

## 1. Key statistics and trends, key conclusions

This section of the National Waste Report provides information on key statistics and trends in the report, as well as information on Ireland's progress in meeting EU waste collection, recovery and diversion targets and some conclusions arising from the information presented.

In Ireland, municipal waste is defined as a combination of household waste, commercial waste and other waste that, because of its nature or composition, is similar to household waste.

### 1.1 Key statistics and trends

Waste stream	Key statistics for 2012 and trends compared to 2011		
<b>Municipal Waste</b>	There was 2,692,537 tonnes of municipal waste generated in 2012 which is 4.6% lower than municipal waste generation in 2011. There was 2,478,337 tonnes of municipal waste managed <sup>2</sup> in 2012 which is 2.7% lower than municipal waste managed in 2011.		
	The main treatment activities for municipal waste in 2012 were:		
		<b>Quantity (tonnes)</b>	<b>% of managed municipal waste</b>
	Recycling	828,492	33%
	Incineration with and without energy recovery	427,093	17%
	Landfilling	1,027,577	41%
	Composting & digestion	156,212	6%
	Other recovery	38,914	2%
	The percentage tonnage of municipal waste managed for recovery <sup>3</sup> (59%) exceeded the percentage tonnage managed for disposal (41%) for the first time in 2012.		
	In 2012, 427,093 tonnes of municipal waste was used as a fuel for energy recovery. This is a 118% increase on the 195,622 tonnes reported for 2011.		
	Our recycling rate (40%) <sup>4</sup> for municipal waste is close to the EU28 average (42%).		
	The quantity of municipal waste disposed to landfill continues to fall - approximately 24% less municipal waste was disposed to landfill in 2012 compared to 2011.		
Approximately 54% of the tonnage of municipal waste disposed was accepted at three landfills: Drehid and Ballynagran Landfills (Eastern and Midlands Region) and Gortadroma Landfill (Southern Region).			
34% of municipal waste managed in Ireland was exported for recovery in 2012. This includes municipal waste exported for energy recovery and for recycling. Export of municipal waste for energy recovery increased by 36% between 2011 and 2012.			

2 The difference between municipal waste generated and managed is household unmanaged waste. Unmanaged waste is the current best estimate of household waste that isn't collected at kerbside or otherwise managed at, for example, a civic amenity site.

3 Recovery includes recycling, energy recovery, composting & digestion and other recovery.

4 Material recycling with composting & digestion.

Waste stream	Key statistics for 2012 and trends compared to 2011
<b>Household Waste</b>	Average household waste generation per capita in Ireland was 344 kg in 2012 which is 21% lower than the average in the EU27 in 2010 (latest data available).
	The household waste recovery rate (57%) exceeded the disposal rate (43%) for the first time in 2012. This is due to the increased use of residual waste as a fuel.
	<p>For household waste managed in 2012:</p> <ul style="list-style-type: none"> <li>➤ 79% was collected at kerbside;</li> <li>➤ 4% was bulky waste collections (skips);</li> <li>➤ 15% was brought for treatment (bring banks, civic amenity sites) ;</li> <li>➤ 2% was brought directly to landfill, to pay-to-use compactors, and to retailers/special collection days in the case of WEEE and portable batteries.</li> </ul>
	<p>Of the 1,069,920 tonnes of household waste collected at kerbside in 2012:</p> <ul style="list-style-type: none"> <li>➤ 68% of the tonnage was presented as residual waste;</li> <li>➤ 24% as mixed dry recyclables;</li> <li>➤ 7.5% as organics;</li> <li>➤ 0.5% as segregated glass.</li> </ul>
	<p>Of household residual waste collected at kerbside:</p> <ul style="list-style-type: none"> <li>➤ 48% was sent to directly to landfill or to landfill via a bulking station for disposal;</li> <li>➤ 47% was sent for recovery (16% for incineration with energy recovery, and 31% sent for mechanical treatment destined for recovery), and</li> <li>➤ 5% was sent to another waste facility (either bulking or treatment station) and its final treatment not analysed.</li> </ul>
	<p>In relation to a kerbside collection service:</p> <ul style="list-style-type: none"> <li>➤ 98% of permanent private households had a 2-bin service (residual waste and mixed dry recyclables);</li> <li>➤ 37% had an organic bin service;</li> <li>➤ 3% had a segregated glass collection service.</li> </ul>
	Cork City and Donegal County were the only local authority areas without a household kerbside organic bin collection service in 2012.
	The number of collectors operating in each local authority area varied widely, from a minimum of two to a maximum of fifteen (the average was nine). Some permit holders only reported servicing a small number of households.
<b>Biodegradable Municipal Waste</b>	There was a decrease in the percentage of BMW in municipal waste sent to landfill for disposal in 2012 compared to 2011 (54% in 2012, 57% in 2011).
	Ireland is on course to meet the 2013 and 2016 Landfill Directive targets. However, economic recovery may lead to an increase in the disposal of biodegradable municipal waste to landfill which would put achievement of the 2016 target at risk.
	There was a significant reduction in the amount of untreated waste going to landfill compared to 2011.

