due for testing until 2017. The C & I bund was decommissioned in early 2011 and the diesel tanks were removed. The bund is still in situ but is not used. The bund will remain in place as it is a concrete structure and will be tested if it is re-commissioned in the future.

10.3 PIPELINE TESTS

Thorntons Tankering Services (TTS) completed a full CCTV drain survey at the facility during January 2013 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 separately as well as a DVD of the survey in February 2014.

The integrity and water tightness of all underground pipes and tanks and their resistance to penetration will be carried out once every 3 years as per Condition 3.13.7 of the waste licence. The pipelines are due for testing in 2016 and a report will be submitted to the EPA following completion.

11 SUMMARY OF INCIDENTS AND COMPLAINTS

11.1 INCIDENTS

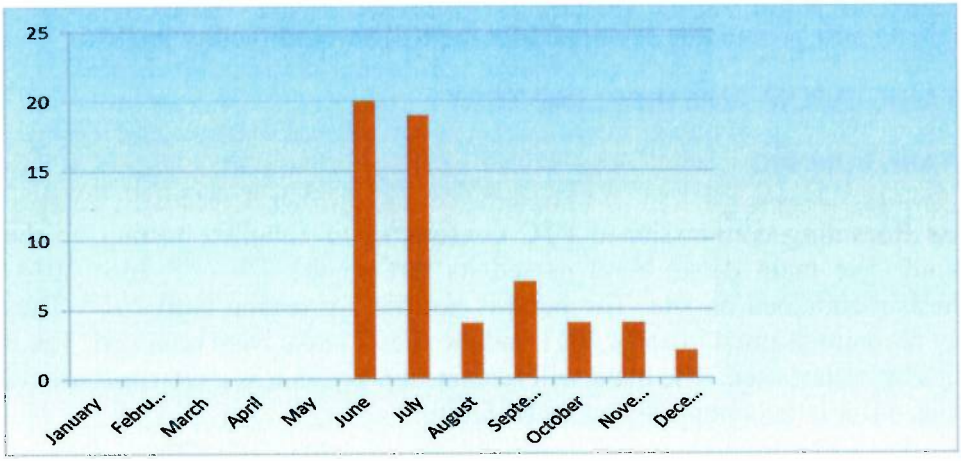
There were no incidents recorded during 2015 by the onsite monitoring. The EPA recorded an exceedance of the BOD trigger level at FW2 on the 16.06.15. The drains were cleaned as part of Thorntons normal schedule and the following sample taken at this monitoring location showed that the elevated level was not continuous.

Thorntons will ensure that regular monitoring is carried out and will endeavour to maintain the emission levels with the licence limits.

11.2 COMPLAINTS

Complaints were reported either directly to the EPA or to Thorntons Recycling Centre during 2015. Figure 10 shows the breakdown of complaints by the month in 2015. There were a total of 60 complaints received during 2015 which was an increase of 22% on the previous year.

Figure 10 Break down of all complaints 2015 by month



Analysis of the complaints during 2015 shows that 60 complaints were received in relation to odour. 51 complaints were received by the EPA and 9 were received on site. There were 12 individual complainants in total. Four individual complaints made up 77% of all the complaints and 7 individual complaints made up 90% of all the complaints.

The trend with complaints in 2015 was similar to that of 2014 and has been towards complaints being reported directly to the EPA and not to the site, which results in the site getting the information on some occasions the next day when the perceived odour has already ceased to be present. Thorntons staff has stressed the importance with complainants on informing the environmental staff when the odour is occurring so that we can investigate it in a timely manner. During 2015, 41 complaints were recorded as been unconfirmed when investigated. The complaints were typically received after the event was perceived to be occurring. No odour was detected by staff when 12 complaints where investigated and on one occasion the odour noted was not from Thorntons Recycling. There were 4 occasions in 2015 when and odour was noted off site following an investigation. On one of these occasions two neighbours made the one complaint at the same time. For all four complaints the perceived sources were identified and once rectified the complainant was contacted to confirm that there was no continuous odour.

All complaints, weather received on site or via the EPA are recorded and tracked as part of the complaints procedure.

The EPA carried out 11 odour assessments during 2015 and on only one occasion was an odour detected that was deemed to have originated from the Thornton's facility.

There were 2 protests in 2015 (30th June 2015 and the 7th July 2015). On both occasions the facility entrance was blocked and deliveries and consignments had to be postponed and diverted elsewhere.

The carbon was changed 2 times during 2015 (25th March 2015 and 15th June 2015) and is monitored daily so that maintenance staff can be notified in advance when the carbon is due to expire.

Thorntons Recycling is committed to not allowing odours off site. We believe that the odour abatement has been successful at the facility in 2015 despite the number of complaints. As discussed in section 5.4 an odour assessment by an independent body was carried out during 2015 on our odour treatment system which concluded that the odour generated at the facility is being managed effectively. The EPA also carried out a number of random odour inspections throughout the year and Thorntons were found not be causing nuisance odours in the surrounding areas for all but one of these reports.

Thorntons Recycling takes every complaint seriously and is committed to resolving all complaints to the facility. We feel that in 2015 we have done our utmost to be proactive in dealing with local complaints and we aim to continue this trend in 2016. Thorntons has a planned trial of new odour abatement technology with OMI in quarter 1 of 2016 and the EPA will be informed if the trial is successful.

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).

In response to EPA suggestions the condition (size) of the stock piles in each shed is monitored and recorded each day as part of the daily environmental check list. Records are maintained on site in the environmental office.

12.1 DUST

PTWDL are required to carry out dust monitoring three times per year. Results of the dust monitoring have been 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 in Building 2 and a dust system RJP Pulse Plant has been installed since March 2006 to remove dust from the air extracted from Building 3. PTWDL uses a road sweeper twice daily on the Killeen road facility or more frequently if deemed necessary. The sweeper is also used on the Killeen Road and Kylemore Park North road to assist in reducing dust levels due to passing traffic and contributory factors. In 2013 a new mist air system was installed within the buildings on site to further reduce the potential of dust emissions and odour emission on site.

12.2 NOISE

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

12.3 ODOUR

Tipping of potentially odorous waste and subsequent segregation and processing occurs within the sealed building 3 which assists in preventing odours from escaping beyond the facility boundary. Putrescible waste is removed from the facility within 48 hours. An Odour Abatement System was installed in March 2005 which uses carbon filtration to extract and treat the molecules that cause odorous air. Further works such as sealing all buildings with polyutherane foam, the installation of an air curtain system and the installation of a pulse plant for dust extraction to improve operation efficiency of the odour treatment system were also carried out since this time. In 2011 a large previously open area of building 3 was closed off with a roller door and metal cladding. A roller door was installed on building 1 to further reduce emissions for the building escaping. In 2015, the carbon was changed two times to ensure a high odour removal rate from the odour system. In 2013 the mist air system was installed to further assist with reducing potential odour emissions.

PTWDL have submitted odour progress reports to the Agency throughout 2015 and Thorntons Recycling will continue to maintain the system in best working practice and keep the EPA informed of the 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 contracts a road sweeper which sweeps inside and around the facility twice daily. Staff sweep and tidy picking areas throughout the day and night and daily housekeeping checks are carried out by supervisors in all areas with further checks being carried out by the environmental department on a daily basis. All housekeeping checks are maintained on file in the Environmental Department at Thorntons Recycling Centre.

