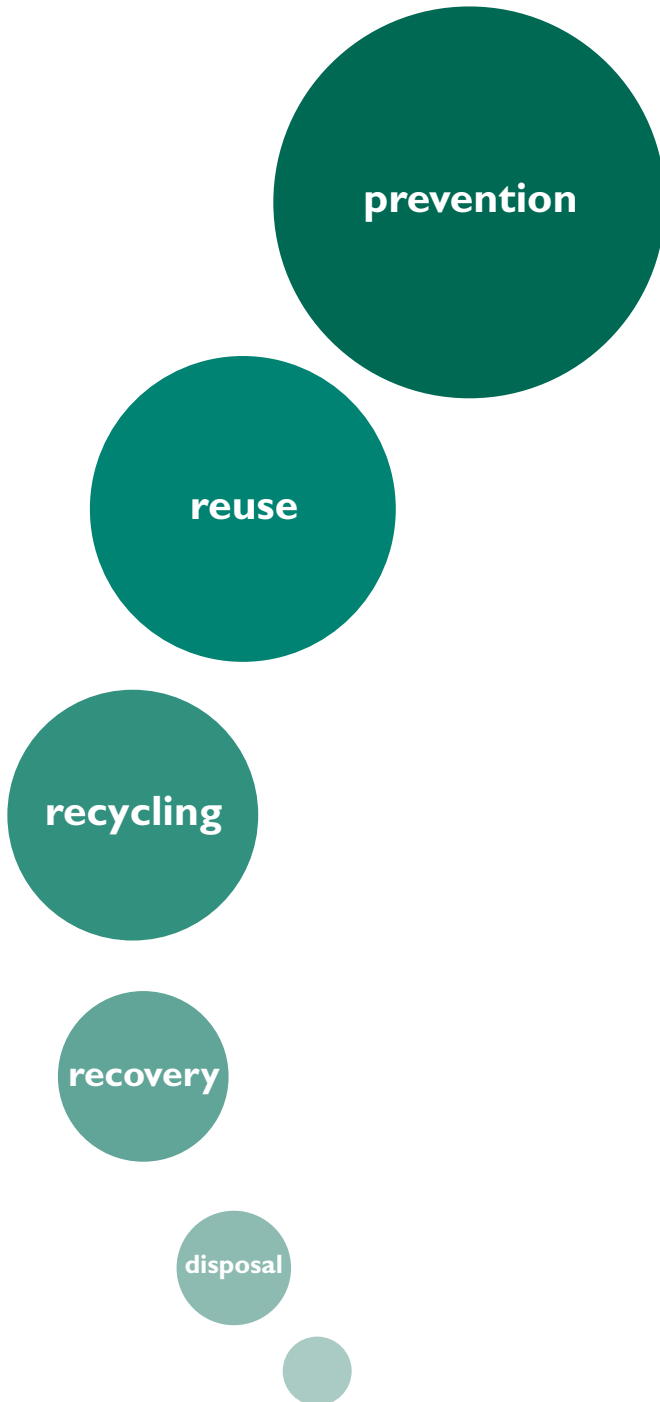


Waste Management Plan for the Dublin Region



**Annual Progress
Report 2010**

March 2011



WASTE MANAGEMENT PLAN
Working for the Dublin Region

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EXECUTIVE SUMMARY

The Dublin Local Authorities (Dublin City Council, Dun Laoghaire Rathdown County Council, Fingal County Council, and South Dublin County Council) are responsible for producing on an annual basis an update of waste management data and statistics for the Region.

This is the fourth Annual Progress Report since the publication of the Dublin Regional Waste Plan in November 2005 and provides the most accurate assessment of waste management for the Region.

Performance Summary

Overall, the Dublin Region continues to perform well in line with the targets and objectives of the Dublin Waste Management Plan. Household waste generation per capita is down 2.5%, municipal waste recycling is up 5%, from 41% to 46% and landfilling is down 4% from 59% to 55%. The region remains overly reliant on landfill with 58% of household waste and 49% of commercial waste sent for disposal. There remains a pressing need to develop recovery alternatives for residual waste. The Dublin Waste-to-Energy plant is due to be online in 2013/2014 and when operational will provide a long-term alternative to landfill disposal though the maximum recovery of energy from residual wastes. When the plant is commissioned the current landfilling rate of 55% will drop to between 10% and 16% which is the Plan target.

Waste Prevention

The Dublin Local Authorities continue to invest staff and financial resources in waste prevention and awareness activities in the region.

- The number of schools awarded Green Flags was 379 at the end of 2009, representing a 50% increase on the number recorded at the end of 2008.
- The overall quantity of material composted in the Dublin Region is estimated to be 33,400 tonnes.
- The overall quantity of household waste generated per capita has decreased to 0.39 tonnes per capita from 0.4 tonnes per capita in 2008, a reduction of 2.5%.

Waste Reuse

The Dublin Local Authorities continue to fund and implement reuse based projects and services in the region.

The online reuse service, FreeTrade, is funded by the Authorities and continues to deliver real results with over 8,300 items reused in 2009. Due to the success of the service it has been expanded to a national platform. FreeTradeIreland.ie was launched in July 2010 with financial assistance from DEHLG.

Household Waste

- Household waste arisings in Dublin decreased by 1% in 2009.
- The recycling rate for household waste increased to 41% in 2009 compared to 35% in 2008 through the expanded rollout of kerbside recycling collections.

- Over 36,000 tonnes of source separated organic waste was collected through the brown bin collection system in 2009. This is a 77% on the tonnage collected in 2008.
- Over 87,000 tonnes of dry recyclables were collected through the green bin collection system in 2009. This is a 6% increase on the quantity collected in 2008.
- The region had 11 active recycling centres and over 46,000 tonnes of material was collected at these locations in 2009.
- There are 304 bring banks in the region with over 27,800 tonnes of material collected at these locations in 2009. The tonnage collected has decreased by 11% compared to 2008 data.
- It is estimated that over 170,000 brown bins were rolled out across the Dublin City and Fingal County Council areas by the end of 2009. In 2010 South Dublin County Council rolled out a complete brown bin service to all household customers (approximately 60,000 households).

Commercial Waste

- Commercial Waste arisings have decreased by an estimated 1% in 2009 compared to 2008.
- The recovery rate for commercial waste was calculated to be 51% in 2009 compared to 46% in 2008.

Municipal Waste

- Municipal Waste arisings have decreased by 1% in 2009 compared to 2008.
- The recovery rate for municipal waste has increased to 46% in the region.

Biodegradable Municipal Waste (BMW)

- The total amount of BMW available in the region in 2009 was estimated to be 864,707 tonnes; of this 396,869 tonnes was landfilled.
- The quantity of BMW landfilled at facilities in the region in 2009 amounted to 183,701 tonnes.
- The total amount of BMW generated in the Dublin region but landfilled outside region was estimated to be 213,168 tonnes.

Packaging Waste

- The recovery rate of packaging waste increased to 55% in the region in 2009 compared to 54% in 2008.
- Packaging waste decreased by 7% to an estimated 290,281 tonnes compared to 310,333 tonnes in 2008.

Construction and Demolition Waste

- Construction and Demolition Waste Arisings decreased by 59% to an estimated 2.7 million tonnes.
- The recovery rate for soil and stones, as part of C & D arisings in the region, was recorded at 98%.

WEEE

- Over 22,500 tonnes of WEEE was collected in 2009 compared to 29,000 tonnes of WEEE collected in 2008.
- 10.5kg of household WEEE was collected per capita in 2009 compared to 11kg per capita collected in 2008.

End of Life Vehicles (ELVs)

- There are 11 Authorised Treatment Facilities operating in the Dublin Region in 2009.
- Over 5,400 tonnes of ELVs were collected in the region in 2009, representing a 62% decrease on 2008.

Waste Tyres

- Over 2,300 tonnes of tyres were collected in the region in 2009.

1 INTRODUCTION

The Dublin Local Authorities (Dublin City Council¹, Dun Laoghaire Rathdown County Council², Fingal County Council³, and South Dublin County Council⁴) are responsible for producing on an annual basis an update of waste management data and statistics for the region.

The Annual Progress Report is published yearly and provides the most up to date information on waste generation, collection and management in Dublin.

This is the fourth Annual Progress Report since the publication of the Dublin Regional Waste Plan in November 2005 and provides the most accurate assessment of waste management for the region.

The data in this report was compiled by RPS on behalf of the Dublin Local Authorities. The report also has regard to the EPA National Waste Report 2009 published in recent weeks.

¹ Dublin City Council, hereafter DCC.

² Dun Laoghaire Rathdown County Council, hereafter DLRCC.

³ Fingal County Council, hereafter FCC.

⁴ South Dublin County Council, hereafter SDCC.

2 WASTE GENERATION IN THE DUBLIN REGION

Table 2.1 provides a summary of the key waste streams generated in the Dublin Region and the quantities recorded in 2006, 2007, 2008 and 2009.

The overall trend is of decreasing tonnage for key waste streams with the exception being Litter and Street Sweepings. The extent of the fall in tonnage varies across the different waste streams, with a large drop (58%) in C&D waste while commercial waste has fallen by just 1%. Each of the waste streams identified in the table are analysed in subsequent chapters of this report. The figures for commercial waste arisings for the Dublin Region outlined in this report have been compiled from data returned by private waste collectors.

Table 2.1: Waste Arisings Managed in the Dublin Region for 2006, 2007 & 2009

Waste Type	Total 2006 (tonnes)	Total 2007 (tonnes)	Total 2008 (tonnes)	Total 2009 (tonnes)
Household Waste Arisings	464,121	470,220	474,767	470,806
Commercial Waste	819,861	778,295	738,193	731,927
Construction and Demolition Waste	7,654,550	7,052,034	6,529,511	2,698,753
Contaminated Soils	10,869	9,542	10,000	9,275
Litter and Street Sweepings	36,616	35,580	35,136	37,437
Packaging waste	279,593	288,081	310,333	290,281
Priority waste streams:				
Waste tyres	5,058	9,542	7,222	2,362
End of life vehicles	7,389	14,187	14,411	5,447
Household Hazardous waste	2,104	2,054	4,028	4,667
Waste Electrical Electronic Equipment	22,680	24,088	31,416	24,052
Water Treatment Sludges	6,825	7,061	6,660	25,543
Sewerage Sludge	4,623	7,466	5,091	20,574

Data Sources:

Household Waste: Local Authority (EPA) National Waste Database Questionnaires (2009)

Commercial/Industrial Waste: Single Region Waste Collection Permits, Multi Region Waste Collection Permits with DCC as the lead authority and Multi Region Waste Collection Permits with the lead authority outside the Dublin Region.

Construction and Demolition Waste: Local Authority (EPA) National Waste Database Questionnaires (2009)

Contaminated Soils: Local Authority (EPA) National Waste Database Questionnaires (2009).

Litter and Street Sweepings: Local Authority (EPA) National Waste Database Questionnaires (2009).

Packaging Waste: REPAK, Waste Composition Data and Regional Landfill AERs, EPA National Waste Report 2009.

Waste Tyres & ELVs: Single Region Waste Collection Permits, Multi Region Waste Collection Permits with DCC as the lead authority and Multi Region Waste Collection Permits with the lead authority outside the Dublin Region

WEEE: ERP & WEEE Ireland

Household Hazardous Wastes: Local Authority (EPA) National Waste Database Questionnaires>Returns (2009).

Water Treatment Sludges and Sewerage Sludges: Single Region Waste Collection Permits, Multi Region Waste Collection Permits with DCC as the lead authority and Multi Region Waste Collection Permits with the lead authority outside the Dublin Region

3 WASTE PREVENTION

The Dublin Local Authorities continue to invest staff and financial resources in waste prevention and awareness and education activities in the region. In this section a selection of the on-going work is presented.

3.1 RESOURCES

Waste prevention and awareness plays an important role in implementing and achieving the objectives set out in the Dublin Waste Management Plan. Each Local Authority has dedicated resources promoting awareness, and informing households, schools and businesses about better waste management practices.

A total of 11 staff members carry out these roles in the region. Table 3.1 provides a breakdown of the Waste Prevention and Awareness staff employed in each local authority in the Dublin Region.

Table 3.1 Local Authority Prevention and Awareness Staff as of December 2009

	DCC	DLR	FCC	SDCC ⁵	Total
Environmental Awareness Officers (EAOs)	1	1	1	2	5
Green Business Officers	1	1	1	0	3
Green Schools Officers	1	1	1	0	3
Other Educational & Awareness Staff	0	0	0	0	3
Total	3	3	3	2	11

Data Source: Local Authority Waste Management Departments

3.2 COMMUNITY AWARENESS

The Local Authority Prevention and Awareness Staff are involved in a range of activities throughout the year that aim to develop environmental awareness within the community. A summary of the types of activities and events organised throughout Dublin in 2009 are listed:

- Activities in 2009 organised by the Dun Laoghaire Rathdown EAO include the Cool Earth Exhibition at the Festival of World Cultures. The Cool Earth exhibition is comprised of a number of community organisations operating in the Dun Laoghaire Region providing information on educational programmes running in the region, home composting advice etc. The exhibition also hosted a series of lectures aimed at informing the public.
- South Dublin County Council hosted an Eco Week from March 30th – April 3rd 2009. Waste management was a key theme during this week. Waste related events organised during the week included a composting workshop and 'From Spin-cycle to Recycle' - hosted by the Clondalkin Community Recycling Initiative – a talk on the reuse of household appliances.
- The Dublin City Neighbourhoods Competition, organised by Dublin City Council, took place for the 5th consecutive year in 2009. The competition involved 5 areas within the City Council area that were rated on a number of local environmental aspects based on their local environment, including waste management and recycling initiatives. This competition was open to residential members, business groups and schools in 2009.

⁵ SDCC have 2 EAOs –an Environmental Awareness Officer and an Assistant Environmental Awareness Officer also serving schools.

- In 2009 Fingal County Council hosted gum litter campaigns, a tour of recycling centres, induction courses for council tenants and anti-litter campaigns.

3.3 GREEN BUSINESS ACTIVITIES

There are currently 3 Green Business Officers (GBOs) operating in the Region – in Dublin City Council, Dun Laoghaire Rathdown County Council and Fingal County Council. In South Dublin County Council the EAO team are also responsible for green business activities in the functional area.

It is the role of the GBO to provide help and support to businesses who are developing and implementing green strategies. The GBOs in the region are involved in organising workshops, promoting green business initiatives and informing businesses about environmental management practices.