Waste stream	Key statistics for 2012 and trends compared to 2011
<b>Waste Packaging</b>	The recovery rate for packaging waste was 87% in 2012, compared to 79% in 2011. This well exceeds the current Directive target of 60%. The increased rate in 2012 was due to the increase in packaging waste in residual waste that was used as a fuel.
<b>Waste Electrical and Electronic Equipment</b>	In 2012, 40,818 tonnes of waste electrical and electronic equipment (WEEE), arising from equipment placed on the Irish market, were collected for treatment.
	An estimated 7.5 kg of WEEE per person was collected from private households which exceeds the 4 kg per person target set by the EU.
	The recycling and recovery targets set by the EU were achieved for all categories of WEEE.
<b>End of Life Vehicles</b>	Ireland achieved compliance with the 2006 End-of-Life Vehicle (ELV) recovery and recycling targets as required under the ELV Directive for the first time in 2012. The 80% reuse and recycling and the 85% reuse and recovery targets were both achieved.
<b>Waste Tyres</b>	Approximately 24,164 tonnes of waste tyres were reported to have been managed in the State in 2012.
<b>Waste Batteries</b>	The portable battery and accumulators collection target was achieved, with 28% collected relative to tonnage placed on the market in 2012.
	Ireland is at risk of failing to meet the 2016 portable battery and accumulators collection target which is 45%, unless there is a significant increase in the collection rate (28% reported in 2012)
<b>Hazardous Waste</b>	There was a 6% reduction in the overall amount of hazardous waste treated both on-site at industry and off-site (hazardous waste facilities) in Ireland in 2012 compared to 2011.
	There was a 3% decrease in the quantity of hazardous waste exported for treatment in 2012 compared to 2011.
	There was an increase in the amount of solvents recovered on-site at IPPC facilities in 2012 compared to 2011, resulting in a reduction of solvents treated at commercial hazardous waste facilities.
	The treatment of hazardous waste in 2012 was similar to 2011 with 22% treated on-site at industry where it was generated, 30% sent off-site to a commercial hazardous waste facility for treatment and 48% exported for treatment.
<b>Waste Infrastructure</b>	The number of landfills accepting municipal waste for disposal continues to decline. While 18 landfills reported accepting municipal waste in 2012, only 13 were active by the end of 2012. This compares to 21 landfills accepting municipal waste in 2011. This rate of closure is expected to continue for the next few years.
	At the end of 2012, the remaining consented municipal landfill capacity (i.e. with waste licence and planning permission in place) was approximately 17.3 Mt nationally. Of this consented capacity approximately 1.6 Mt was operational at the end of 2012. This equates to just under 2 years capacity based on the fill rate in 2012.
	Ireland's first municipal waste incinerator had its first full year of operation in 2012.
	Local authorities reported 118 civic amenity sites and 1,862 bring banks in 2012, compared to 113 and 1,891 respectively in 2011.

## 1.2 Key Conclusions

### Progress towards meeting EU recycling, recovery and diversion targets

In 2012, Ireland achieved all its EU obligations across a broad range of waste legislation (Table 1).

- Most significantly, Ireland achieved the 2006 End of Life Vehicle (ELV) Directive targets for the first time. This was mainly due to the fact that Irish ELV shredder operators sent the majority of residue arising from ELV shredding for recovery rather than disposal.
- In addition, preliminary data indicate that Ireland is on course to meet the 2013 Landfill Directive target for the diversion of biodegradable municipal waste (BMW) from landfill. This reflects a combination of measures including changes in EPA landfill licences to limit the acceptance of BMW, better segregation of organic waste by households and commercial enterprises, increases in the landfill levy and an increase in municipal residual waste going for energy recovery.
- In relation to packaging waste, Ireland's recovery rate was 87% in 2012 which well exceeds the Packaging Directive target of 60%. The increase in 2012 rate compared to 2011 is attributable to an increase in packaging waste in residual waste that was used as a fuel.
- Finally, in relation to Waste Electrical and Electronic Equipment (WEEE) collection targets, Ireland is nearly double the WEEE collection target (4 kg/person) with 7.5 kg collected per person in Ireland in 2012. While these figures indicate that Irish households produce a lot of WEEE, they show that the household WEEE collection systems, which were put in place by the electrical and electronic equipment manufacturers, importers and their compliance schemes, are working well.