12.4 BIRDS

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

12.5 RODENTS

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

12.6 FLIES

Flies have not been a problem at the facility during 2015 and no preventative fly sprays were required. The presence of flies is checked as part of the daily environmental checks and if required additional action will be carried out by the contracted pest control company.

12.7 TRAFFIC

Thorntons Recycling Centre is bordered to the West of the facility by the busy Killeen Road which has an access entrance into Park West Industrial Estate and is bordered to the North of the facility by Kylemore Park North, both locations receive a considerable amount of traffic.

13 FINANCIAL PROVISIONS, MANAGEMENT STRUCTURE, PROGRAMME FOR PUBLIC INFORMATION

FINANCIAL PROVISIONS

PTWDL is insured by JLT (Appendix 6). PTWDL is insured for Employers Liability, Public/Products Liability and Motor Insurance. PTWDL is a financially secure company which is evident from the director's report and consolidated financial statements for the year ended 31st December 2014. Thorntons Recycling is insured under public liability for €13 million for sudden and accidental pollution incidents.

The company also have employed environmental management staff to ensure best practice guidelines and compliance with waste licence W0044-02 is being adhered to. A comprehensive emergency plan exists for all facilities operated by the company and the company has maintained certification to Environmental Standard ISO 14001 across all its sites in 2015. 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 students and businesses in 2015. The environmental team have been actively involved in carrying out recycling workshops and audits in schools, hospitals and industrial and commercial businesses as well as giving presentations to some of our larger commercial customers at their facilities.

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

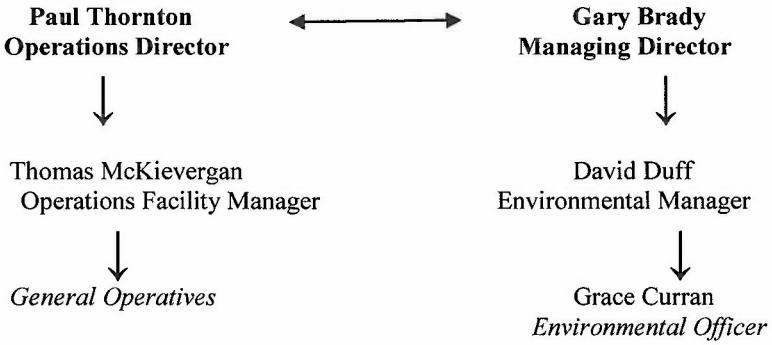
Thorntons Recycling has upgraded its website so customers can access information such as waste collection permit numbers and facility waste licences under the compliance section etc. These permits and licences are updated regularly and the web site is maintained with the most up to date information. The companies, on line skip service www.skip.ie provides our customers with services and information in relation to hiring a skip from Thorntons Recycling. All household customers now have a personal log in number to our website which enables them to view their waste activities including weights, collection dates and times etc.
A news update section of our website is updated regularly with news about the company which enables customers and the public to keep up to date with Thorntons Recycling.

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

Thorntons Recycling was the runner up waste collection operator of the year and green transport Repak Awards 2015. The company won the green product award at the Green Awards in 2015.

MANAGEMENT STRUCTURE

The graph below details the 2015 management structure relating to the Killeen Road site for the second half of the year.



14 FOUL WATER PRODUCTION AND VOLUME OF WATER TRANSPORTED OFF SITE

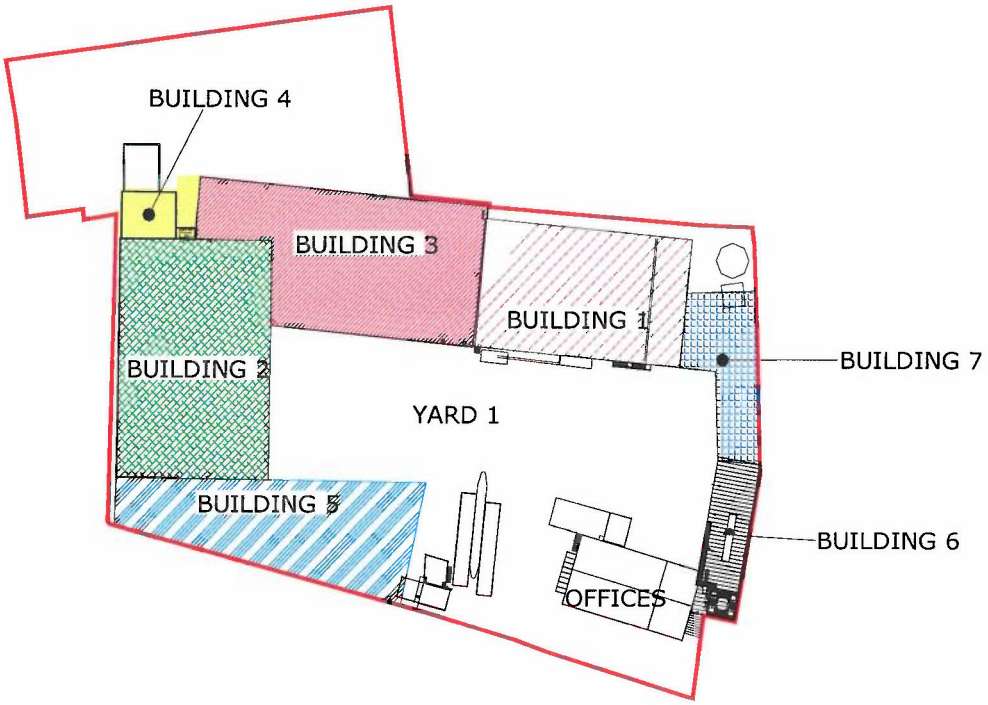
Thorntons Recycling Centre are limited under schedule C4 of waste licence not to emit more than $20m^3$ per day to the sewer at emission point reference F2 which exits at the north of the facility at Kylemore Park North or $12m^3$ per day to the sewer at emission point reference F1 which exits at the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

Both foul meters located on F1 and F2 locations are checked during daily checks at the facility and zeroed at the end of the year. A total of 1,248,400 litres was discharged from F1 during 2015 and 2,113,200 litres from F2. Both are below the max permissible annual discharge for the reporting period by 71% and 71% respectively. Thorntons Recycling Tankering Services is used for all onsite drainage maintenance and can be called in the event of an emergency if required. Approximately 21,950 litres of foul water or drain cleaning and maintenance was removed by tankers from the facility in 2015. Job tickets are located in the drain maintenance file in the Environmental Department, Killeen Road, Dublin 10.

15 RESTORATION AND AFTERCARE

A restoration and aftercare plan was prepared in 2014 which detailed and costed for the decommissioning or closure of the facility. The plan was submitted to the EPA and agreed. In compliance with condition 4.2.3 the plan is reviewed annually and costings are updated in line with costs agreed for the year ahead. There are no proposed amendments to the details of the decommissioning plan for 2015-2016.