There are a number of award schemes and competitions organised by the Local Authorities in Dublin that reward businesses and organisations for implementing green practices in their organisations. The Envirocom Awards in the Dun Laoghaire Rathdown Region are a good example of a Local Authority business award scheme.

The awards are presented by the DLR Healthy County Forum whose members include DLRCC, DLR Chamber and the HSE. DLRCC is represented by the GBO on the organising committee. Waste prevention is one of the categories recognised by the Envirocom Awards.

3.4 GREEN SCHOOLS CAMPAIGN

The Green Schools Programme continues to be very successful in promoting waste awareness and prevention in schools on a national basis and throughout the region. At the end of 2009 it was recorded that 516 schools or 75% of schools in the region were registered with the Green Schools Programme. This is a 3.6% increase on the number registered in 2008.

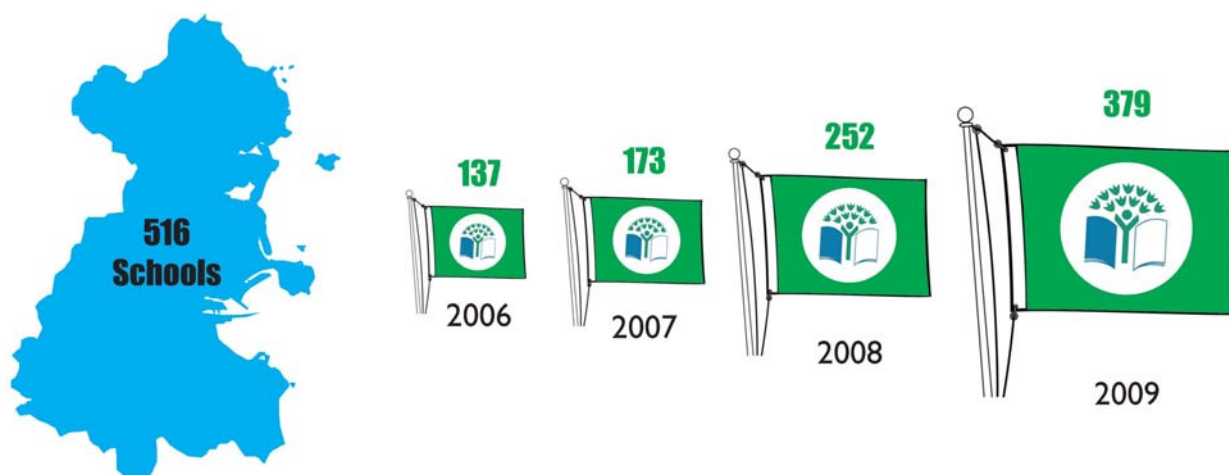


Figure 3.1 Green Flags Awarded 2009

The number of schools awarded Green Flags was recorded at 379 at the end of 2009, representing a 50% increase on the number recorded at the end of 2008, see Figure 3.1.

Table 3.2: Green School Registrations and Green Flags Awarded (2009)

Local Authority	Total Number of Schools in each Local Authority 2009			Number of Schools Registered 2009			Green Flags Awarded By End 2009
	Primary	Secondary	Total	Primary	Secondary	Total	Total
DCC	225	87	312	151	55	206	72
DLR⁶	81	31	114	69	24	95	128
FCC⁷	103	24	127	72	23	105	122
SDCC	100	35	135	84	26	110	57
Total 2009	509	177	688	376	128	516	379
Total 2008	500	176	679	370	125	495	252
Total 2007	478	189	667	329	115	444	173
Total 2006	477	177	654	244	89	417	137
Total 2004	457	208	665	235	78	313	54

3.5 LOCAL AGENDA 21

Local Agenda 21 aims to facilitate sustainable development within communities, through the funding of projects including interactive waste awareness and educational events.

A total 52 projects were funded by the Local Agenda 21 Environment Fund in 2009 with 9 of these projects being waste related. Overall €127,808 was spent on the projects, which was funded by both the Local Authorities and the Department of the Environment, Heritage and Local Government (DEHLG).

This represents a 4.7% increase in funding from 2008. However the number of waste related projects funded by the Local Agenda 21 Environment Fund in 2009 have decreased to 9 from 12 in 2008.

⁶ DLR total figures include 'other' schools such as special, post primary and primary/secondary.

⁷ FCC total figures include special schools and crèches.

Table 3.3: Local Agenda 21 Environment Fund 2009 Projects and Funding

Local Authority	Total number of projects	Total spent on funding	Waste Projects
	2009	2009	2009
DCC	11	€41,034	2
DLR	10	€26,453	3
FCC	13	€29,233	3
SDCC	18	€31,088	1
Total 2009	52	€127,808	9
Total 2008	51	€122,099	12
Total 2007	58	€115,121	23
Total 2006	49	€101,076	29
Total 2004	43	€57,626.40	32

Data Source: Local Authority Waste Management Departments & Local Agenda 21 Officers

3.6 HOME COMPOSTING

The Local Authorities continue to promote home composting through the sale of compost bins to members of the public and by hosting educational workshops. Details of the estimated home composting tonnages are provided in Table 3.4. An estimated 7,567 tonnes of material was composted in 2009.

Table 3.4: Home Composting Tonnages in the Dublin Region

Area	2009 Tonnes	2008 Tonnes	2007 Tonnes	2006 Tonnes
DCC	4,129	4,129	4,071	4,000
DLR	1,194	2,711	2,581	2,305
FCC	1,003	989	961	875
SDCC	1,241	1,128	1,088	1,037
Total	7,567	8,957	8,701	8,217

Source: Local Authority (EPA) National Waste Database Returns 2009

It is difficult to quantify the amount of household waste not entering the collection system due to home composting bins in Dublin. Figure 3.2 provides an estimate of the tonnage composted in 2009. The figure is a cumulative total of the estimated annual tonnages.



Figure 3.2 Estimate of Home Composting 2009

3.7 DUBLINWASTE.IE WEBSITE

DublinWaste.ie is the regional waste awareness website operated by the Dublin Local Authorities. The website is a one stop shop for waste management and recycling information in Dublin. Regular news updates on waste collections, recycling events, educational workshops, open days and community initiatives are posted on the web site.

The website also hosts a popular recycling search engine, which provides users with the details of all Recycling Centres and Bring Centre facilities available to the public in Dublin.



The innovative reuse service, FreeTrade was extended to a national platform with the creation of FreeTradeIreland.ie in July 2010. As a consequence, traffic to DublinWaste.ie has decreased in 2010. However the website remains popular and traffic to the site remains consistently high, details of which are shown in Table 3.5.

Table 3.5: Traffic to the Website May 2004 to December 2010

Year	Total Hits	Average Hits per Month	% Change (Year on Year)
2004 (May to Dec)	35,946	4,493	-
2005 (Jan to Dec)	146,068	12,172	306%
2006 (Jan to Dec)	358,882	29,907	146%
2007 (Jan – Dec) ¹	1,096,234	91,353	205%
2008 (Jan-Dec)	1,412,317	117,693	29%
2009 (Jan – Dec)	1,463,484	121,957	4%
2010 (Jan – Dec)	1,053,117	87,760	-28%

¹ Google Analytics has been used since April 2008. Prior to this the monitoring software package Urchin was used to estimate hits to the website.

4 WASTE REUSE

The Dublin Local Authorities continue to fund and implement reuse based projects and services in the region. The online reuse service, FreeTrade, was funded and managed by the Authorities from July 2006 to July 2010.

4.1 FREETRADE

The FreeTrade service was launched and hosted on DublinWaste.ie since 2006. The online service facilitating and promoting reuse was shown to deliver tangible results and due to its success has been extended nationwide. In July 2010 the FreeTrade service was rolled out at a national level through FreeTradeIreland.ie, with Local Authorities across the country now funding and promoting the FreeTrade Ireland Service.

The online initiative encourages the reuse of unwanted items by facilitating the free advertising of items for members.



The FreeTrade Ireland website also aims to facilitate the reuse of items from businesses and provides the facility for businesses and householders to record the items they re-use through the service.

The service is hugely popular with over 34,600 members (December 2010). Since 2006 the use of the service has increased and correspondingly the number of items reused through the service. In the four and a half years the service has been operating in Dublin an estimated of 34,150 items have been reused.



Figure 4.1 Items Reused on FreeTrade in Dublin

Table 4.1 provides an annual breakdown of the number of items reused on the service since 2006. This items are specific to the Dublin Region primarily.

Table 4.1: Number of items Reused on the FreeTrade Service 2006

Year	Number of items Reused	% Change (Year on Year)
2006 (Aug - Dec)	1,551	-
2007 (Jan – Dec)	6,174	298%
2008(Jan - Dec)	8,736	41%
2009(Jan - Dec)	9,365	7%
2010(Jan - Dec)	8,324	-11%

4.2 REDISCOVERY CENTRE

Ballymun Regeneration Ltd (BRL) was set up by Dublin City Council in 1997 to develop new and improved facilities for the community in Ballymun. As part of the BRL activities the Rediscovery Centre concept was established, the idea being to develop and offer reuse and recycling initiatives of materials in one central hub.

The centre is still going through planning phases although and many of the community initiatives are already in place and are proving successful:

- The Rediscovery Centre furniture project was established in 2006 as a partnership between BRL and Poppintree Environmental Group. The aim of the project is to offer an outlet for old or unwanted furniture where it is taken in, redesigned, restored and sold.
- Rediscover Fashion, which was set up in 2007, strives to increase the lifespan of textiles by reusing or repurposing textiles and as a consequence reducing the quantity of textiles sent to landfill. Items are redesigned or altered giving the material a new use and life.
- The Community Composting Project was set up by BRL as a pilot study in a block of apartments at the Santry Cross complex in 2006. This scheme took place over 30 months and examined the feasibility of community composting.
- Rediscover Paint - aims to take back unused or left over paint from householders and businesses and redistribute recovered paint back to the community diverting it away from landfill.
- Recycabike is a reuse and repair initiative for bikes. The aim of this initiative is to refurbish bikes for resale, offer a repair service and also provide training and volunteering for the community.

New items produced through Rediscovery Centre projects are available for purchase in the Rediscovery Ecostore.

5 HOUSEHOLD WASTE COLLECTION AND RECYCLING

5.1 ARISING

Household waste arisings decreased in the Dublin Region in 2009 and it is estimated that 470,806 tonnes was generated. This represents a 1% decrease in household waste generation in the region since 2008. Overall waste generation per household has decreased in 2009 to 1.01 tonnes per household with waste generation per capita at 0.39 tonnes. The corresponding figures for 2008 are 1.12 tonnes per household and 0.40 tonnes per capita respectively. This decrease represents a reduction of 10% in waste generation per household and a 2.5% decrease in household waste per capita since 2008.

A breakdown of the household waste arisings in each Local Authority Area in 2009 is provided in Table 5.1.

Table 5.1: Growth in Household Waste Arisings 2003 – 2009⁸

Local Authority	2006 (Tonnes)	2007 (Tonnes)	2008 (Tonnes)	2009 (Tonnes)
DCC	192,952	191,541	193,409	175,574
DLR	73,252	71,054	69,061	80,879
FCC	95,531	103,618	103,923	101,893
SDCC	102,597	104,008	108,374	112,460
TOTAL	464,121	470,221	474,767	470,806
Waste per Household	1.1	1.12	1.12	1.01
Waste per Capita	0.41	0.41	0.40	0.39

Source: Local Authority (EPA) National Waste Database Returns 2009

Figure 5.1 illustrates the quantity of household waste per capita showing a gradual decrease in tonnages between 2006 and 2009.

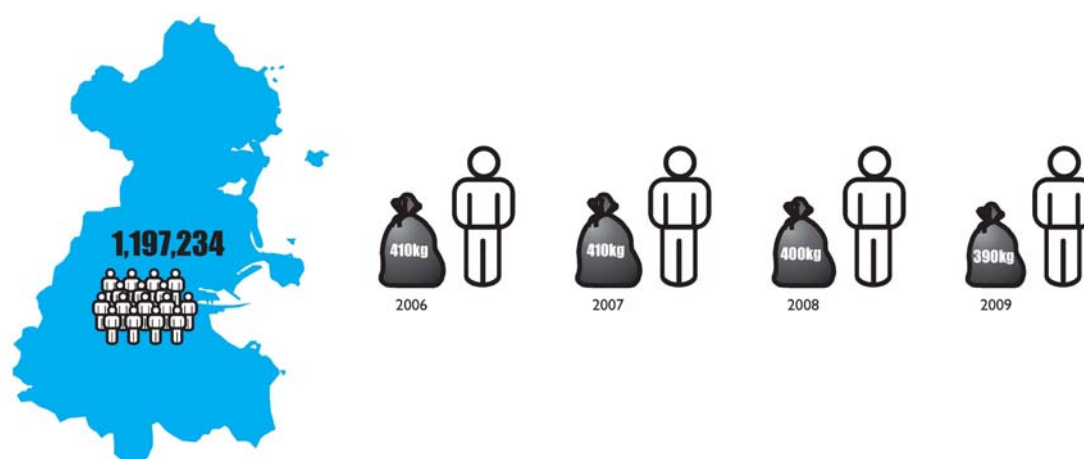


Figure 5.1 Household waste per capita

⁸ Population of Dublin Region = 1,197,234 persons; Number of households = 464,815 households using data from 2009 EPA National Waste Database Returns.

5.2 WASTE COLLECTION SYSTEMS

Waste collection systems in the Dublin region are provided through recycling centres, bring centres, bring banks and kerbside collections. The different collection systems facilitate maximum waste material segregation at the source and promote recycling within the region.

In 2009 the Dublin Local Authorities were the largest providers of household waste management in Dublin, collecting 79% of household waste generated in the region. All of the local authorities provided residual (black bin) and dry recyclable (green bin) collections. Separate collections of food and garden waste (brown bin) were also provided by Dublin City Council and Fingal County Council. Household waste management is also by Local Authorities through the network of recycling centres, bring banks, and WEEE collection days.

Private waste collectors are also providing kerbside collections to householders in the region and in 2009 serving 21% of the household waste collection market. Their share of the single dwelling household market continues to expand and they are the largest provider of collections to apartment complexes.

Figure 5.2 illustrates that household waste management in the region remains heavily dependent on disposal with 58% of household waste being treated in this manner.