There are risks however of failing to meet some EU Directive targets in 2013 and beyond, particularly for:

- **End of Life Vehicle (ELV) Directive.** Higher targets are coming into effect from January 2015.
- **Landfill Directive.** Ireland is on track to meet the 2016 biodegradable municipal waste (BMW) targets. There is, however, a risk that municipal waste generation could increase with economic recovery which in turn may result in an increase in BMW being disposed to landfill.
- **Batteries Directive.** Ireland is at risk of failing to meet the 45% minimum collection rate for portable batteries & accumulators coming into effect in August 2016, unless there is a significant increase in the collection rate (28% reported for 2012).

### Municipal waste

Municipal waste generation continues to decrease from a peak in 2007, with municipal waste generated 21% lower in 2012 compared with 2007. Subsequently, municipal waste generated per capita has decreased from 0.78 tonnes of waste generated per person in 2007 to 0.59 tonnes in 2012. This decrease is linked to declining personal consumption as the economy contracted over the period 2007 to 2012 and occurred despite an increase in population over the same period. In addition, it also indicates a trend towards improved waste prevention in the country.

Significantly, 2012 was the first year that the percentage of municipal waste recovered (59%) exceeded the percentage disposed (41%). The treatment of municipal waste is down to market forces with existing policies and the introduction of new waste infrastructure influencing the shift from disposal to recovery. This is welcome, but prevention initiatives, preparation for reuse, and recycling of waste must also be implemented, particularly where waste streams are segregated at source.

### Disposal to Landfill

There was a 24% decrease in municipal waste disposed to landfill in 2012 compared with 2011. The increases in the landfill levy, particularly since 2008, are playing a role in diverting municipal waste from disposal to landfill. In addition, the number of landfills accepting municipal waste for disposal is continuing to decrease (54% of total municipal waste disposed in 2012 was accepted at three landfills)

as is the remaining licensed landfill disposal capacity. There is approximately 17.3 Mt of remaining consented capacity for landfills and, of this, approximately 1.6 Mt is operational. This equates to approximately two years landfill capacity based on the 2012 fill rate. Alternative treatment options must be developed as operational landfills continue to decline.

### Recovery

In 2012, 59% of managed municipal waste was recovered. Recovery covers recycling, energy recovery, composting & digestion. In relation to exports of municipal waste, 34% of municipal waste managed in Ireland was exported for recovery in 2012. This includes exported for energy recovery recycling.

Ireland's recycling rate is 40% and is close to the EU28 average of 42%. Ireland has no glass manufacturing facility, paper mill or metal smelter, therefore these waste streams are mainly exported for recycling which represents a lost opportunity.

Ireland's first municipal waste incinerator was operational for the full year of 2012. This contributed to increased recovery rates with 17% of managed municipal waste used as a fuel. In addition, cement kilns are also accepting waste for use as a fuel.

Notably, there was an increase of 36% in the export of baled municipal waste and refuse derived fuel for energy recovery between 2011 and 2012. Incineration plants on mainland Europe are under-supplied and, thus, there is a market for such export. Export of waste for energy recovery is a lost resource opportunity for the State. Incentives to keep waste for recovery, both energy and recycling as mentioned above, within the State should be pursued.

### Producer Responsibility Initiatives

The introduction of the Producer Responsibility Initiative (PRI) legislation for particular waste streams (e.g. packaging, WEEE, ELVs, batteries) has been very positive in terms of the separate collection of these wastes and their appropriate treatment. There are some opportunities for improvement within PRIs, as identified by the Department of the Environment Community and Local Government's (DECLG) recent review, particularly for ELVs and waste tyres. In 2014, the DECLG set up Working Groups for ELVs and waste tyres to progress the recommendations of the PRI review reports.