Appendix 1


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

Appendix 2

EWC Code	Materials Received	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total Year To Date
20 03 01	MMW In	4736.82	4596.34	5153.30	5312.39	5318.08	4653.55	5417.06	5127.23	6242.77	6143.01	5657.08	5315.12	63672.75
20 03 07	Bulky MWW	3165.78	3938.35	3936.33	4873.31	5305.76	5309.82	5619.63	4756.73	4901.39	5495.98	2585.78	1348.04	51236.90
19 12 10	Combustile waste suit SRF processing	1808.18	1580.56	1435.66	1653.04	2356.62	2107.38	2366.26	2524.24	2543.31	1947.62	1913.44	2436.56	24672.89
20 03 03	Street cleaning residues	1330.24	1090.84	1217.70	1430.86	1401.48	1494.72	1593.68	1398.36	1410.50	1692.14	2021.38	1698.34	17780.24
19 12 12	Inert trommel Fines	78.88	142.98	110.34	113.08	74.08	128.32	81.04	149.24	105.88	133.52	132.14	115.84	1385.34
17 01 07	Clean Construction Rubble								45.98					45.98
17 09 04	Mixed C&D Waste	3806.57	4088.36	4596.00	4679.00	4446.38	4654.32	4861.05	4284.84	4474.85	3842.12	1890.90	1003.72	40628.11
17 05 04	Soil and Stones	4.56	34.70	47.44	106.66	109.46	133.60	66.80	39.62	51.42	29.52	26.74	10.42	662.94
02 01 06	Straw/ Animal Manure.							2.06	7.46		8.92	0.94		19.38
04 02 20	Sludges from Textile Industry				11.36									11.36
02 06 01	Bakers Waste	44.12	33.28	51.08	33.86	49.54	52.38	25.64	10.06	2.94	9.78	4.98	3.50	321.16
18 01 04	Non Infectious Healthcare Waste	623.58	605.46	644.66	601.80	638.58	653.28	705.16	627.43	661.33	664.38	645.53	711.52	7782.71
02 02 99	Food Prep Animal Origin				8.02									8.02
02 03 04	Tobacco	12.34	2.84	6.58		3.68	18.96	18.68	8.18	6.52		21.92	6.50	106.20
02 06 01	Unsuitable food dairy							15.98						15.98
02 03 04	Unsuitable food waste	7.10	9.50	4.86	21.72	8.42	11.30		11.80	3.46	1.22	39.34	17.36	136.08
16 03 04	Products for Destruction inorganic	2.90	2.26	3.66					3.70	8.22	2.94	3.84	1.62	28.74
02 07 04	Unsuitable Alcohol and Liquid for Destruction	7.16	16.24			23.02		17.88	6.46	21.24	8.28		6.06	106.34
20 01 99	Mixed Dry Recyclables				0.10	3.66		7.76						11.52
16 01 18	Metal non ferrous aluminium				0.92									0.92
17 04 01	Metal, Copper, bronze, brass	0.62		0.16		0.70	0.16			0.20			0.18	2.02
15 01 04	Metallic Packaging Aluminium								0.26	1.28				1.54
15 01 06	Mixed Packaging (dry MMW)	3.86	4.06	3.50	3.70	5.06	11.26	2.22	2.96	3.92	7.84	7.94	3.86	60.20
19 12 02	Ferrous Mixed Metal	10.14	20.36	3.50	19.90		11.46	14.02	17.84	10.18	7.85	14.37	17.10	146.72
17 04 11	Metal Wiring Cable							0.16						0.16
17 04 07	Metal Mixed C & D	3.72	7.28	0.92	4.02	38.22	4.42	4.96	6.20	2.80	2.58			75.12
15 01 03	Wood Packaging	252.70	228.42	240.62	300.02	365.28	282.56	242.32	240.92	251.66	317.42	192.28	75.60	2990.80
19 12 07	Woood Processed Wood e.g. chipped	9.32	10.62	6.16	3.56	4.14	5.58	4.76	5.26	6.12	14.10	5.66		77.30
17 02 01	Wood C & D Waste Wood	65.26	80.20	86.28	95.80	140.14	137.58	116.64	94.24	73.04	101.03	52.56	21.54	1064.31
03 01 05	Wood Waste Manufacturing	26.32	16.64	13.42	42.62	26.54	22.80	9.42	37.62	20.62	25.80	6.96	7.28	255.04
20 01 38	Wood Municipal Waste	26.34	18.52	17.40	15.60	15.82	11.76	8.64	18.70	43.26	62.92	50.74	56.74	346.64
15 01 02	Mixed Plastic Film - Low Grade	5.08	3.42	6.96	6.32	7.02	4.52	6.30	2.86	7.60	5.20	7.98	4.34	67.60
15 01 02	Mixed Plastic PP packaging			0.34										0.34
15 01 02	Mixed Bottles			21.98	0.60							0.50		23.08
20 01 39	Mixed Hard Plastics	1.14	3.26	3.84	1.77	7.44	2.28	1.36		7.18	4.44	9.14	3.78	45.83
19 12 04	Glass Packaging				4.22				3.58		7.14	4.72		19.66
20 01 02	Glass Other	80.60	92.26	75.44	87.82	76.02	78.58	83.58	80.18	92.76	72.90	72.08	31.80	904.04
20 01 08	Brown Bin/ Seperately collected Food Run	1794.20	1644.76	2173.54	2596.89	2685.96	3021.66	2796.07	2441.34	2363.27	2340.90	2190.02	1991.06	28061.67
20 02 01	Green Waste	195.04	70.62	40.50	39.38	51.34	19.62	36.06	17.54	29.14	122.70	260.20	22.32	904.66
20 01 11	Textiles / Clothes	3.58	14.59	1.02	19.40	4.80	0.78	9.32	1.12	2.78	3.94	5.02	0.16	66.51
16 01 03	ELV Tyres				2.54			1.40	0.68	2.88	3.12			10.62
17 09 02	Gypsum Products/Plasterboard	3.54	3.06	1.82		3.98	9.58	2.12	14.26	5.34	1.22	1.70	4.42	51.04
19 09 01	Screenings Sewage Treatment				2.12	2.46		3.88	2.68		2.12		2.14	15.40
19 09 04	Carbon - Spent activated			10.42		5.14		5.36		5.34		5.92		32.18
15 01 02	Polystrene						0.44							0.44
	TOTAL	18109.29	18359.82	19915.43	22072.40	23177.82	22842.87	24151.47	21999.59	23385.20	23062.66	17631.80	14917.94	249636.28