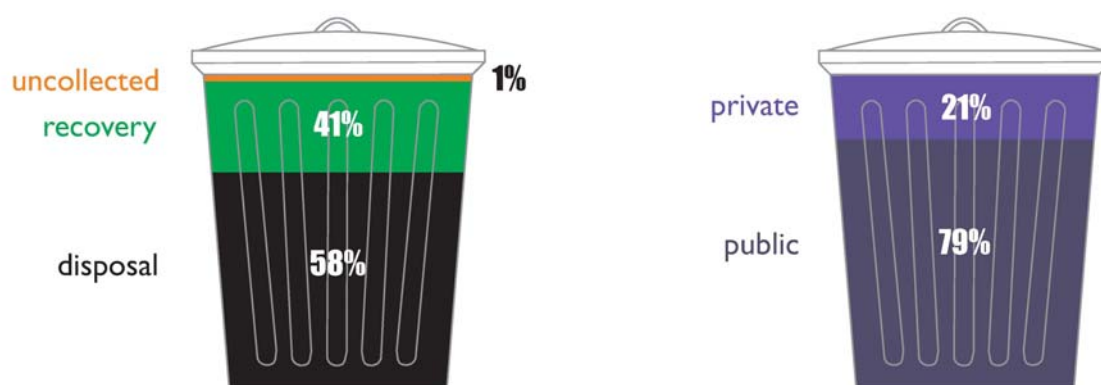


Figure 5.2 Household Waste Management

A breakdown of household waste collected and recovered from households in 2009 in each Local Authority area is provided in Table 5.2. The household recycling rate in Dublin continues to grow with a 6% increase on the 2008 rate recorded in 2009. The capture of material in the green and brown bin collection system has increased further in 2009 and is driving the increase in the recycling rates.

This table shows that the overall regional household recycling rate for 2009 is calculated to be 41%, indicating that the region continues to progress towards its long term target of 60%. Recycling rates are highest in Fingal and Dublin City Council due to the concentrations of brown bins for food waste which were not rolled out in South Dublin or Dun Laoghaire in 2009. In 2010 the brown bin collection service was rolled out to existing customers by South Dublin County Council.

It is estimated that 1% of household waste generated in the region was uncollected in 2009, with 41% recovered through recycling facilities and kerbside collections in the region.

The total quantity of household waste sent for disposal in 2009 has decreased by 10%. This decline is attributed to increased diversion of material from the residual waste bin as well as the reduction in disposable income and personal consumption which is impacting on the total household arisings and residual quantities.

Table 5.2: Recycling Rate for Household Waste 2008 & 2009

Waste Source	DCC Tonnes	FCC Tonnes	SDCC Tonnes	DLR Tonnes	Regional 2009 Tonnes	Regional 2008 Tonnes
Bring Banks	14,406	4,848	5,431	3,182	27,867	31,307
Recycling Centres, Bulky & Greenwaste Collections	4,362	9,021	7,643	10,910	31,936	31,981
Kerbside – Green bin (Local Authority)	29,443	15,497	18,211	5,185	68,336	70,382
Kerbside – Green bin (Private collectors)	1,250	2,338	1,801	13,556	18,945	12,305
Kerbside – Brown bin (Local Authority)	16,128	16,023	0	0	32,151	18,497
Kerbside – Brown bin Private collectors	3,214	932	134	0	4,280	2,065
WEEE Collections*	2,099	673	5,423	492	8,687	-
Total Recycled	70,902	49,332	38,642	33,325	192,202	166,537
Kerbside – Black Bin (Local Authorities)	82,906	36,663	54,396	19,085	193,050	245,117
Kerbside – Black Bin (Private collectors)	18,658	12,683	8,683	25,212	65,236	38,250
Delivered for disposal	188	0	10,738	3,257	14,183	19,185
Total Disposed	101,752	49,346	73,817	47,554	272,469	302,552
Uncollected waste	2,920	3,215	0	0	6,135	5,669
Total Arisings	175,574	101,893	112,460	80,879	470,806	474,758
2009 Recycling Rate %	40%	48%	34%	41%	41%	35%
2008 Recycling Rate %	31%	41%	32%	44%	35%	-
2007 Recycling Rate %	23%	28%	29%	42%	28%	-
2006 Recycling Rate %	21%	25%	30%	43%	27%	-

Source: Local Authority (EPA) National Waste Database Returns 2009. Figures for household waste collected includes waste collected by private collectors.

*WEEE Collections include household WEEE collected through Retailer Depots, Local Authority and Retailer collection days. This data is from WEEE Ireland & ERP.

5.3 KERBSIDE COLLECTIONS

The kerbside system is key for collecting and recycling household waste in Dublin. Kerbside collection systems accounted for 82% of waste collected from households in 2009. By the end of 2009 approximately 170,000 households had a 3-bin collection system. This number has increased further in 2010. The remaining households are provided with a 2-bin collection service. The proportion of residual dry recyclables and biowaste collected from kerbside households in 2009 is illustrated in Figure 5.3.

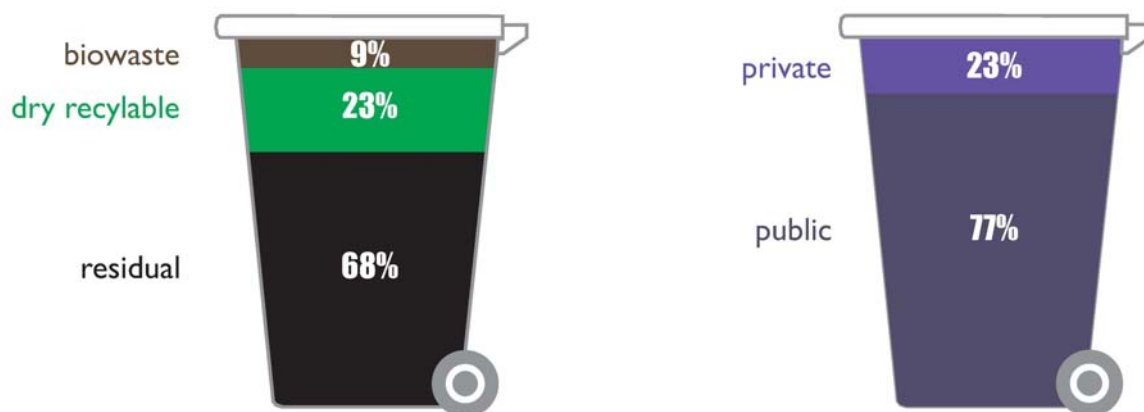


Figure 5.3 Kerbside Waste Management

5.3.1 Black Bin Residual Waste Collection

The quantity of waste collected by the local authorities and private collectors through the kerbside black bin collection has decreased by approximately 9% (25,108 tonnes).

The local authorities black bin kerbside collection service decreased in 2009 by 52,067 tonnes. This is due to a several factors including a fall in residual waste generation, increased diversion of material to green and brown bins and a loss of kerbside customers to private waste collectors. Private collectors have increased their kerbside black bin collection service across Dublin by 70% compared to 2008.

Table 5.3: Black Bin Collection Service 2007, 2008 & 2009

Region	Local Authority	Private Collectors	Total
DCC	82,906	18,658	101,564
DLR	19,085	25,212	44,297
FCC	36,663	12,683	49,346
SDCC	54,396	8,683	63,079
Regional 2009	193,050	65,236	258,286
Regional 2008	245,117	38,250	283,367
Regional 2007			313,811

Source: Local Authority (EPA) National Waste Database Returns 2009

5.3.2 Dry Recyclable Collection

The quantity of waste collected by public and private collectors through the green bin collection system in each Local Authority is outlined in Table 5.4. Overall there has been a 6% increase in

mixed dry recyclables collected through the green bin system since 2008. In 2009 the green bin kerbside collection service was provided by Greyhound Recycling on behalf of the Local Authorities.

Table 5.4: Green Bin Recyclables Collected 2006, 2007, 2008 & 2009 (includes Public & Private)

Local Authority	2006 (tonnes)	2007 (tonnes)	2008 (tonnes)	2009 (tonnes)
DCC	22,491	25,704	29,649	30,693
DLR	13,211	14,598	16,811	18,741
FCC	12,633	13,273	16,660	17,835
SDCC	13,859	15,597	19,567	20,012
Total	62,194	69,172	82,687	87,281

Source: Local Authority (EPA) National Waste Database Returns 2009

5.3.3 Biowaste Collection Service

In 2009 a brown bin collection service was provided by both Dublin City Council and Fingal County Council. The brown bin collection service in the Fingal region has been in operation since 2005 and continues to grow with 16,955 tonnes collected in 2009.

Similarly a phased implementation of the brown bin kerbside collection has been underway in Dublin City Council since 2006. The quantity of material collected continues to increase with 19,342 tonnes collected in 2009.

The biowaste material collected in the South Dublin and Dun Laoghaire Rathdown County Council functional areas was collected by private collectors. A brown bin collection service was introduced by South Dublin County Council in 2010 while a full scale roll out of brown bins is due to be implemented in 2011 in the Dun Laoghaire Rathdown area.

Table 5.5: Brown Bin Collection Service 2006, 2007, 2008 & 2009 (includes Public & Private)

Local Authority	2006	2007	2008	2009
DCC	411	1,315	8,553	19,342
FCC	1,971	3,266	10,548	16,955
SDCC	-	36	1,312	134
DLR	-	0	149	0
Region	2,382	4,617	20,562	36,431

Source: Local Authority (EPA) National Waste Database Returns 2009.

5.4 UNCOLLECTED WASTE

The quantity of uncollected waste estimated in the Dublin Region in 2009 was estimated to be 6,135 tonnes. The corresponding figure for each Local Authority is presented in Table 5.5.

Table 5.6: Uncollected waste in the Dublin Region in 2008 & 2009

	2008	2009
DCC	3,685	2,920
FCC	360	3,215
SDCC	0	0
DLR	1,624	0
Region	5,669	6,135

Source: Local Authority (EPA) National Waste Database Returns 2009

5.5 PUBLIC RECYCLING FACILITIES

During 2009 there were a total of 327 recycling facilities in the region. Public recycling facilities in Dublin consists of recycling centres, bring centres and bring banks. Recycling Centres are large manned facilities with set operating hours. Bring Centres are manned bring banks which accept a wider range of material free of charge. Bring banks are smaller in nature, accept a limited number of waste streams and are unmanned. All materials accepted at bring banks are accepted free of charge.

Figure 5.4 outlines the number of public recycling facilities in the Dublin Region in operation in 2009.

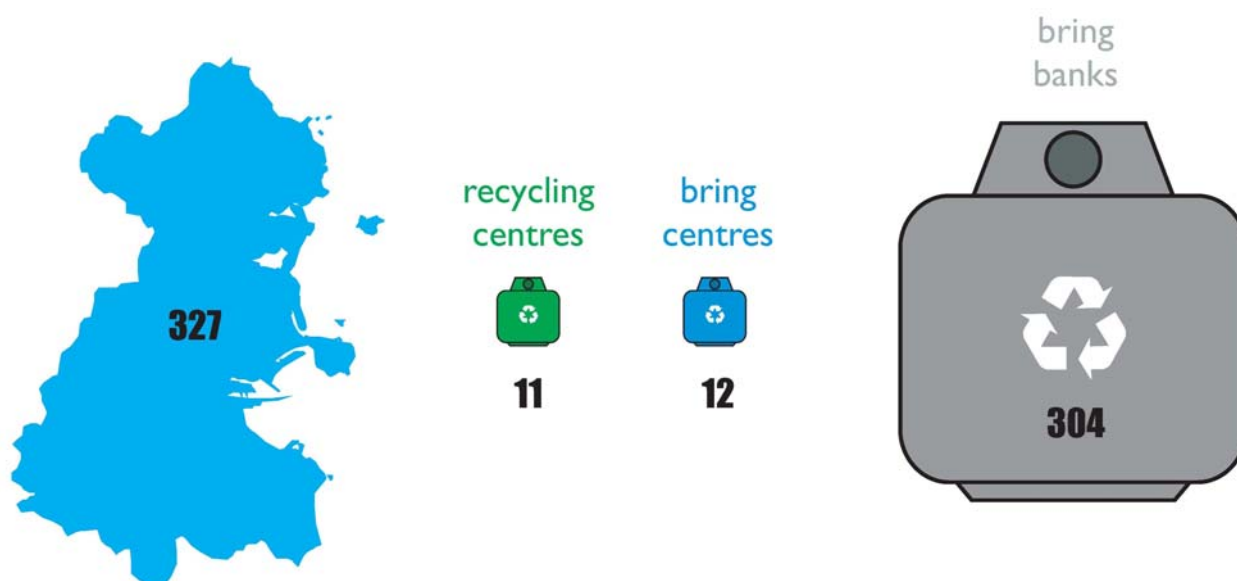


Figure 5.4 Public Recycling Facilities

5.5.1 Recycling Centres

In 2009 there were 11 recycling facilities in operation in the Dublin Region, no increase on the number of facilities in operation in 2008.

In 2008 Balleally Recycling Centre, operated by FCC Council closed. In 2010 Esker Green Waste Facility, operated by SDCC, and Balbriggan Recycling Centre, operated by FCC, both closed. A private operator, Green Clean Ltd, opened a public recycling facility in Lusk, which has been operating since 2009.

A breakdown of the number of recycling centres in operation in the Dublin Region is provided in Table 5.7.

Table 5.7: Number of Existing Recycling Centres

Local Authority	DCC	DLR	FCC	SDCC	Region
Recycling Centres 2006	2	2	4	1	9
Recycling Centres 2007	2	2	4	2	10
Recycling Centres 2008	2	3	4	2	11
Recycling Centres 2009	2	3	4 ⁹	2	11
Recycling Centres 2010	2	3	3 ¹⁰	1	9
Total Regional target 2010	12				

Source: Local Authority (EPA) National Waste Database Returns 2009.

In 2009 a total of 46,119 tonnes of waste was collected through the network of recycling centres in the Dublin Region. This represents a 10% decrease on the quantity of material accepted in 2008.

Approximately 31% of this waste was delivered to recycling facilities for disposal to landfill. Currently 2 recycling centres accept mixed residual waste for disposal – Ballyogan Recycling Park and Ballymount Recycling Centre.

A breakdown of the quantity of material accepted at the local authority recycling centres in Dublin is provided in Table 5.8.

Table 5.8: Recycling Centres in the Dublin Region in 2009

Local Authority	Name/Location	2006 (Tonnes)	2007 (Tonnes)	2008 (Tonnes)	2009 (Tonnes)
DCC	Shamrock Terrace, North Strand Road	9,542	7,261	4,979	4,550
	Pigeon House Road, Ringsend	(5,656 recycled)	(4,184 recycled)	(4,332 recycled)	(4,362 recycled)
DLR	Ballyogan				
	Eden Park Recycling Centre	18,270	14,928	12,477	14,167
	Shanganagh Recycling Centre	(12,463 recycled)	(10,021 recycled)	(9,049 recycled)	(10,909 recycled)

Source: Local Authority (EPA) National Waste Database Returns 2009.