### Register of Waste Infrastructure and Data Reporting

The lack of a live national register of authorised waste facilities, including their treatment capacities, is an ongoing data gap for the State. The EPA published a report in April 2014 entitled "*National Municipal Waste Recovery Capacity*" as requested by the DECLG in a '*A Resource Opportunity – Waste Management Policy in Ireland*' (2012). The Capacity Register, created as part of this assessment, represents a start at capturing the diversity of facilities that are authorised to treat and pre-treat waste generated from a municipal source along with creating a log for Ireland's waste infrastructure.

The EPA made a number of recommendations in this report and in particular notes that there is no complete national register of waste facility permits and Certificates of Registration authorised by Local Authorities in the State. Ideally, maintenance of a register should be a shared service of local authorities, centrally managed by one. For example, the National Waste Collection Permit Office at Offaly County Council are now managing the waste collection permit register and annual returns from permit holders and this has led to improved quality and real-time data in a central repository. In addition, transfrontier shipment data (notified waste and green list waste) and movements of hazardous waste within the State are managed by the National Transfrontier Shipment Office at Dublin City Council. These shared services have delivered significant benefits for national and regional waste data collection and reporting. A central electronic reporting system for waste facility permit annual returns is the next logical step for shared services for waste data collection and would be of significant benefit to the State for waste planning and reporting purposes.

**Table 1** - Progress towards EU waste recycling, recovery and diversion targets.

Directive	Title	Article	Targets		Indicator
			Target date	Specifics	
				60% as a minimum by weight of packaging waste will be recovered or incinerated at waste incineration plants with energy recovery.	Achieved
				55% as a minimum by weight of packaging waste will be recycled.	Achieved
				No later than 31st December 2011 the following minimum recycling targets for materials contained in packaging waste will be attained:	
94/62/EC as amended	Packaging Directive <sup>5</sup>	6(1)	31-12-2011	(i) 60% by weight for glass;	Achieved
				(ii) 60% by weight for paper and board;	Achieved
				(iii) 50% by weight for metals;	Achieved
				(iv) 22.5% by weight for plastics, counting exclusively material that is recycled back into plastics;	Achieved
				(v) 15% by weight for wood.	Achieved
				87%	Current progress to target in Ireland
				74%	Current progress to target in Ireland

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5 2012 data, most recent reported to the European Commission.

Directive	Title	Article	Targets		Indicator
			Target date	Specifics	
		5(5)		Separate collection of > 4kg of WEEE from private households per person per year.	Achieved
				For large household appliances:- <ul style="list-style-type: none"> <li>➤ recovery shall be increased to a minimum of 80% by an average weight per appliance; and</li> <li>➤ component, material and substance reuse and recycling shall be increased to a minimum of 75% by an average weight per appliance.</li> </ul>	Achieved
				For automatic dispensers:- <ul style="list-style-type: none"> <li>➤ recovery shall be increased to a minimum of 80% by an average weight per appliance; and</li> <li>➤ component, material and substance reuse and recycling shall be increased to a minimum of 75% by an average weight per appliance.</li> </ul>	Achieved
2002/96/EC	WEEE Directive <sup>6</sup>	7(2)	(31-12-2006) 31-12-2008 <sup>7</sup>	For IT and telecommunications equipment:- <ul style="list-style-type: none"> <li>➤ the rate of recovery shall be increased to a minimum of 75% by an average weight per appliance; and</li> <li>➤ component, material and substance reuse and recycling shall be increased to a minimum of 65% by an average weight per appliance.</li> </ul>	Achieved
				For consumer equipment:- <ul style="list-style-type: none"> <li>➤ the rate of recovery shall be increased to a minimum of 75% by an average weight per appliance; and</li> <li>➤ component, material and substance reuse and recycling shall be increased to a minimum of 65% by an average weight per appliance.</li> </ul>	Achieved
				For small household appliances, electrical & electronic tools, toys, leisure and sports equipment:- <ul style="list-style-type: none"> <li>➤ the rate of recovery shall be increased to a minimum of 70% by an average weight per appliance; and</li> <li>➤ component, material and substance reuse and recycling shall be increased to a minimum of 50% by an average weight per appliance.</li> </ul>	Achieved

<sup>6</sup> 2012 data, most recent reported to the European Commission.

<sup>7</sup> Ireland secured a two-year derogation.