Appendix 3

EWC Code	Materials Consigned	Jan	Feb	Mar	Apr	May	June	July	August	Sept	October	Nov	Dec	Total Year To Date
20 03 01	MMW (Bord na Mona Drehid Landfill)		171.68		659.96	291.20		15.08	17.76	676.14	291.44			2123.26
20 03 01	MMW (Ballynagran Landfill)		115.88											115.88
20 03 01	MMW(Greyhound)				235.66	43.56								279.22
20 03 01	MMW (Oxigen, Robinhood)				68.12									68.12
20 03 01	MMW (Indaver Waste to Energy)		428.66							55.68				484.34
20 03 06	Street cleaning residues (Bord na Mona Drehid)	2029.24	995.66	1338.76	1682.64	1477.68	1429.66	1793.56	1744.90	2037.86	1419.52	1678.35	1348.90	18976.93
19 12 10	SRF (Lagan Cement)	276.14	1373.00	1428.66	1027.14	1586.74	1039.42	1194.34	1332.22	1784.80	1958.08	2132.78	2149.38	17282.70
19 12 10	SRF (Pacon)	312.06												312.06
19 12 10	SRF (Quinn Cement)					1067.72	1733.56	169.16	1693.30	1937.90	1698.68	932.66	1090.82	10323.80
19 12 10	SRF (Dunboyne)	3063.92	3783.24	529.30										7376.46
19 12 10	SRF (Greyhound)							149.36						149.36
19 12 10	SRF (Irish Cement)	2471.22	142.92	4919.42	4970.20	4474.96	4357.10	6145.88	3948.74	4309.84	4396.24	6588.22	5738.86	52466.60
19 12 12	Stone (Bord Na Mona Drehid Landfill)	1052.36	2666.50	2619.56	1808.42	1732.38	1528.38	1406.70	1106.82	1306.86	1230.60	1112.06	125.82	17696.46
19 12 12	Stone (Tara Mines)						562.64	1723.96	1674.92	1679.14	1406.60	1325.94	28.52	8401.72
19 12 12	Organic Fines (Oxigen Robinhood)						153.60	117.44	118.64	161.42				551.10
19 12 12	Organic Fines (OD Recycling)					84.32								84.32
19 12 12	Organic Fines (O Tools Composting)					276.70	324.58	106.30	53.90	112.76	325.58	490.92	247.38	1938.12
19 12 12	Organic Fines (McGill Environmental)	609.60	1119.06	1047.80	889.68	1181.68	1124.40	1379.96	1448.78	1674.96	1192.80	1042.64	1307.60	14018.96
19 12 12	Organic Fines (Bord Na Mona)	19.22				153.66				164.38	272.56	28.22		638.04
19 12 12	Organic Fines (EnrichEnvironmental EX AES)								26.72				52.54	79.26
19 12 12	Trommel Fines (Bord na Mona Drehid)	4141.28	3477.00	3382.00	4027.68	4612.46	4771.60	4934.68	4710.83	3784.84	4319.00	2384.44	613.74	45186.55
19 12 12	Trommel Fines (Ballynagran)		223.68	161.82	700.08	400.72	219.12	863.54	444.30	476.66	802.50	203.26		4515.68
19 13 02	Ferrous Mixed Metals (Hammond Lane)	108.64	18.60	50.48			50.32	185.88	192.40	42.44	18.94	59.00	8.84	735.54
19 12 02	Ferrous Mixed Metals (Multimetals)	443.40	505.44	495.96	532.64	590.46	725.28	384.82	416.22	528.88	605.86	607.92	536.68	6373.60
19 12 02	Ferrous Mixed Metals (Wilton Waste)						6.88			0.72				7.60
19 12 03	Non-ferrous metals (Hammond Lane)	70.22	64.30		43.62	48.76		60.76	37.14	43.24	43.25	55.52	45.92	510.73
20 13 03	Non-ferrous metals (Hammond Lane)													0.00
19 12 03	Non-ferrous metals (Wilton)					7.14			22.82	21.58	6.76	7.90	14.94	81.14
17 04 11	Metal cabling (Wilton Waste)	2.62	4.52	4.06	1.94	2.80	1.96	1.92	4.82	9.06	2.72	2.60	5.90	44.92
17 04 01	Copper and bronze (Hammond Lane)													0.00
17 04 01	Copper and bronze (Wilton)	16.10	7.34	18.16	9.40			10.24	6.80		2.72	3.62	6.06	80.64
15 01 04	Metallic Packaging Aluminium (MDR Facility)	13.48	14.76	14.56	15.62	25.22	14.06	18.16	12.66	13.54	12.16		17.16	171.40
15 01 04	Metallic Packaging Tin (Wilton Waste)	39.38	13.82	14.14	44.26	31.60	16.16	16.58	62.60	52.28	17.12	47.96	17.76	373.66
20 01 39	Hard Plastic (Leinster Environmental)	10.84		10.48	8.50	16.46	16.12	15.44	17.50	20.08	11.28	5.52	11.96	144.18
20 01 39	Hard Plastic (Irish Polymer Extrusions)		10.68							3.02	9.12	12.76	19.52	55.10
20 01 39	Plastic Wrap (MDR)		0.20											0.20
20 01 08	Compostable Food Waste (Kilmainhamwood)	1663.72	1722.96	2212.66	2499.64	2555.85	2543.62	2789.53	2510.65	2315.10	2207.64	940.56	1299.02	25261.15
20 01 08	Compostable Food Waste (Waddock Composting)	72.68				168.10						251.36	25.62	517.96
20 01 08	Compostable Food Waste (Acorn Recycling)	32.68					106.38					111.36		250.42
20 02 01	Green waste (Barrockstown Farms Limited)				16.16		32.26	48.24	16.12	35.98	322.82	215.98	227.18	914.74
20 02 01	Green Waste (PDM)	7.96												7.96
17 09 02	Plasterboard (Allied Waste Management)												3.53	3.53
15 12 01	Cardboard (MDR)			10.12										10.12
15 12 01	Cardboard (IPR)						2.68	3.84	12.00	16.44	4.68		7.16	46.80
16 06 01	Batteries (Wilton)					1.00		1.00						2.00
16 05 06	Gas Cylinders (Quarantine)			0.72		1.16	0.54	0.70	0.60		0.50	0.32		4.56
16 01 03	Tyres (Crumb Rubber)	7.06												7.06
15 01 03	Wood Pallets to PDM				9.20									9.20
19 12 07	Wood (PDM)	1131.66	1144.26	1118.60	961.70	1032.20	1046.68	885.72	1048.95	1015.72	967.20	721.82	212.22	11306.73
20 01 01	Paper Mixed (MDR)										1.20			1.20
	TOTAL	17595.68	19004.36	19407.48	20212.26	21862.57	21807.22	24422.79	22883.11	24281.12	23586.57	20964.89	16163.03	249974.08

Appendix 4

THORNTONS RECYCLING CENTRE
PLANT CAPACITY REPORT JANUARY 2016

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 2016					
Area	**Details**	**Machine**	**Capacity (tonnes per day)**	**Spare**	**Spare Capacity (tonnes per day)**
Waste Handling	Handling Skip Waste (B2)	Libherr 1	1500	Fuchs 6 (PDM)	1500
Waste Handling	Loading Trailers Oversize (B2)	Fuch 8	1500	Shovel 2 - JCB loading shovel 456	2000
Waste Handling	Loading MSW line (B3)	Libherr 2	1500	CAT Fuchs	1200
Waste Handling	Replacement during cleaning	Fuchs 9	1500	Shovel 3 & 4 Cat (PDM x 1)	4000
Waste Handling	Unloading trailers in the yard	Fork lift 1 (7 Tonne)	1000	Forklift 3 &5 MDR	2000
Waste Handling	Moving full and empty waste trailers	Shunter 1	1200 (* Based on 100 tonnes per hour for 12 hours)	Forklift 4 MDR	1000
Waste Handling	Moving waste in Building 3	Shovel - Volvo L120H	2000	Teleporter 1&2 in MDR	2000
Waste Handling	Moving waste in building 1	Shovel 5 - Volvo L120F	2000	Shovel 5 & 1 L90C (Dunboyne & Kilmainhamwood)	4000
Waste Handling	Moving waste in yard- Spare	Shovel - Volvo L120F	2000	Shovel 2 - JCB loading shovel 456	2000
Waste Handling	Spare in labre/yard	Cat 360B Teleporter	1000		
Waste Handling	Moving full and empty waste trailers	Shunter 2	1200 (* Based on 100 tonnes per hour for 12 hours)		
			16,400		**21,700**

Table 2: Current Capacity of Waste Processing Machinery.