⁹ Includes the public recycling facility operated by Greenclean.

¹⁰ Ibid 7.

Table 5.8: Recycling Centres in the Dublin Region in 2009 (Cont..)

FCC	Estuary Recycling Centre, Swords				
	Coolmine Recycling Centre	11,533t	14,812t	14,813t	9,021t
	Balbriggan Recycling Centre	(5,216t recycled, includes green waste)	(7,947t recycled, includes green waste)	(10,843t recycled, includes green waste)	(9,021 t recycled)
	Green Clean Recycling Centre				
SDCC	Ballymount Baling Station	22,676t	18,118t	18,926t	18,381t
	Esker Green Waste Centre	(12,002t recycled, includes green waste)	(8,888t recycled, includes green waste)	(7,739 t recycled, includes green waste)	(7,642t recycled)

5.5.2 Bring Banks & Bring Centres

At the end of 2009 there were 304 bring banks and 12 bring centres in operation in the Dublin Region. This represents a 5% increase since 2008.

Table 5.9 provides a breakdown of the number of bring banks and bring centres in the region. It remains difficult to find suitable locations for bring bank facilities. Obstacles include anti-social behaviour, vandalism, health and safety issues and can lead to the removal of bring banks.

In the Dublin City Council area there were 12 bring centres in operation in 2009.

Table 5.9: Number of Bring Banks & Bring Centres in Dublin in 2006, 2007, 2008 and 2009

Local Authority	DCC	DLR	FCC	SDCC	Region
Bring Banks 2006	129	69	79	44	321
Bring Banks 2007	127	81	80	58	346
Bring Banks 2008	118	47 ¹¹	76	60	301
Bring Banks 2009	125	48	73	70	316
Existing Ratio (population per site)	1:4,050	1:4,042	1:3,425	1:3,528	1:3,789

Source: Local Authority (EPA) National Waste Database Returns 2009

While the number of bring banks serving the region has increased the quantity of materials recovered has decreased by 11% since 2008, with 27,867 tonnes collected in 2009. Included in the tonnages

¹¹ Due to a reclassification of bring banks the number recorded in the Dun Laoghaire Rathdown Functional Area decreased in 2008. This was due to the exclusion of battery collection points previously recorded in this category.

reported is material collected through bring centres, including 1,452 tonnes of green waste and 361 tonnes of hazardous waste.

Table 5.10 provides a breakdown of the materials collected at bring banks and bring centres in the region in 2009.

Table 5.10: Quantity of materials accepted at Bring Banks and Bring Centres in 2009

Material	SDCC (tonnes)	FCC (tonnes)	DCC (tonnes)	DLR (tonnes)	Total (tonnes)
Glass	5,113	4,626	9,786	2,713	22,238
Aluminium cans	17	19	35	26	97
Plastics	-	-	-	15	15
Textiles	301	201	685	429	1,616
Batteries	-	-	33	-	33
Paper & Card	-	-	1,907	-	1,907
Steel cans	-	-	1	-	1
Composite packaging	-	-	-	-	0
Green Waste	-	-	1,452	-	1,452
Other¹²	-	2	506	-	508
2009 Total (tonnes)	5,431	4,848	14,405	3,183	27,867
2008 Total (tonnes)	5,565	4,434	16,755	4,553	31,307
2007 Total (tonnes)	5,632	4,097	12,192	5,565	27,486

Source: Local Authority (EPA) National Waste Database Returns 2009

5.6 HAZARDOUS COLLECTIONS

Household hazardous waste is collected through recycling centres and bring centres. In 2009 a total of 1,674 tonnes of hazardous waste was collected at these locations in the Region.

Table 5.10 provides a breakdown of the hazardous waste collected at Recycling Centres in the Dublin Region in 2009. There were no Chemcar hazardous waste collections in 2009.

¹² Others refers to Hazardous waste such as paints, aerosols and pesticides, flat glass. Batteries include lead acid batteries and small batteries.

Table 5.10: Household Hazardous Waste Collected at Recycling Facilities 2007, 2008 & 2009

Waste Type	DCC Tonnes	DLR Tonnes	FCC Tonnes	SDCC Tonnes	Regional Tonnes collected 2009	Regional Tonnes collected 2008	Regional Tonnes collected 2007
Batteries	46	38	53	24	161	183.7	178.9
Oils	2	23	18	27	70	99.4	78.8
Fluorescent tubes	-	1	-	-	1	14.7	4.6
Other Hazardous waste ¹³	1,138	100	169	35	1,442	1043.6	512.6
Subtotal (tonnes)	1,186	162	240	86	1,674	1,341.4	774.9
kg per capita	2.34	0.84	1.0	0.3	1.40	1.13	0.65

Source: Local Authority (EPA) National Waste Database Returns 2009.

The total household Waste Electronic and Electrical Equipment (WEEE) collected in the region was 12,577 tonnes. This represents a decrease on the quantity of household WEEE collected in 2008 in the region of 13,009 tonnes. Details of WEEE collections in the region are presented in Section 9.1.

5.7 BULKY WASTE COLLECTIONS

Bulky waste is collected through the network of recycling facilities in the region. Bulky items can also be reused in the region through the online service, www.FreeTradelreland.ie.

Dublin City Council also provide a skip bag collection service at a cost of €75 per skip bag.

In June 2009 Fingal County Council ceased the provision of an arranged collection service which operated on a pay per item basis. Customers prepaid for this collection service as part of an organised service.

6 COMMERCIAL AND MUNICIPAL WASTE

6.1 COMMERCIAL WASTE ARISING

Commercial waste arisings generated in Dublin in 2009 was 731,927 tonnes. This figure represents an estimated decrease of 1% or 6,266 tonnes compared in 2008 data.

Table 6.1 provides a breakdown of commercial waste arisings in the Dublin Region in 2009.

The data presented in the table was sourced following a detailed analysis of returns made by single region permit holders in Dublin, multi-region permits holders where DCC is the Lead Authority and multi region permit holders where the Lead Authority is based outside Dublin. The figures represent the most accurate depiction of commercial waste arisings in the Dublin Region.

Table 6.1: Commercial Waste Collected in the Dublin Region 2009

	Total EWC 20 ¹⁴	Total EWC 15 ¹⁵	Total
Single Region Returns	332,313	28,468	360,781
Multi Region Permit DCC as Lead Authority	249,413	68,578	317,991
Multi Region Permits Other LA as Lead Authority	34,462	4,040	38,502
Commercial Waste Collected by Dublin Local Authorities	14,653	-	14,653
Total	630,841	101,086	731,927

Source: Single Region Waste Collection Permits, Multi Region Waste Collection Permits relevant to Dublin

6.2 COMMERCIAL WASTE RECOVERY

Table 6.2 provides an estimate of the recovery rates for commercial waste for 2006, 2007, 2008 and 2009. The commercial waste recovered in the region is estimated to be 373,283 tonnes. This figure was calculated using the EPA national recovery rate of 51% for commercial waste as published in the National Waste Report for 2009.

Determining the rate of recovery for commercial waste generated in Dublin is becoming increasingly more difficult. Intermediate facilities are used by collectors to process and or bulk waste before the output fractions are transferred onwards to recovery and disposal destinations. The format of collection returns submitted by collectors does not currently provide adequate detail on quantity of waste being recovered or disposed. Resolving this information gap will be an on-going challenge for the Dublin Local Authorities and the future reporting of recovery rates for commercial and municipal waste. The recovery rates calculated by the EPA reflect the national average and have been applied by the Dublin Local Authorities to generate best estimate rates.

¹⁴ Total EWC 20 includes EWC Codes 20 01 01, 20 01 02, 20 01 08, 20 01 10, 20 01 11, 20 01 14, 20 01 15, 20 01 19, 20 01 21, 20 01 23, 20 01 25, 20 01 26, 20 01 27, 20 01 29, 20 01 32, 20 01 33, 20 01 35, 20 01 36, 20 01 38, 20 01 39, 20 01 40, 20 01 99, 20 02 01, 20 02 02, 20 03 01 & 20 03 07. Note sludges have not been included in Total EWC 20.

¹⁵ Total EWC Code 15 includes 15 01 01, 15 01 02, 15 01 03, 15 01 04, 15 01 05, 15 01 06 & 15 01 07

Table 6.2: Commercial Waste Estimated Recovery Rates for 2006, 2007, 2008 and 2009

Waste Type	2006 Tonnes	2007 Tonnes	2008 Tonnes	2009 Tonnes
Recycled	399,433	379,261	340,489	373,283
Landfilled	420,428	399,034	397,704	358,644
Commercial waste arisings	819,861	778,295	738,193	731,927
Recovery Rate	49%	49%	46%	51%

Source: Single Region Waste Collection Permits, Multi Region Waste Collection Permits relevant to Dublin

6.3 MUNICIPAL WASTE ARISING AND RECOVERY RATE

Municipal waste arisings of 1,234,035 tonnes have been reported for 2009 in the Dublin Region, representing a 1% decrease on municipal waste arisings recorded in 2008.

The recovery rate for the region has increased to 46%, a 5% increase on the 2008 figure and 7% higher than the national rate of 39%.

The rate of disposal to landfill remains high at 54% and Dublin like the rest of the country remains overly dependent on landfill. The need to deliver treatment technologies for the long-term management of residual waste remains a priority for the region and the country. The move away from a disposal reliant system towards a sustainable recovery based approach is dependent on the key treatment infrastructure, such as the Poolbeg facility, being developed in the region as planned.

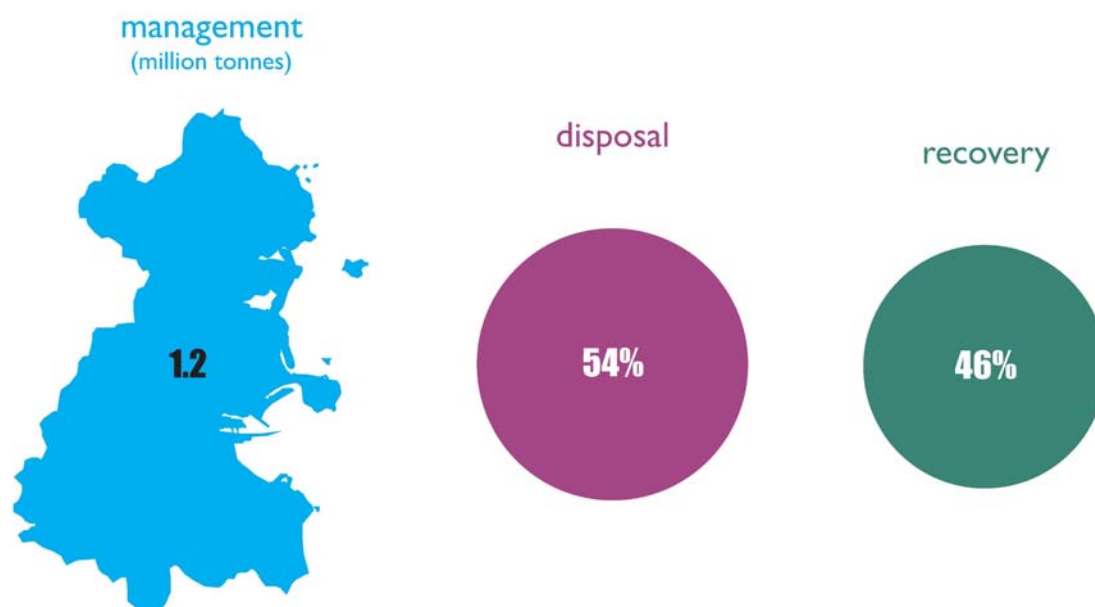


Figure 6.1 Management of Municipal Waste

Table 6.3 provides a breakdown of the municipal arisings generated in the region

Table 6.3: Dublin Region Municipal Waste Arisings and Recovery Rate 2006, 2007, 2008 & 2009

Waste Stream	Total tonnes 2006	Total tonnes 2007	Total tonnes 2008	Total tonnes 2009
Household Waste Generated	464,066	470,221	474,767	464,671 ¹⁶
Commercial/Industrial Waste Generated	819,861	778,295	738,193	731,927
Litter and Street Sweepings	36,616	35,580	35,136	37,437
Municipal Waste generated	1,320,598	1,284,096	1,248,096	1,234,035
Household Waste Recovered	126,805	132,331	166,546	192,202
Commercial/Industrial Waste Recovered	402,311	401,607	340,489	373,283
Municipal Waste Recovered	529,116	533,938	507,035	565,285
Municipal Recovery Rate	40%	41%	41%	46%

6.4 MUNICIPAL WASTE PROJECTIONS

Table 6.4 sets out revised projections for municipal waste generation for Dublin for the period 2010 to 2020. This new dataset updates the projections published in the previous Annual Progress Report.

Table 6.4 Municipal Waste Projection 2009 – 2020 (Unit = tonnes)

Year	Waste Projections ¹⁷	Actual	Difference	% Difference
2009	1,178,072 ¹⁸	1,195,685	+17,613	+1.5%
2010	1,183,451			
2011	1,191,851			
2012	1,208,905			
2013	1,230,629			
2014	1,265,071			
2015	1,294,251			
2016	1,318,112			
2017	1,341,817			
2018	1,365,979			
2019	1,390,606			
2020	1,415,709			

¹⁶ Household waste does not include uncollected household waste.

¹⁷ The revised projections use the latest available national economic growth rates (GNP) and regional population projections. The GNP values were sourced from two ESRI publications; Quarterly Economic Commentary (Winter 2010) and Recovery Scenarios for Ireland: An Update (July 2010). The population projections for Dublin were sourced from the DEHLG and are the same as those used in the Greater Dublin Areas Regional Planning Guidelines document.

¹⁸ As published in the Waste Management Plan for the Dublin Region Annual Progress Report 2009.

Economic growth rates and population projections have been used to develop projections for commercial and household wastes respectively. The method to calculate the municipal waste projections follows the approach developed for the previous Annual Progress Report.

This approach examines the relationship between actual data for household and commercial waste streams and key influencing growth factors e.g. population growth and economic growth. Population is identified as having a strong co-relation with household waste projections. A similar co-relation exists between economic growth and commercial waste tonnages. These relationships are averaged to generate constant emission intensity factors which are then applied to the latest available population projections for Dublin and national economic growth (in terms of Total GNP).