THORNTONS RECYCLING CENTRE CURRENT DAILY PROCESSING CAPACITY 2016						
Area	**Details**	**Machine**	**Capacity (tonnes per day) Based on 14 hr day**	**Spare**	**Spare Capacity**	**Emergency Spare Parts In Store**
Processing	C.I.D line- crusher, 2 x trommels, 2 x Nihots, flip flop and picking lines (14 hr day)	C.I.D line	490	Diversion of waste to another facility or work a longer shift	Yes	Yes Motors, Belts and rollers
Processing	MSW line- crusher, waste screen and Nihots (14 hour day)	MSW line	560	Bulking material and consigning to landfill	Yes	Yes Motors, Belts and rollers

1050

Table 3 Current Capacity of Waste Transportation

THORNTONS RECYCLING CENTRE CURRENT TRANSPORT CAPACITY 2015					
Area	**Details**	**Machine**	**Capacity (tonnes per day)**	**Spare Capacity**	**Emergency Spare Parts In Store**
Transport	Moving waste to landfill - Loose Waste	7 Open Top Trailers	(2 driver, 5 lds * 25t per ld) **125**	Yes	Yes
Transport	Moving SRF to outlet	8 Closed trailers and 6 walking floor trainers	(3 driver, 15ld 24t per ld) **360**	Yes	Yes
Transport	Moving Compostable waste	3 Aluminium trailers	(2 driver, 4lds 27t per day) **108**	Yes	N/A
Transport	Moving Wood to PDM	7 Open top trailer and 5 walk floor	(1 drivers,3 lds * 25t per ld) **75**	Yes	N/A
Transport	Moving mixed metals	2 Open top bulker, 4 40ft tippers.	(1 drivers,2 lds * 20t per ld) **40**	Yes	N/A
Transport	Moving Organic Fines	2 walking floors and 3 tipper trucks	(2 drivers,4 lds * 26t per ld) **104**	Yes	N/A
Transport	Moving Trommel Fines and Stones	2 rigid tipper trucks 1 artic truck	(3 drivers,12lds*25t per ld) **300**	N/A	Yes
			1,112		

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 displays the current capacity of waste processing machinery and the current transport capacity. Should the facility be required to handle more than that displayed in Table 2 and 3, hours of processing can be increased as the facility is licenced to operate under a twenty four hour licence and extra drivers and trailers can be hired to accommodate transport of materials. The trailers and lorries are able to transport a number of different types of waste streams so trailer types are interchangeable to transport material off site as required.

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

PTWDL employs a maintenance team who are responsible for ordering and cataloguing all essential spare parts. The team consists of qualified fitters and electricians, who have their own maintenance workshop and service bay onsite at the Killeen Road facility. A garage has been developed in Park West Industrial Estate where a team of 13 are employed. The garage is equipped with all the necessary specialized equipment and an emergency service vehicle for call out or to fix mechanical breakdowns. PTWDL have 24 hour access to Hose Doctor who can be on site within the hour to replace any damaged hydraulic fittings.

CONCLUSION

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

Appendix 5

PM03- F01 Management Programme 2015

COMPLETED | ON HOLD CARRY FORWARD TO 2016 | ON HOLD

Ref Numbe	Date	Type	Objective and Target	Location	Responsibility	Method	Time Frame	Status
EP03	Jan-15	Environmental	Environmental Guidance File on X Drive to be reviewed and Completely updated	All Sites	Team	1. MK split folder between all staff to ensure all folders up to date 2 Circulate to head office when complete useful for tenders and customers	May-15	Completed - DD completed sections assigned in April 2015. GC & MK completed Sections May 2015
EP 05	Jan-15	Environmental	Killeen Road Site environmental appearance for summer 2015 - hanging baskets etc	Killeen Road	DD	1. Discuss with Paul and have a third party deliver and erect flower baskets.	Jun-15	Completed in June 2015
EP 06	Jan-15	Environmental	Smarter Way of reporting Third Party tipping on. WIMS to be investigated	All Sites	SR/ MK	1. SR to review with WIMS and resend the data dump format in a spreadsheet that could be used. Liase with DB	Dec-15	WIP - MK/SR to redesign reports. Templates completed in May 2015. MK to meet with NF to discuss
EP 07	Jan-15	Environmental	Weighbridge Ticket - Investigate new design with new information	All Sites	SR	1. Get 4 samples of tickets from other companies 2. Get samples of tickets from other companies using WIMS/AMCS system 3. Team to make decision on look. SR to look at costs for changing 4. Loot at Haulier Name and Registration option	Dec-15	WIP - SR/DD have designed new tickets, needs team approval. 4 x tickets as templates from other waste companies . MK/SR sent request for new reports and tickets to NF June 2015 WIMS working on putting data on new platform so will be at least Aug/Sept before requests looked at
EP 08	Jan-15	Environmental	Project - SRF - Linder Shredder replacement in Killeen Road	Killeen Road	DD	1. Remove old linder shredder and store on Killeen road. 2. Install new linder shredder	Feb-15	Completed. Installation work carried out in February and process operating again.
EP 11	Jan-15	Environmental	Create SOP for environmental emmergency situations - such as for the weighbridge in the event of a power cut, odour system in the event of a power cut and for when warning alarms are activated on site	Killeen Road	DD	1. Review correct procedure with maintenance and operations staff. 2. Draft SOP's. 3. Have mainteance and operations approve SOP's. Finalise SOP's. 4 Update ERP and Training file for the site	May-15	Completed - Passed to Marius in Maintenance in April 2015.
EP 12	Jan-15	Environmental	Repak Survey on SRF produced at the killeen road facility.	Killeen Road	DD	1. Discuss with repak. 2. Appoint consultants. 3. Carry out work. 4. Report survey findings to Repak.	June 2015.	Completed October 2015
EP 13	Jan-15	Environmental	Review and update the Killeen road Process procedures and flow diagams for 2015. For use on educational tours and for the sales team	Killeen Road	DD	1. Review process flow diagrams. 2 Review process procedures. 3. File old revisions.	Feb-15	Completed - Records updated on the X drive in the environmetnal guidance folder and e-mail circulated to customer care and sales
EP 22	Feb-15	Environmental	Concreting works for the main yard around the FW pumping chamber	Killeen Road	Ted / DD	1. Cut concrete. 2 Remove concrete. 3. Top up infill. 4. Put in rebar. 5. Pour concrete	Aug-15	Completed- on the 1st May 2015.
EP 23	Feb-15	Environmental	Errect steel wall between incoming MSW and Organic fines bay	Killeen Road	Ted / DD	1. Remove current concrete structures. 2. Fix steel plated dividing wall in place.	Sep-15	Completed in May 2015
EP25	Sep-15	Environmental	Tidy up Environmental Legal Register to remove all irrelevant legislation	All Sites	GC	1. Review existing Legal Register & ascertain which legislation does not apply to Thomtons Recycling & remove 2. Re do register to simplify 3. insert section for revoked legislation	Dec-15	Carry over to 2016 to complete.

PM03- F01 Management Programme 2016

COMPLETED		ON HOLD CARRY FORWARD TO 2016			ON HOLD			
Ref Numb	Date	Type	Objective and Target	Location	Responsibility	Method	Time Frame	Status
EP 01	Jan-16	Environmental	CCTV survey to be carried out on the Killeen road Facility.	Killeen Road	GC	1 - Organise through TTS	Jan-16	
EP 05	Jan-16	Environmental	Re-testing of fowl water flow meters in Killeen road- FW1 and FW2	Killeen Road	GC	1. Liase with calibration company to retest and calibrate the flow meters.	Sep-16	
EP 07	Jan-16	Environmental	Installation of Linder Shredder in Killeen Road	Killeen Road	GC	1. Liase with operations and complete aspects on the installation of a second linder shredder in Killeen road. Notify EPA of works prior to commencement.	Jan-16	
EP 08	Jan-16	Environmental	Review of Environmetal Legal Register file	All Sites	GC	1. Review existing Legal Register. 2 Ascertain new legislation which applies to Thorntons Recycling . 3. Input new legistation 3. insert section for revoked legislation	Jul-16	Carry over from 2015
EP 09	Jan-16	Environmental	Review third party tipping recording template and create one template for all sites	All Sites	DD/GC/SC	1. Review current format and identify missing data. .2 Create a new format. 3 Each site to track third party tippers and update	Jun-16	
EP 11	Jan-16	Environmental	Liase with IWMA on C&D stone- end of waste criteria.	Killeen Road & Dunboyne	DD/GC	1. IWMA sub group meeting.	Dec-16	
EP 13	Jan-16	Environmental	Concreting works for the main yard at the entracne to Bay 1 &2 of Building 5	Killeen Road	Ted / DD	1. Cut concrete. 2 Remove concrete. 3. Top up infill. 4. Put in rebar. 5. Pour concrete	Jan-16	Completed- On week 1 of 2016
EP 14	Jan-16	Environmental	Trail with OMI on new odour abatement technology	Killeen Road	Ted / DD	1. Agreed procedure with OMI. 2 Install trail system. 3. Test results of trail system. 4. Review report in order to make a decision on long term installations	Apr-16	

Appendix 6

Celebrating 50 years in Ireland

JLT Ireland
Friends First House
Cherrywood Business Park
Loughlinstown
Dublin 18

Tel +353 1 2028000
Email jlt@jlt.ie

www.jlt.ie

EFB

To Whom it May Concern

30 June 2015

Confirmation of Insurance Cover

Our Client: Padraig Thornton Waste Disposal Ltd

We act as Insurance Brokers to the above client and confirm that the following insurance has been arranged on their behalf.

Insurance Type Liability	:	Combined Liability comprising Employers, Public and Products
Period	:	01 July 2015 to 30 June 2016
Business Description	:	Waste Collection, Recycling and Disposal including Electrical Waste and End of Life Vehicles, Composting, Maintenance of Own Vehicles and Contractor's Vehicles used on the business of the Insured, Bin Repair and Drain Cleaning, Sludge Dewatering, Pressure Jetting & CCTV Services, Industrial Cleaning, Hazardous Waste Cleaning, Removal & Disposal, Tank Cleaning, Hazardous & Non –Hazardous Waste, Septic Tank & Grease Tap Cleaning and Waste (Hazardous & Non- Hazardous) Removal & Disposal and Property Owners
Limit of Indemnity	:	€20,000,000 in respect of Employers Liability €13,000,000 in respect of Public/Products Liability
Insurers	:	QBE Syndicate 386, London
Policy Number	:	AA156568

Insurance Type	:	Motor Fleet
Period	:	01 July 2015 to 30 June 2016
Limit of Indemnity	:	€6,400,000 – Third Party Property Damage
Insurers	:	QBE Europe Ltd
Policy Number	:	Y105938FLT0215A

This document does not confer upon the addressee, recipient or holder any rights in the insurance nor does it set out the full terms, clauses, conditions, limits and exclusions of the insurance. These statements have been made in good faith and are a summary of the insurance cover in force as at the date of this letter (which insurance remains subject to the full terms and conditions of the subscribing insurers' policy), although the Limit of Indemnity may have been impaired by incurred claims and therefore may vary from the amount shown. We accept no responsibility whatsoever for any inadvertent or negligent act, error or omission on our part in preparing these statements or for any loss, damage or expenses thereby occasioned to any recipient of this letter. The information contained in this letter should be treated as confidential.

Should the insurance cover be cancelled, assigned or changed in any way during the period of insurance, neither we nor the subscribing insurer(s) accept any obligation to notify any recipient of this letter.

The subscribing insurers' obligations under contracts of insurance to which they subscribe are several and not joint and are limited solely to the extent of their individual subscriptions. The subscribing insurers are not responsible for the subscription of any co-subscribing insurer who for any reason does not satisfy all or part of its obligations.

Notwithstanding the issuance of this letter we are and remain solely the agent of our Client in this matter and owe no duties to any recipient of this letter.

EAMONN BERGIN
Managing Director Corporate Division

Appendix 7

Environmental Protection Agency

Guidance to completing the PRTR workbook

PRTR Returns Workbook

Version 1.1.19

REFERENCE YEAR	2015

1. FACILITY IDENTIFICATION

Parent Company Name	Padraig Thornton Waste Disposal Limited
Facility Name	Thorntons Recycling Centre (Ballyfermot)
PRTR Identification Number	W0044
Licence Number	W0044-02

Classes of Activity

No.	class_name
-	Refer to PRTR class activities below

Address 1	Killeen Road
Address 2	Ballyfermot
Address 3	Dublin 10
Address 4	
	Dublin
Country	Ireland
Coordinates of Location	-6.35373 53.3348
River Basin District	IEEA
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	David Duff
AER Returns Contact Email Address	dduff@thorntons-recycling.ie
AER Returns Contact Position	Environmental Manager
AER Returns Contact Telephone Number	086 8371959
AER Returns Contact Mobile Phone Number	086 8371959
AER Returns Contact Fax Number	n/a
Production Volume	250000.0
Production Volume Units	tonnes
Number of Installations	3
Number of Operating Hours in Year	8000
Number of Employees	40
User Feedback/Comments	
Web Address	www.thorntons-recycling.ie

2. PRTR CLASS ACTIVITIES

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

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

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

4. WASTE IMPORTED/ACCEPTED ONTO SITE

Guidance on waste imported/accepted onto site

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities) ?	No

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR | Link to previous years emissions data | [PRTR# : W0044 | Facility Name : Thorntons Recycling Centre (Ballyfermot) | Filename : W0044_2015.xls | Return Year : 2015 | 29/01/2016 07:54