The approach described has proved reliable to date with the projected tonnages and the actual tonnage for 2009 differing by 1.5%. The method takes a conservative approach in its projecting forward of waste tonnages focusing on what is considered to be the primary influencing factor rather than considering the impact of multiple factors on the waste stream. Over the long-term this approach is considered to provide a consistent set of waste projections for Dublin.

In summary the revised projected data in Table 6.4 shows an average annual growth rate of 1.8% over the time period. Municipal waste projections will continue to be revised on an annual basis by the Local Authorities.

7 PACKAGING WASTE

7.1 PACKAGING WASTE ARISING

Packaging waste arisings decreased by 7% in 2009, with total packaging arisings in the region estimated to be 290,281 tonnes. This generation figure comprises data from REPAK members and self compliers.

Table 7.1 provides an overview of the management of packaging waste generated in Dublin from 2006 to 2009.

Table 7.1 Packaging Waste Arisings for the Dublin Region for 2006, 2007, 2008 & 2009

Packaging waste	Landfilled (tonnes)	Recovered (tonnes)	Arisings (tonnes)	Recovery Rate
2006	142,927	136,632	279,559	49%
2007	139,375	148,706	288,081	52%
2008	141,766	168,567	310,333	54%
2009	131,120	159,161	290,281	55%

Source: Packaging recovered data provided by Repak and Self Compliers data as included in National Waste Report 2010. Packaging waste landfilled calculated using packaging factors EPA National Waste Report 2007.

7.2 RECOVERY

Overall there has been a 1% increase in the packaging recovery rate which is 56% for the region in 2009.

Figure 7.1 shows that the region has achieved the packaging waste recovery target set in the Waste Management Plan of 55%.

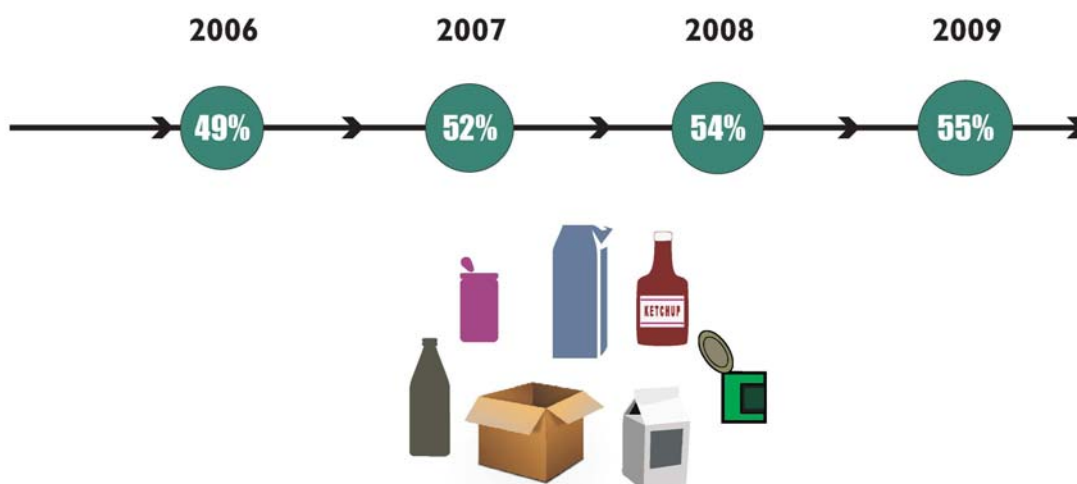


Figure 7.1 Packaging Waste Recovery Rates

7.3 ESTIMATE OF PACKAGING WASTE LANDFILLED

Table 7.2 provides a breakdown of the composition of packaging waste in the household and commercial waste streams. Packaging factors were provided by the EPA.

Table 7.2 Packaging Composition in Landfilled Household and Commercial Waste

Packaging Material	Household %	Commercial %
Paper & Cardboard	5.5	5.8
Plastic	11.1	9.1
Glass	2.9	1.3
Metals	-	1.1
Ferrous	1.1	-
Aluminium	0.5	-
Other metals	0	-
Wood	0.1	0
Textiles	0.1	0.1
Other	1	3.1
Total %	22.3%	20.5%

Source: EPA National Waste Report 2007

Table 7.3 shows that a total of 131,120 tonnes of packaging waste was landfilled in the region in 2009. This represents a 8% decrease in packaging waste landfilled since 2008.

Table 7.3 Packaging Waste Generated in Dublin and Sent for Disposal in 2009

	Household	Commercial
Total Waste Landfilled (Tonnes)	258,286	358,644 ¹⁹
% Packaging	22.3	20.5
Packaging Waste Landfilled (Tonnes)	57,598	73,522
Total Packaging Waste Landfilled 2009	131,120	
Total Packaging Waste Landfilled 2008	141,766	
Total Packaging Waste Landfilled 2007	139,375	

¹⁹ This figure is an estimate of the commercial waste generated in Dublin and landfilled outside of the Dublin Region.

8 CONSTRUCTION AND DEMOLITION (C & D) WASTE

8.1 ARISINGS

Construction and demolition arisings generated in the Dublin Region in 2009 was 2,698,753 tonnes, representing an overall decrease of 59% since 2008.

The construction sector has been significantly impacted by the current economic crisis in Ireland. This has been mirrored by the decrease in C & D waste arisings, which has decreased on a national scale by 62% ²⁰ since 2008.

Table 8.1 provides a breakdown of C & D waste arisings in the Dublin Region in 2009.

Table 8.1: Construction and Demolition Waste Arisings 2008 & 2009

C & D Waste	DCC	FCC	DLR	SDCC	2009 Total (tonnes)	2008 Total (tonnes)
concrete, bricks, tiles & ceramics	88,585	25,444	22,831	45,368	182,228	583,144
wood glass & plastic	1,624	8,403	642	16,365	27,034	25,872
Bituminous mixtures, coal tar & tarred products	15,641	3,991	3,465	8,448	31,545	26,693
Metals	24,678	23,737	854	43,321	92,590	358,955
Soils - excluding contaminated soils	399,173	877,997	318,260	401,907	1,997,337	4,892,312
Insulation materials	605	99,816	125	469	101,015	15,400
Gypsum Based construction material	470	865	94	84	1,513	1,076
Other	103,443	45,745	44,495	71,808	265,491	626,059
Total	634,219	1,085,998	390,766	587,770	2,698,753	6,529,511

Source: Local Authority (EPA) National Waste Database Returns 2009

*Contaminated soils have been removed from the C & D waste quantities recorded for the region. This is in line with the EPA approach and this material is classified as hazardous waste.

²⁰ EPA National Waste Report 2009.

8.2 RECOVERY/DISPOSAL

Table 8.2 provides a summary of the management of all construction and demolition wastes as generated in the region in 2009.

Table 8.2: Management of Construction and Demolition Waste 2009(unit = tonnes)

Collection (tonnes)	Recovery	Disposal	Total
EPA licensed landfills	270,819	41,896	312,715
Local Authority Permitted Sites	372,217	-	372,217
Recovery/Disposed at facilities outside the region*	1,999,791	14,030	2,013,821
Total	2,642,827	55,926	2,698,753
Estimated C & D Recovery Rate	98%		

Data Source: Local Authority (EPA) National Waste Database Returns 2009

Table 8.3 provides a summary of the management of the soil and stone fraction of C&D wastes in the Dublin Region. The recovery rate has been estimated at 98.

Table 8.3: Management of Soil and Stones 2009(unit = tonnes)

Collection (tonnes)	Recovery	Disposal	Total
EPA licensed landfills	270,819	38,949	309,768
Local Authority Permitted Sites	151,264	-	151,264
Recovery/Disposed at facilities outside the region*	1,536,305	-	1,536,305
Total	1,958,388	38,949	1,997,337
Estimated Recovery Rate	98%		

Data Source: Local Authority (EPA) National Waste Database Returns 2009

Table 8.4 provides a summary of the management of the other construction and demolition wastes in the Dublin Region. The recovery rate for C & D waste (excluding soil and stones) is 98% in total. The rate other C&D waste recovered in Dublin is 22%.

Table 8.4: Management of Other Construction and Demolition Wastes 2009(unit = tonnes)

Collection (tonnes)	Recovery	Disposal	Total
EPA licensed landfills	-	2,947	2,947
Local Authority Permitted Sites	220,954	-	220,954
Recovery/Disposed at facilities outside the region*	463,486	14,030	477,516
Total	684,440	16,977	701,417
Estimated Recovery Rate	98%		

Data Source: Local Authority (EPA) National Waste Database Returns 2009

9 PRIORITY WASTE STREAMS

9.1 WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

Table 9.1 provides a breakdown of WEEE collected at Recycling Centres in the region in 2009.

Overall there has been a 10% decrease in WEEE collected at the Recycling Centres in the region since 2008.

Table 9.1: WEEE collected at Recycling Centres in 2009 (tonnes)

	DCC	DLR	SDCC	FCC	Dublin Region
Total 2009	619	735	932	1,491	3,777
Total 2008	691	824	883	1,813	4,211
Total 2007	699	798	662	1,599	3,758
Total 2006	762	871	1,257	1,334	4,224

Source: WEEE Ireland & ERP

In 2009 9,940 tonnes a WEEE was collected in the region by private waste collectors. A breakdown of the WEEE collected by private waste collectors in the Region is provided in Table 9.2.

Since 2008 there has been a 40.5% decrease in the quantity of WEEE collected by private waste collectors.

Table 9.2: WEEE Collected by Private Operators

Waste Category	SDCC Tonnes	DCC Tonnes	FCC Tonnes	DLR Tonnes	Region Tonnes
WEEE 2009	5,494	1,887	1,624	935	9,940
WEEE 2008	11,801	1,777	3,035	91	16,704
WEEE 2007	2,672	5,290	4,724	991	13,677
WEEE 2006	7,453	2,414	959	539	11,365

Source: Single Region Waste Collection Permits, Multi Region Waste Collection Permits relevant to Dublin

In 2009 the total household WEEE collected in the region was 12,577 tonnes with the household WEEE per capita recorded at 10.5Kg. This has decreased from 11kg per capita in 2008.

Table 9.3 provides a breakdown of the household WEEE collected in the region in 2009.

Table 9.3: Household WEEE Collected in the Dublin Region in 2009

WEEE	DCC	DLR	SDCC	FCC	Total
Retailer collections	1,627	454	4,594	617	7,292
Recycling Centres	619	735	932	1,491	3,777
Bring Centres	2	99	-	-	101
Collection days	116	38	651	56	862
Council Depots	12.00	-	-	-	12
Retailer Depots	356	-	178	-	534
Total Household WEEE Collected 2009	2,732	1,326	6,355	2,164	12,577
Total Household WEEE Collected 2008	2,047	1,463	6,958	2,541	13,009
Population	506,211	194,038	246,985	250,000	1,197,234
Households	190,984	79,224	95,607	99,000	464,815
2009 KG/CAPITA	5.40	6.83	25.73	8.66	10.51
Source WEEE Ireland, ERP Ireland					

9.2 END OF LIFE VEHICLES (ELVS)

There are 11 Authorised Treatment Facilities operating in the Dublin Region. The breakdown of these facilities is provided in Table 9.4.

Table 9.4: No of Authorised Treatment Facilities (ATFs) in the Dublin Region 2008 & 2009

Local Authority	No. of ATFs 2009	No. of ATFs 2008
Dublin City Council	2	3
Dun Laoghaire Rathdown County Council	0	0
South Dublin County Council	6	7
Fingal County Council	3	3
Region	11	13

Source: Local Authorities

Overall 5,447 tonnes of end of life vehicles (ELVs) were collected in the region in 2009. Details of the ELVs collected in the region are provided in Table 9.5. The decrease in the quantity of ELVs collected in 2009 is a likely consequence of the economic downturn which has impacted significantly on the purchase of new cars in the state.

Table 9.5: Tonnes of ELVs collected in the Region in 2006, 2007, 2008 & 2009

Local Authority	ELVs (tonnes) 2006	ELVs (tonnes) 2007	ELVs (tonnes) 2008	ELVs (tonnes) 2009
Dublin City Council	2,445	4,378	6,276	696
Dun Laoghaire Rathdown County Council	1,212	738	719	1,040
South Dublin County Council	2,648	4,136	3,574	1,892
Fingal County Council	1,084	4,725	3,842	1,819
Region	7,389	13,977	14,411	5,447

Source: Single Region Waste Collection Permits, Multi Region Waste Collection Permits relevant to Dublin

9.3 WASTE TYRES

The quantity of waste tyres reported by Private Collectors in the annual reports for 2009 was 2,362 tonnes representing a 67% drop on 2008 data.

Table 9.6: Quantity of Waste Tyres 2006, 2007, 2008 & 2009

	DCC (tonnes)	FCC (tonnes)	DLR (tonnes)	SDCC (tonnes)	Total (tonnes)
2009 Quantity Collected	905	419	40	999	2,363
2008 Quantity Collected	4,025	1,008	470	1,719	7,222
2007 Quantity Collected	6,039	1,220	386	1,897	9,542
2006 Quantity Collected	2,357	1,007	451	1,243	5,058

Source: Single Region Waste Collection Permits, Multi Region Waste Collection Permits relevant to Dublin

10 WASTE DISPOSAL

10.1 UPDATE ON LANDFILL RATES

In 2009 it is estimated that approximately 668,550 tonnes of the municipal waste generated in Dublin was sent to landfill. This is a 9% drop in the quantity of municipal waste landfilled compared to 2008.

The AERs for Arthurstown and Balleally Landfills show that 280,972 tonnes of municipal waste was landfilled in region. This consists of commercial, household and street sweepings. It is estimated that the remaining 387,578 tonnes of waste is disposed outside of the region.

Household waste disposed to landfill has decreased by 10% from 2008. In 2009 a total of 198,667 tonnes of household waste from the Dublin Region was disposed of at landfills serving the Dublin Region – Balleally and Arthurstown. A further 73,802 tonnes (27%) of household waste collected in the Dublin Region is landfilled outside the region.

Commercial waste arisings in the region have decreased by 1%. The quantity of commercial waste disposed landfilled at the regional facilities have decreased by 39,060 tonnes (11%) since 2008.

Details of waste generated in the region and sent for disposal are provided in Table 10.1.