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

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

SECTION B : REMAINING PRTR POLLUTANTS

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

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

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

RELEASES TO AIR					Please enter all quantities in this section in KGs								
POLLUTANT		METHOD			QUANTITY								
			Method Used		D2	D3	D4	D5	D7				
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	Emission Point 3	Emission Point 4	Emission Point 5	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
210	Dust	M	OTH	30 Day composite sample measured in mg/m2/day using standard method VDI2119	0.05	0.03	0.05	0.05	0.09	0.27	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: Thorntons Recycling Centre (Ballyfermot)

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

| PRTR# : W0044 | Facility Name : Thorntons Recycling Centre (Ballyfermot) | Filename : W0044_2015.xls | Return Year : 2015 |

29/01/2016 07:54

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

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

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT			Method Used		QUANTITY			
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 WATERS					Please enter all quantities in this section in KGs			
POLLUTANT			Method Used		QUANTITY			
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 WATERS					Please enter all quantities in this section in KGs			
POLLUTANT			Method Used		QUANTITY			
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
					0.0	0.0	0.0	0.0

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

4.3 RELEASES TO WASTEWATER OR SEWER

Link to previous years emissions data

SECTION A : PRTR POLLUTANTS

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

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

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

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs				
POLLUTANT		METHOD			QUANTITY				
			Method Used		FW1	FW2			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	Emission Point 2	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
306	COD	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	446.61	1236.22	1682.83	0.0	0.0
308	Detergents (as MBAS)	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	0.18	0.31	0.49	0.0	0.0
314	Fats, Oils and Greases	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	21.7	38.67	60.37	0.0	0.0
324	Mineral oils	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	5.11	7.76	12.87	0.0	0.0
332	Ortho-phosphate (as PO4)	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	7.59	7.7	15.29	0.0	0.0
240	Suspended Solids	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	145.7	432.1	577.8	0.0	0.0
303	BOD	M	OTH	Standard method for the examination of water and wastewater APHA20th Ed	170.09	711.62	881.71	0.0	0.0

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

4.4 RELEASES TO LAND

Link to previous years emissions data

SECTION A : PRTR POLLUTANTS

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

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

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

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

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

5 ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

[PRTR# : W0044 | Facility Name : Thorntons Recycling Centre (Ballyfermot) | Filename : W0044_2015.xls | Return Year : 2015 |

03/02/2016 08:01

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 Next Destination Facility Non Haz Waste Name and Licence/Permit No of Recover/Disposer	Haz Waste Address of Next Destination Facility Non Haz Waste Address of Recover/Disposer	Name and License / Permit No and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	15 01 04	No	373.66	metallic packaging	R13	M	Weighed	Offsite in Ireland	Wilton Waste Recycling Ltd,WFP-CN-10-0005-01	Kiffagh,Crosserlough,Ballyjamesduff,Co Cavan,Ireland		
Within the Country	15 01 04	No	171.4	metallic packaging	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling MDR,WFP-DC-10-0021-02	Unit 51 Henry Road,Parkwest Business Park,Dublin ,12,Ireland		
Within the Country	16 01 03	No	7.06	end-of-life tyres	R13	M	Weighed	Offsite in Ireland	Crumb Rubber,WFP-LH-10-0005-01	Mooretown,Dromiskin,Dundalk,Co Louth ,Ireland		
Within the Country	16 05 05	No	4.56	gases in pressure containers other than those mentioned in 16 05 04	R13	M	Weighed	Offsite in Ireland	Calor Gas,N/A	Long Mile Road,,Dublin,12,Ireland		
Within the Country	17 04 01	No	80.64	copper, bronze, brass	R4	M	Weighed	Offsite in Ireland	Wilton Waste Recycling Ltd,WFP-CN-10-0005-01	Kiffagh,Crosserlough,Ballyjamesduff,Co Cavan,Ireland		
Within the Country	16 06 01	Yes	2.0	lead batteries	R13	M	Weighed	Offsite in Ireland	Wilton Waste Recycling Ltd,WFP-CN-10-0005-01	Kiffagh,Crosserlough,Ballyjamesduff,Co Cavan,Ireland	Ecobat Technologies Ltd,EPR/BL5598IR,Darley Dale Smelter,South Darley,Matlock Derbyshire,DE4 2LP,United Kingdom	Darley Dale Smelter,South Darley,Matlock Derbyshire,DE4 2LP,United Kingdom
Within the Country	17 04 11	No	44.92	cables other than those mentioned in 17 04 10	R13	M	Weighed	Offsite in Ireland	Wilton Waste Recycling Ltd,WFP-CN-10-0005-01	Kiffagh,Crosserlough,Ballyjamesduff,Co Cavan,Ireland		
Within the Country	17 08 02	No	3.53	gypsum-based construction materials other than those mentioned in 17 08 01	R3	M	Weighed	Offsite in Ireland	Allied Waste Management,WFP-KE-08-0347-01	Unit 74A,Naas Industrial Estate,Naas ,Co Kildare,Ireland		
Within the Country	19 12 02	No	7.6	ferrous metal	R4	M	Weighed	Offsite in Ireland	Wilton Waste Recycling Ltd,WFP-CN-10-0005-01	Kiffagh,Crosserlough,Ballyjamesduff,Co Cavan,Ireland		
Within the Country	19 12 02	No	6373.6	ferrous metal	R4	M	Weighed	Offsite in Ireland	Multimetals,WFP-WW-09-0014-01	Blessington, ,Co. Wicklow,,,Ireland		
Within the Country	19 12 03	No	81.14	non-ferrous metal	R4	M	Weighed	Offsite in Ireland	Wilton Waste Recycling Ltd,WFP-CN-10-0005-01	Kiffagh,Crosserlough,Ballyjamesduff,Co Cavan,Ireland		
Within the Country	19 12 02	No	735.54	ferrous metal	R4	M	Weighed	Offsite in Ireland	Hammond Lane,WP 98107	Pigeon House Road,Ringsend,Dublin,4,Ireland		
Within the Country	19 12 03	No	510.73	non-ferrous metal	R4	M	Weighed	Offsite in Ireland	Hammond Lane,WP 98107	Pigeon House Road,Ringsend,Dublin,4,Ireland		
Within the Country	19 12 07	No	11306.73	wood other than that mentioned in 19 12 06	R3	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Woodchipping,WFP-KE-10-0061-01	PDM,Kill,Co Kildare,,Ireland		
Within the Country	19 12 10	No	7376.46	combustible waste (refuse derived fuel)	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Dunboyne,W0206-01	Dunboyne, ,Co. Meath,,Ireland		
Within the Country	19 12 10	No	17282.7	combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Lagan Cement,P0487-05	Kinnegad, ,Co. Meath,,,Ireland		
Within the Country	19 12 10	No	52466.6	combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Irish Cement Ltd,P0030-04	Drogheda, ,Co. Louth,,,Ireland		
Within the Country	19 12 10	No	312.06	combustible waste (refuse derived fuel)	R13	M	Weighed	Offsite in Ireland	Pacon Waste,WFP-FG-10-0004-01	Stephenstown Business Park ,Balbriggan ,Co Dublin ,Ireland		
Within the Country	19 12 10	No	149.36	combustible waste (refuse derived fuel)	R13	M	Weighed	Offsite in Ireland	Greyhound Recycling and Recovery,W0205-01	Craig Avenue ,Clondalkin Industrial Estate,Clondalkin ,Dublin,Ireland		
Within the Country	19 12 12	No	17696.46	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R5	M	Weighed	Offsite in Ireland	Bord na Mona Drehid landfill,W0201-03	Carbury,,Co Kildare,,Ireland		