Table 10.1: Waste Generated in Dublin and Disposed to landfill 2006, 2007, 2008 & 2009

Waste Type	2006 Tonnes	2007 Tonnes	2008 Tonnes	2009 Tonnes
Household	337,070	337,889	302,552	272,469
Commercial	420,428	399,034	397,704	358,644
Street cleanings	36,616	35,580	35,136	37,437
Total	794,114	772,503	735,392	668,550

10.2 EXISTING LANDFILLS

There are currently two local authority non-hazardous landfill facilities in operation in the Dublin Region – Balleally Landfill operated by Fingal County Council and Arthurstown Landfill operated by South Dublin County Council.

Table 10.2 provides a breakdown of the quantity of waste landfilled in each facility in 2009 and the remaining void space.

Arthurstown landfill closed in December 2010 and Balleally Landfill is due to cease filling at the end of 2011.

An inert landfill operated by Murphy Environmental Ltd is active in the region. This facility provides long-term capacity for the disposal of clean soil and stone type material generated in Dublin and from neighbouring counties. The facility has available void capacity for filling until 2050, assuming an annual waste intake of 200,000tonnes/annum.

Table 10.2: Status of the Local Authority Landfills in the Dublin Region in 2009

	Balleally		Arthurstown	
Operator	Fingal County Council		South Dublin County Council	
Tonnes Landfilled	Civic Amenity Household	0	Household	186,536
	Household	37,789	Commercial	25,658
	Commercial/Trade	54,093	Green Bin Residue	2,554
	Sewage Sludge	315		
	Ind. Non-Hazardous Sludge	6,363		
	Total	98,560	Total	214,748
Expected Closure Date	Dec-11		December 2010	
Current Remaining void	107,284 tonnes		274,335 tonnes	

Source: Facility Annual Environmental Report 2009

The production of energy from the capture of landfill gas from existing landfills in the region, both active and closed facilities, continues to increase with a total of 136,990 MWh generated in 2009, a 3% increase of 2008 figures, refer to Table 10.3 for details.

Table 10.3: Energy Recovery from Dublin Landfills, 2006, 2007, 2008 & 2009

Landfill	Energy Recovery 2009 (MWh)	Energy Recovery 2008 (MWh)	Energy Recovery 2007 (MWh)	Energy Recovery 2006 (MWh)
Balleally	25,429	27,117	23,762	20,529
Ballyogan	7,218	9,068	11,124	11,124
Dunsink	5,607	6,687	6,774	8,026
Friarstown	2,783	2,677	3,162	-
Arthurstown	95,953	86,975	71,181	53,930
Total	136,990	132,524	116,003	93,609

Source: Facility Annual Environmental Reports 2009, Local Authorities

10.3 SHORT-TERM DISPOSAL OPTIONS

In 2009 some 668,550 tonnes of residual waste was consigned to landfill inside and outside of the Dublin Region. By the end of 2011 there will be no active non-hazardous landfill facility in the region. Pending the commissioning of the Dublin Waste-to Energy facility the Dublin Local Authorities have put in place short-term solutions for the disposal of residual waste.

Following a public tendering process a panel of suitable facilities (19 in total), 12 of which are landfill facilities, were accepted onto a framework. Call-off contracts from the framework for the disposal of residual waste from Dublin will be run every 6 months. Currently waste from Dublin is being landfilled at disposal facilities in Kildare (Drehid Landfill) and Cavan (Corranure Landfill). Figure 10.1 shows the landfill facilities accepted onto the framework.



Figure 10.1 Framework Facilities for the Acceptance of Dublin’s Waste

11 REGULATION AND ENFORCEMENT

The Dublin Local Authorities continue to invest staff and resources in the regulation and enforcement of waste policy in the Dublin Region.

Table 11.1 provides a breakdown of enforcement statistics for the Dublin Region for 2009.

Table 11.1: Local Authority Enforcement 2008 & 2009

	DCC	DLR	FCC	SDCC	Regional Total
Waste Permit Facility Audits	36	2	65	47	150
No of Inspections carried out:					
Routine Business Audits	574	-	-	-	574
WEEE Audits:	272	53	30	81	436
PBL Audits:	421	100	82	219	822
C & D Audits	31	16	0	-	47
Road checks	30	4	10	-	44
Packaging	321	266	80	140	807
Battery	266	22	-	121	409
Haz Waste Inspection	0	59	0	-	59
Tyre Outlet Inspection	64	22	8	42	136
Other	-	80	30		110
TOTAL 2009	1,979	622	240	603	3,444
TOTAL 2008	1,161	693	277	695	2,772
No of Complaints	136	27	194	65	422

Source: Local Authority RMCEI Annual Report

12 KEY PERFORMANCE INDICATORS

12.1 HEADLINE INDICATORS

Table 12.1: Headline Indicators for years 2006, 2007, 2008 and 2009.

	Headline Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance	Waste Plan Targets
1	Household Waste Generated per household	1.1	1.12	1.12	1.01	1.25 tonnes/annum 2006 onwards
2	Municipal Waste Recycling Rate	40%	41%	41%	46%	45% by 2010
3	Proportion of Household and C/I waste sent for Energy Recovery	0%	0%	0%	0%	38% by 2013
4	Tonnage Biodegradable Municipal Waste Landfilled	470,361	417,025	438,456	396,869	175,030 by 2009
5	% C&D Waste Recycled (excl soil)	14%	43%	28%	98%	85% by 2013
6	Kg (household) WEEE collected for Recycling per capita	4.1 Kg	10.9 Kg	11Kg	10.5Kg	4 Kg by 2006
7	% Household Hazardous Waste in residual waste stream	0.40%	0.40%	0.30%	0.30%	0.75% by 2008
8	% Recycling of Packaging Waste	48.80%	54%	54%	55%	55% by 2011

12.2 PREVENTION AND MINIMISATION

Headline Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance	Target
Household Waste Generated per Household (tonnes/annum)	1.1	1.12	1.12	1.01	1.25 from 2006 onwards

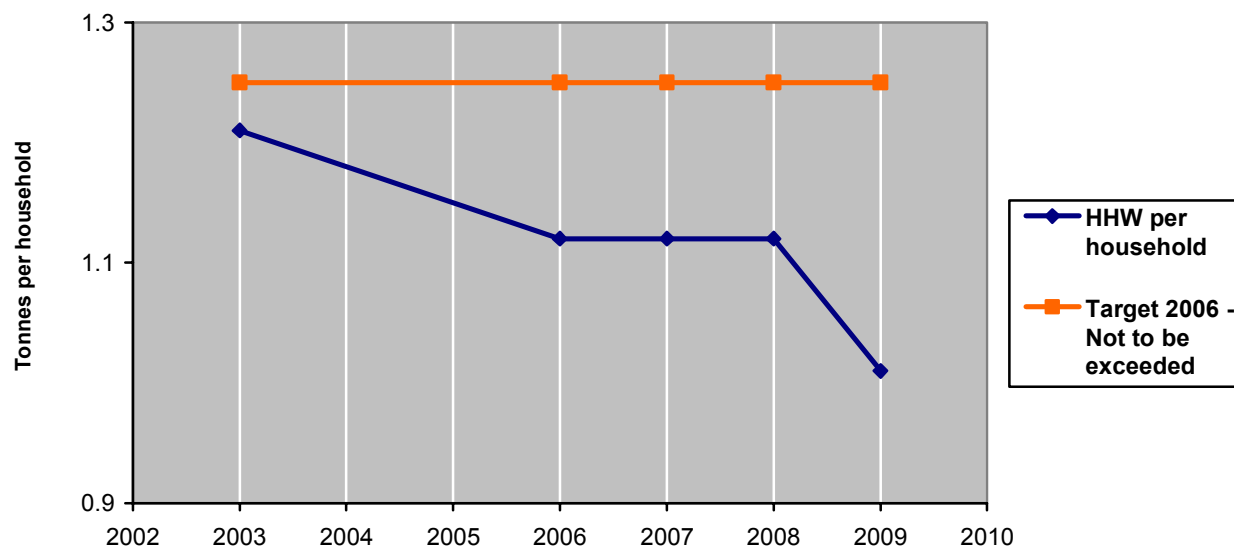


Figure 12.1 Household Waste Generated Per Capita

Secondary Indicators	2006 Performance	2007 Performance	2008 Performance	2009 Performance
Household Waste Generated per Household (tonnes/annum)	0.41	0.41	0.40	0.39
No of Items Reused on FREE Trade Service	1,551	6,174	9,365	8,324

12.3 RECYCLING OF MUNICIPAL WASTE

Headline Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance	2010 Target
Municipal Waste Recycling Rate	40%	41%	41%	46%	45%

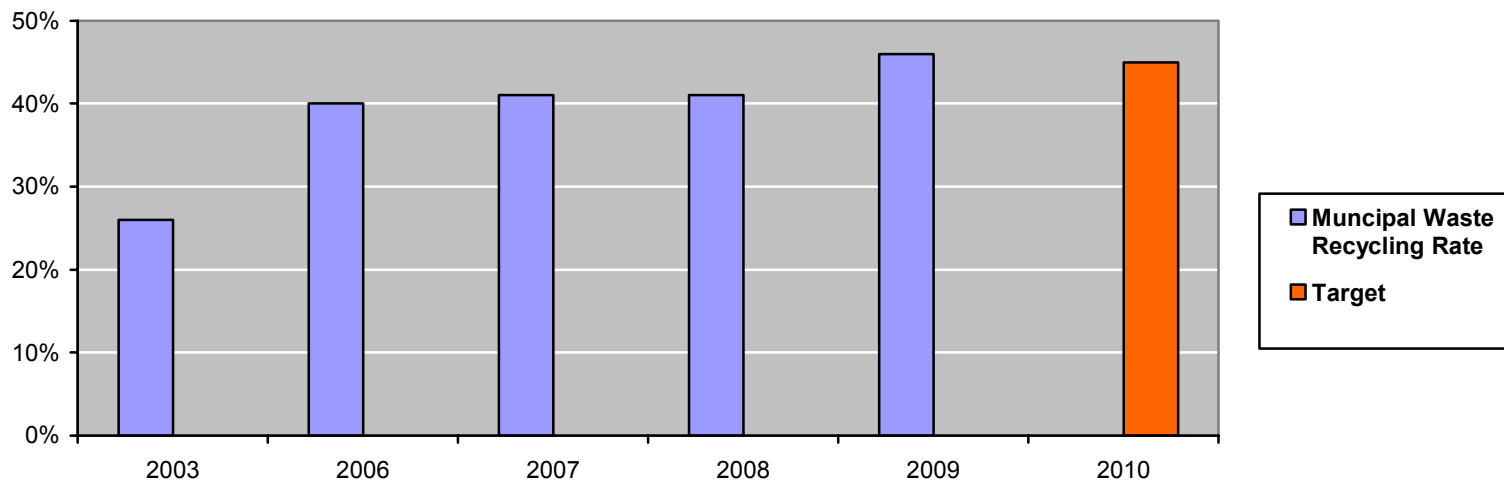


Figure 12.2 Municipal Waste Recycling Rate (%)

Secondary Indicators – Household and Commercial Waste Recycling Rates

Secondary Indicators	2006 Performance	2007 Performance	2008 Performance	2009 Performance	2013 Target
Household Waste Recycling Rate	27%	28%	35%	41%	60%
Commercial/Industrial Waste Recycling Rate	49%	49%	46%	51%	41%

12.4 CONSTRUCTION AND DEMOLITION WASTE

Headline Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance	Target
% C&D Waste Recovered (Excl soil) in Dublin	14.4%	42.8%	28%	22%	85% by 2013
% C&D Waste Recovered (Incl soil)	82%	90%	75%	98%	

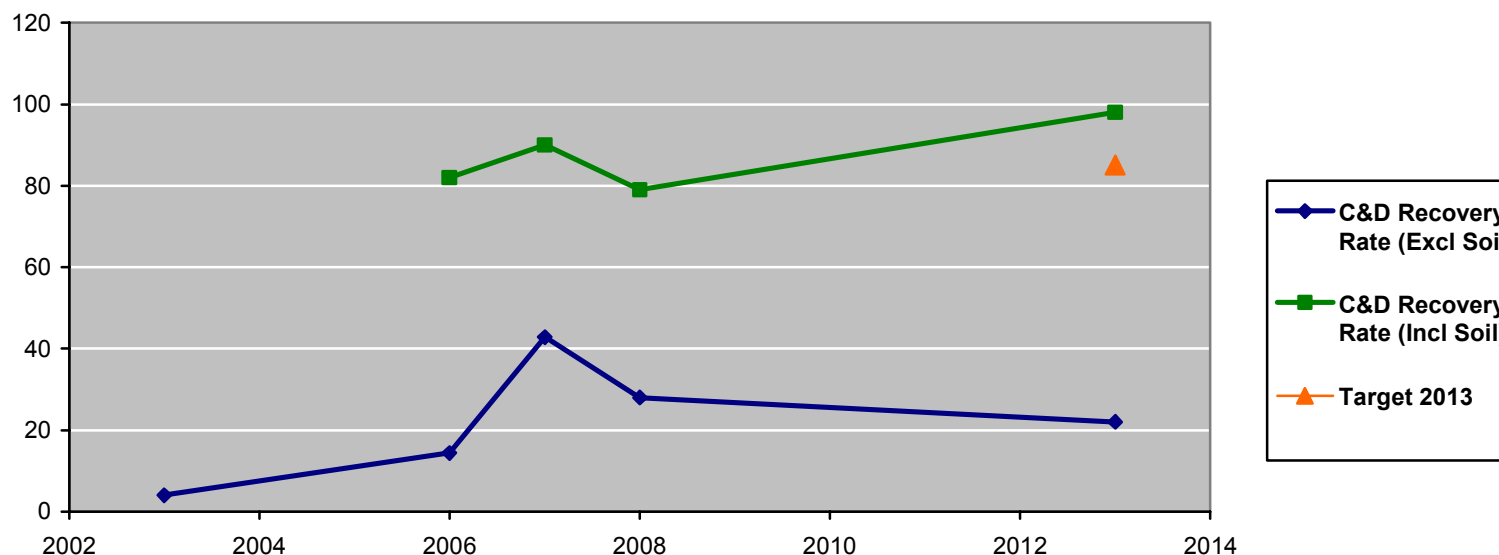


Figure 12.3 Construction and Demolition Recycling Rate (%)

Secondary Indicator - Construction and Demolition Waste Recycling Tonnage

Secondary Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance
Construction and Demolition Waste Recycling (Tonnes excl soil and stones)	231,200	418,690	461,169	220,954

12.5 WASTE ELECTRICAL AND ELECTRONIC WASTE

Headline Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance
Kg (household) WEEE Collected for Recycling per capita	4.1 Kg	10.9 Kg	11 Kg	10.5Kg

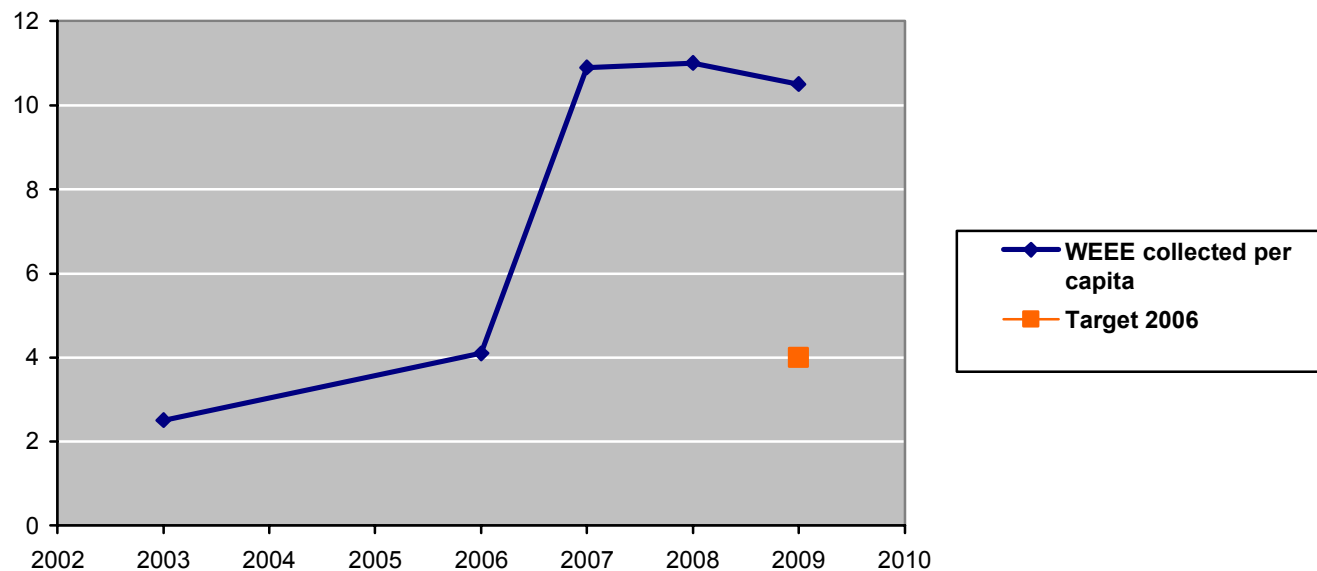


Figure 12.4 WEEE Collected (kg) for Recycling per Capita

Secondary Indicator - Estimated Quantity of WEEE Landfilled

Secondary Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance
WEEE landfilled	6,456 tonnes	5,986 tonnes	1,703 tonnes	1,535 tonnes

*Based on a composition of 0.3% of the residual bin.

12.6 HOUSEHOLD HAZARDOUS WASTE

Headline Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance	Target
% Household Hazardous Waste in residual waste stream	0.4%	0.4%	0.9%	0.9%	0.75% by 2008

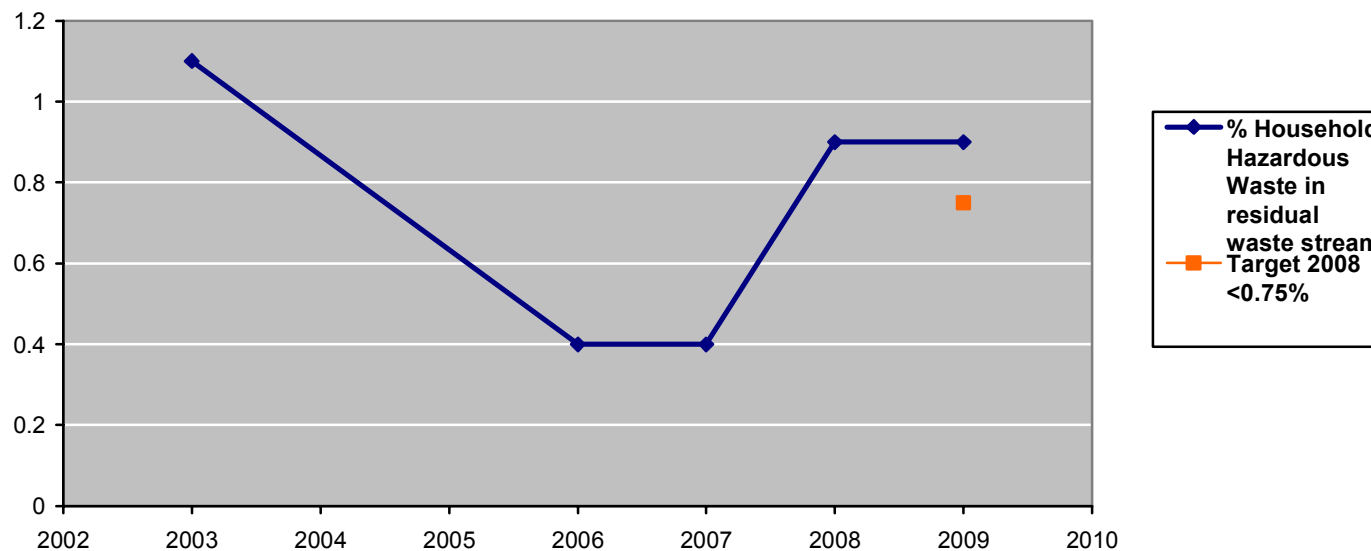


Figure 12.5 % Household Hazardous Waste in Residual Waste Stream

Secondary Indicator - Estimated Quantity of Hazardous Waste Landfilled

Secondary Indicator	2003 Performance	2006 Performance	2007 Performance	2008 Performance	2009 Performance
Household Hazardous Wastes landfilled	5,055 tonnes	1,359 tonnes	1,260 tonnes	2,723 tonnes	2,452 tonnes

12.7 PACKAGING WASTE

Headline Indicator	2006 Performance	2007 Performance	2008 Performance	2008 Performance	Target
% Recycling of Packaging Waste	49%	52%	54%	55%	55% by 2011

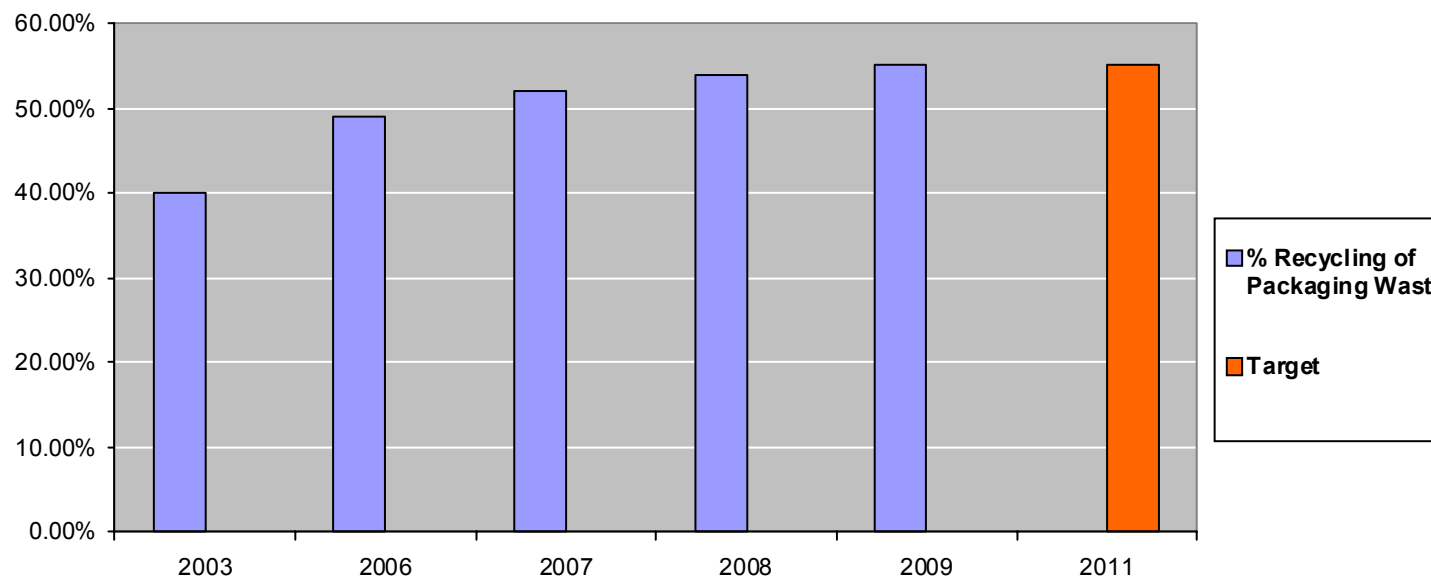


Figure 12.6 Recycling of Packaging Waste (%)

Secondary Indicator - Quantity of Packaging Waste Landfilled

Secondary Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance
Packaging Waste landfilled	142,927 tonnes	139,375 tonnes	141,766 tonnes	131,120 tonnes

12.8 RECOVERY OF ENERGY FROM WASTE

It remains the policy of the Dublin Local Authorities region to develop a Waste-to-Energy facility in Poolbeg, Ringsend for the long-term treatment of residual municipal waste arisings. Construction of the new facility will commenced in 2009 but has since stalled. It is expected to restart construction in 2011 and be operational by late 2012.

The Waste Management Plan as set targets for energy recovery from household waste of 39% and from commercial waste of 37%. These targets remain to be met.

Headline Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance	Target
Proportion of Household and C&I waste sent for Energy Recovery	0 %	0 %	0 %	0 %	38% by 2013

Secondary Indicator – Landfill Gas and WWTP Biogas Recovery

Landfill gas capture and utilisation systems are in place at regional landfills, namely Arthurstown, Ballyogan, Balleally, Friarstown and Dunsink Landfills. The total energy generated and recovered through these systems is presented in the table below and has increased for 2009.

Secondary Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance
Landfill Gas Recovery	93,609MWh	116,003MWh	132,524MWh	136,990 MWh

12.9 LANDFILL DISPOSAL

BMW Generated in Dublin 2009

Collection System	Quantities Collected	Biodegradability Factor	BMW Content
LA Household (Region) - 3 -bin	93,693	0.47	44,036
LA Household (Region) - 2 -bin	99,357	0.63	62,595
Private Household DCC - 3 Bin	13,061	0.47	6,138
Private Household DCC - 2 Bin	5,597	0.63	3,526
Private Household DLR - 2 Bin	25,212	0.63	15,884
Private FCC - 3 Bin	11,415	0.63	7,191
Private FCC - 2 Bin	1,268	0.47	596
Private Household SDCC – 2 BIN	8,423	0.63	5,306
Private Household SDCC – 3 BIN	260	0.47	122
Kerbside - green bin	87,281	0.729	63,628
Kerbside brown bin	36,432	0.936	34,100
Uncollected	6,135	0.65	3,988
WEEE Collections	8,687	0	0
Recycling Centre/bring bank - recyclables	59,803	0.35	20,931
Recycling centre - disposal	14,183	0.63	8,935
Street Cleanings	37,437	0.645	24,147
Commercial	731,927	0.77	563,584
Total	1,240,171		864,707

Determining the Quantity of BMW Landfilled in the Dublin Region in 2009

Collection System	Collected and landfilled	Biodegradability Factor	BMW Tonnage
Commercial	79,778	0.75	59,834
Residues	2,554	0.42	1,073
LA Household DCC – 3 BIN	58,863	0.47	27,666
LA Household DCC – 2 BIN	24,043	0.63	15,147
LA Household DLR – 2 BIN	19,085	0.63	12,024
LA Household SDCC – 2 BIN	54,396	0.63	34,269
LA Household FCC – 3 BIN	34,830	0.47	16,370
LA Household FCC – 2 BIN	1,833	0.63	1,155
LA Household -KCC	25,658	0.63	16,165
Total	301,040		183,701

Note:

It has been estimated that by the end of 2009, 70% of households served by Dublin City Council had a 3 bin collection service. The corresponding estimate of 3-bin coverage in Fingal County Council was 95%. The remaining households have a 2 bin system. South Dublin and Dun Laoghaire Rathdown County Councils had not commenced the rollout of brown bins in 2009.

The biodegradability factors listed have been published by the EPA following a review of biodegradable content of municipal waste coupled with the findings of the Municipal Waste Characterisation Studies.