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste Name and Licence/Permit No of Next Destination Facility Non Haz Waste Name and Licence/Permit No of Recover/Disposer	Haz Waste Address of Next Destination Facility Non Haz Waste Address of Recover/Disposer	Name and License / Permit No and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	19 12 12	No	8401.72	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R5	M	Weighed	Offsite in Ireland	Boliden Tara Mines,PO516-03	Knockumber, ,Navan,Co Meath,Ireland		
Within the Country	19 12 12	No	45169.55	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R5	M	Weighed	Offsite in Ireland	Bord na Mona Drehid landfill,W0201-03	Carbury, ,Co Kildare, ,Ireland		
Within the Country	19 12 12	No	4515.68	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R5	M	Weighed	Offsite in Ireland	Ballynagran Landfill,W0165-02	Coolbeg and Kilcandra, , ,Wicklow,Ireland		
Within the Country	19 12 12	No	14018.96	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R3	M	Weighed	Offsite in Ireland	McGill Environmental ,W0180-01	Coom,Glenville, ,Cork,Ireland		
Within the Country	19 12 12	No	79.26	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R3	M	Weighed	Offsite in Ireland	Enrich Environmental Ltd,WFP-MH-08-0004-01	Newtown,Rathganley,Kilcock,Co. Meath,Ireland		
Within the Country	19 12 12	No	551.1	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R13	M	Weighed	Offsite in Ireland	Oxigen Environmental Ltd,W0152-03	Robinhood Industrial Estate,Ballymount, ,Dublin 22,Ireland		
Within the Country	19 12 12	No	638.04	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R3	M	Weighed	Offsite in Ireland	Bord na Mona PLC- Kilberry Compost,WO198-01	Kilberry facility,, ,Kildare,Ireland		
Within the Country	19 12 12	No	1938.12	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R3	M	Weighed	Offsite in Ireland	O Toole Composting,WFP-CW-10-0003-01	Ballintrane, , ,Co Carlow,Ireland		
Within the Country	19 12 12	No	84.32	other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	R3	M	Weighed	Offsite in Ireland	OD Recycling Ltd,WFP-TS-10-0002-04	Ballyboe,Ballypatrick,Clonmel,Tipperary,Ireland		
Within the Country	20 01 08	No	25261.15	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Kilamainhamwood,W0195-02	Ballynalurgan,Nobber,Co Meath, ,Ireland		
Within the Country	20 01 08	No	517.96	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	Waddock Composting Ltd,WFP-CW-11-05-01	Kilamaster, ,Co Carlow, ,Ireland		
Within the Country	20 01 08	No	250.42	biodegradable kitchen and canteen waste	R3	M	Weighed	Offsite in Ireland	Acorn Recycling (Ballybeg Composting Facility),WO249-01	Ballybeg,Littleton, ,Co Tipperary,Ireland		
Within the Country	20 01 01	No	1.2	paper and cardboard	R3	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling MDR,WFP-DC-10-0021-02	Unit 51 Henry Road,Parkwest Business Park,Dublin ,12,Ireland		
Within the Country	20 01 39	No	0.2	plastics	R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling MDR,WFP-DC-10-0021-02	Unit 51 Henry Road,Parkwest Business Park,Dublin ,12,Ireland		
Within the Country	20 01 39	No	144.18	plastics	R3	M	Weighed	Offsite in Ireland	Leintser Environmental,WFP-LH-11-0002-01	Clermont Business Park,Haynestown TD,Haggardstown Dundalk,Louth,Ireland		

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste Name and Licence/Permit No of Next Destination Facility Non Haz Waste Name and Licence/Permit No of Recover/Disposer	Haz Waste Address of Next Destination Facility Non Haz Waste Address of Recover/Disposer	Name and License / Permit No and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	20 01 39	No	55.1	plastics	R3	M	Weighed	Offsite in Ireland	Irish Polymer Extrusion,WFP-LS-13-0001-01	Unit 20,Bay Road Business Park ,Mountmellick,Co Laois,Ireland		
Within the Country	19 12 01	No	46.8	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Irish Packaging Recycling,W0263-01	Ballymount Road ,Walkinstown ,Dublin 12, ,Ireland		
Within the Country	20 02 01	No	914.74	biodegradable waste	R3	M	Weighed	Offsite in Ireland	Barrockstown Farms Ltd,WFP-MH-14-0007-02	Barrockstown ,Maynooth, ,Meath,Ireland		
Within the Country	20 02 01	No	7.96	biodegradable waste	R3	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Woodchipping,WFP-KE-10-0061-01	PDM,Kill,Co Kildare, ,Ireland		
Within the Country	20 03 01	No	484.34	mixed municipal waste	R1	M	Weighed	Offsite in Ireland	Indaver,W0167-02	Carranstown,Duleek,Co Meath, ,Ireland		
Within the Country	20 03 01	No	68.12	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Oxigen Environmental Ltd,W0152-03	Robinhood Industrial Estate,Ballymount, ,Dublin 22,Ireland		
Within the Country	20 03 01	No	2123.26	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	Bord na Mona Drehid landfill,W0201-03	Carbury, ,Co Kildare, ,Ireland		
Within the Country	20 03 01	No	115.88	mixed municipal waste	D5	M	Weighed	Offsite in Ireland	Ballynagran Landfill,W0165-02	Coolbeg and Kilcandra, , ,Wicklow,Ireland		
Within the Country	19 12 01	No	10.12	paper and cardboard	R3	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling MDR,WFP-DC-10-0021-02	Unit 51 Henry Road,Parkwest Business Park,Dublin ,12,Ireland		
Within the Country	15 01 03	No	9.2	wooden packaging	R3	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Woodchipping,WFP-KE-10-0061-01	PDM,Kill,Co Kildare, ,Ireland		
Within the Country	19 12 10	No	10323.8	combustible waste (refuse derived fuel)	R1	M	Weighed	Offsite in Ireland	Quinn Cement Limited,PO378-02	Scotchtown,Ballyconnell , ,Cavan,Ireland		
Within the Country	20 03 01	No	279.22	mixed municipal waste	R13	M	Weighed	Offsite in Ireland	Greyhound Recycling and Recovery,W0205-01	Craig Avenue ,Clondalkin Industrial Estate,Clondalkin ,Dublin,Ireland		
Within the Country	20 03 03	No	18976.93	street-cleaning residues	D5	M	Weighed	Offsite in Ireland	Bord na Mona Drehid landfill,W0201-03	Carbury, ,Co Kildare, ,Ireland		
	20 03 07	No	0.0		R13	M	Weighed	Offsite in Ireland	PTWDL T/A Thorntons Recycling Dunboyne,W0206-01	Dunboyne, ,Co Meath, ,Ireland		

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

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