Headline Indicator	2006 Performance	2007 Performance	2008 Performance	2009 Performance	2013 Target
Municipal Waste Landfilled in the Region	664,114 tonnes	592,609 tonnes	402,525 tonnes	301,040 tonnes	
Biodegradable Waste Landfilled in the Region	470,361 tonnes	417,025 tonnes	250,356 tonnes	183,701 tonnes	175,030 tonnes

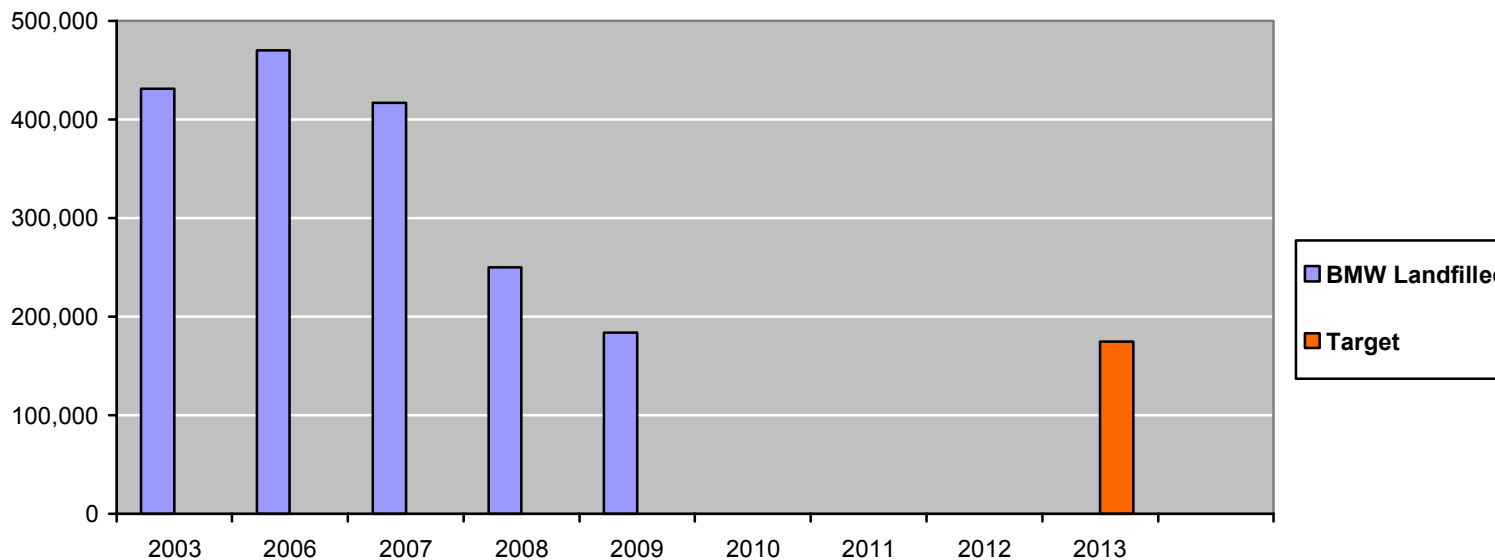


Figure 12.7 BMW Quantities Landfilled in Dublin

Secondary Indicator	2008 Performance	2009 Performance
Municipal Waste Landfilled outside the Region	330,000 tonnes	387,578 tonnes
Biodegradable Waste Landfilled Outside of the Region	188,100 tonnes	213,168 tonnes

APPENDIX A
REPORT FIGURES

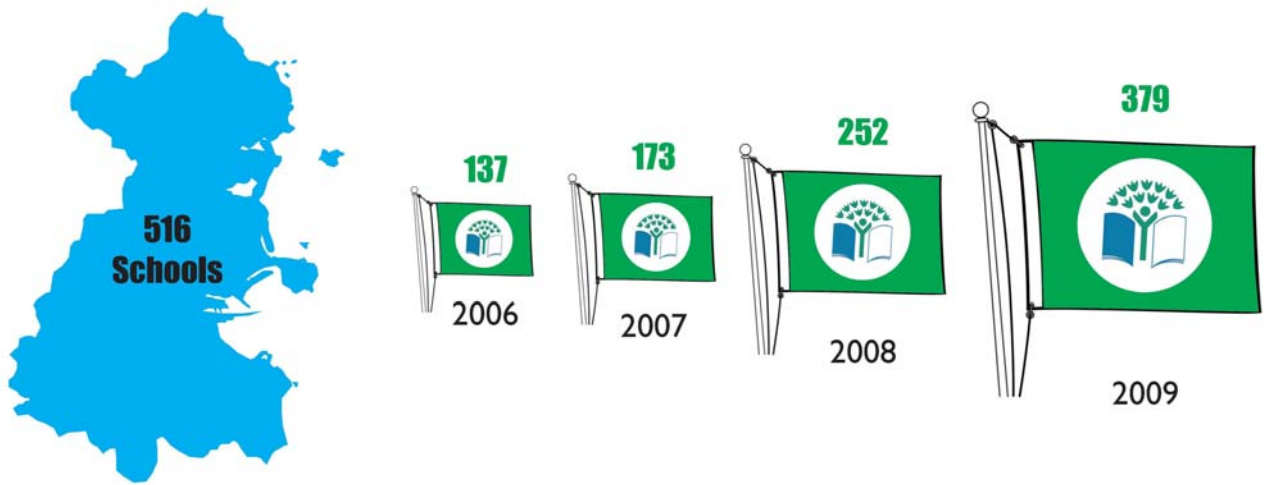


figure 3.1 green flags awarded



figure 3.2 estimated household waste composted

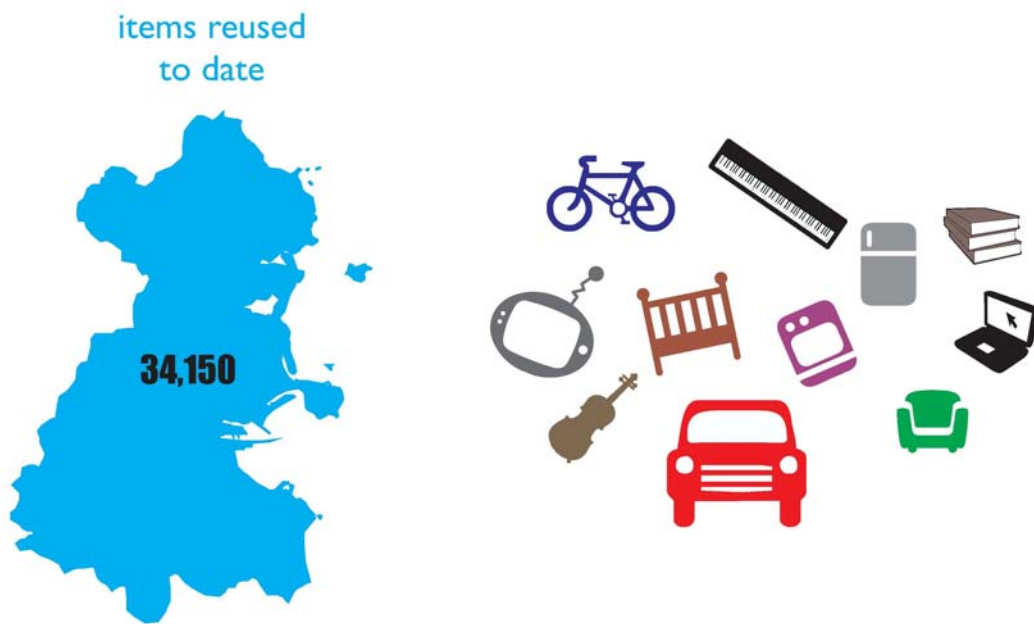


figure 4.1 items reused on free trade in Dublin

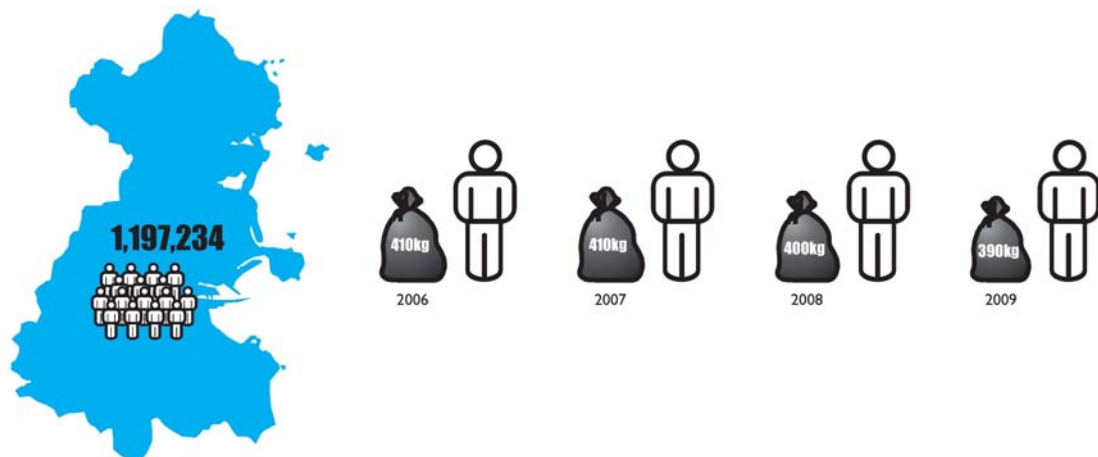


figure 5.1 household waste per capita

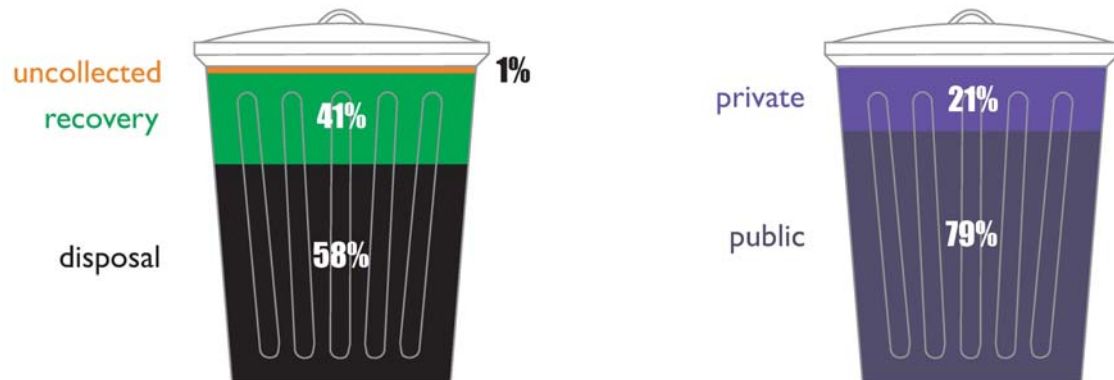


figure 5.2 household waste management

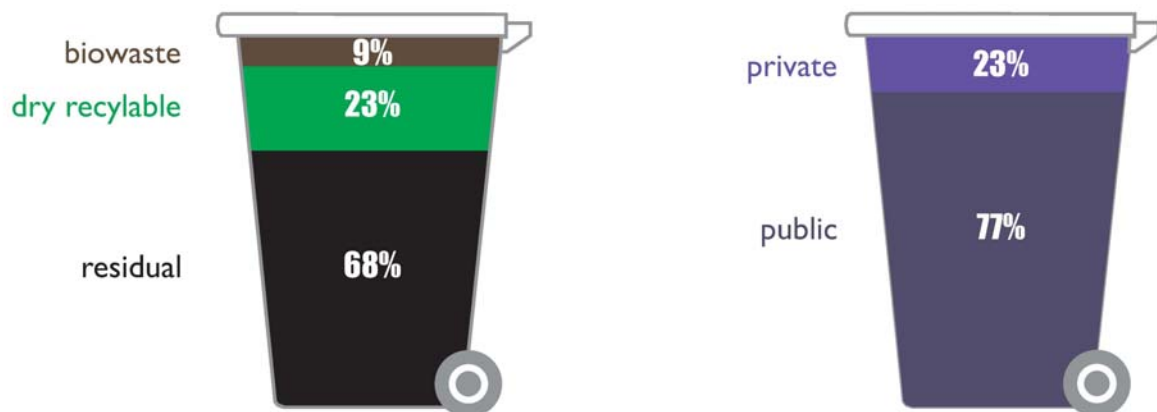


figure 5.3 kerbside waste management

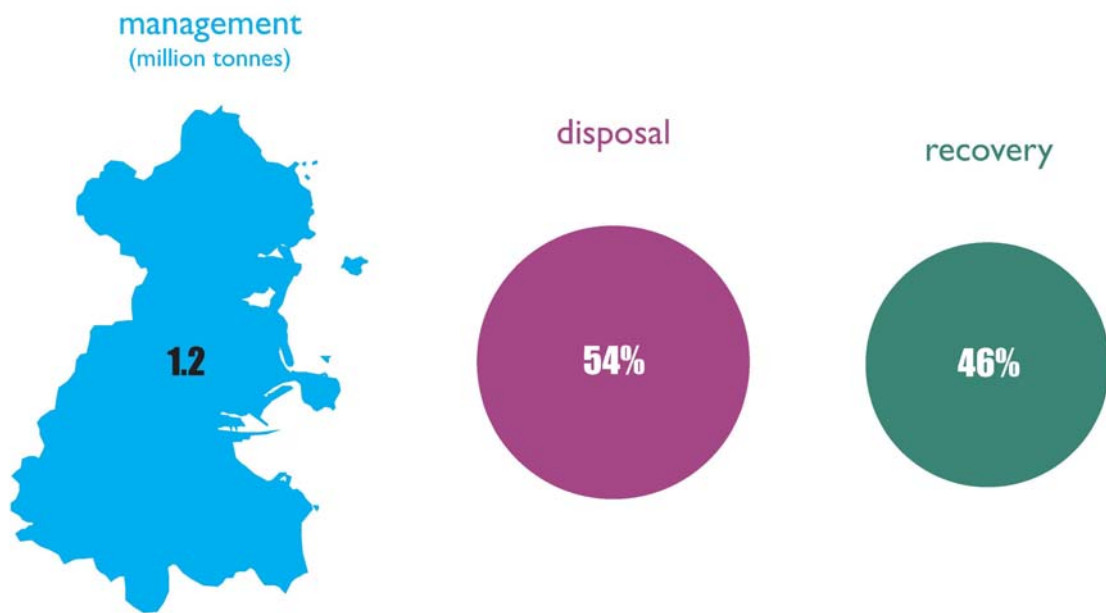


figure 6.1 municipal waste management

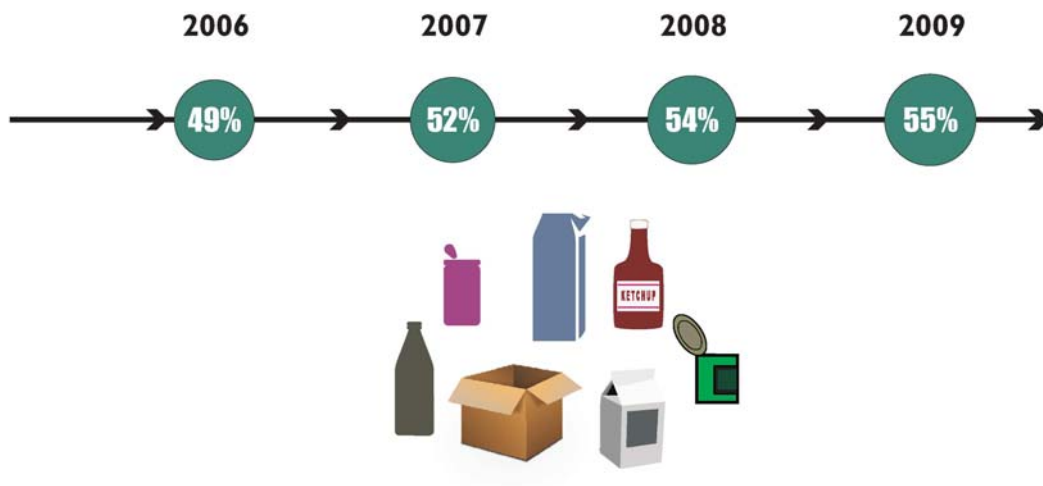


figure 7.1 packaging waste recovery rates



Figure 10.1 Framework Facilities for the Acceptance of Dublin's Waste