Directive	Title	Article	Targets		Indicator
			Target date	Specifics	
2002/96/EC	WEEE Directive <sup>4</sup>	7 (2)	(31-12-2006) 31-12-2008 <sup>5</sup>	For medical devices:-	Achieved
				<ul style="list-style-type: none"> <li>▶ the rate of recovery shall be increased to a minimum of 70% by an average weight per appliance; and</li> <li>▶ component, material and substance reuse and recycling shall be increased to a minimum of 50% by an average weight per appliance.</li> </ul>	
				For monitoring and control instruments:-	
				<ul style="list-style-type: none"> <li>▶ the rate of recovery shall be increased to a minimum of 70% by an average weight per appliance; and</li> <li>▶ component, material and substance reuse and recycling shall be increased to a minimum of 50% by an average weight per appliance.</li> </ul>	
				For lighting equipment:-	Achieved
				<ul style="list-style-type: none"> <li>▶ the rate of recovery shall be increased to a minimum of 70% by an average weight per appliance; and</li> <li>▶ component, material and substance reuse and recycling shall be increased to a minimum of 50% by an average weight per appliance.</li> </ul>	
				For gas discharge lamps, the rate of component, material and substance reuse and recycling shall reach a minimum of 80% by weight of the lamps.	Achieved

Directive	Title	Article	Targets		Current progress to target in Ireland	Indicator
			Target date	Specifics		
2000/53/EC	End of Life Vehicles Directive <sup>8</sup>	7(2)(a)	1-1-2006	Reuse and recovery to a minimum of 85% by average weight of vehicle and year.	88%	Achieved
				Reuse and recycling to a minimum of 80% by average weight of vehicle and year.	82%	Achieved
	7(2)(b)	1-1-2015	Reuse and recovery to a minimum of 95% by average weight of vehicle and year.	(88%)	Risk Due January 2015	
			Reuse and recycling to a minimum of 85% by average weight of vehicle and year.	(82%)	Risk Due January 2015	
2006/66/EC	Batteries Directive <sup>9</sup>	10(2)	31-12-2011	Minimum 25% collection rate for batteries & accumulators.	28% <sup>10</sup>	Achieved
			26-9-2016	Minimum 45% collection rate for batteries & accumulators.	(28%) <sup>11</sup>	Risk Due September 2016
		12(4)	26-9-2011	Recycling processes shall achieve the following minimum recycling efficiencies:		
				(a) recycling of 65 % by average weight of lead-acid batteries and accumulators, including recycling of the lead content to the highest degree that is technically feasible while avoiding excessive costs;	79% <sup>9</sup>	Achieved
	(b) recycling of 75 % by average weight of nickel-cadmium batteries and accumulators, including recycling of the cadmium content to the highest degree that is technically feasible while avoiding excessive costs; and			75% <sup>9</sup>	Achieved	
	(c) recycling of 50 % by average weight of other waste batteries and accumulators.			57% <sup>9</sup>	Achieved	

8 2012 data, most recent reported to the European Commission.

9 Data presented as per DECLG report to European Commission June 2013, with information for reference period 2009-2012.

10 Collection rate for 2012. 2011 target met in 2011 (29%).

11 Collection rate for 2012.

Directive	Title	Article	Targets		Indicator	
			Target date	Specifics		
1999/31/EC	Landfill Directive	5(2)	(16-7-2006)	Biodegradable municipal waste going to landfills must be reduced to 75% of the total quantity (by weight) biodegradable municipal waste produced in 1995 (< 916,000 t)	Achieved	
			16-7-2010 <sup>12</sup>			
			(16-7-2009) 16-7-2013	Biodegradable municipal waste going to landfills must be reduced to 50% of the total quantity (by weight) biodegradable municipal waste produced in 1995 (< 610,000 t)	On track Due July 2013	
2008/98/EC	Waste Framework Directive <sup>16</sup>	11(2)(a)	16-7-2016	Biodegradable municipal waste going to landfills must be reduced to 35% of the total quantity (by weight) biodegradable municipal waste produced in 1995 (427,000 t)	On track Due July 2016	
			12-12-2020	Preparing for reuse and recycling of 50% by weight of household derived paper, metal, plastic & glass (includes metal and plastic estimates from household WEEE).	On track Due December 2020	
			12-12-2020	Preparing for reuse, recycling and other material recovery (incl. beneficial backfilling operations using waste as a substitute) of 70% by weight of C&D waste (excluding natural soils & stone)	45%	
		29	12-12-2013	Establishment of a National Waste Prevention Programme (NWPP)	NWPP established in 2004	Achieved

<sup>12</sup> Ireland secured a four-year derogation on first and second targets.

<sup>13</sup> 2010 BMW tonnage disposed to landfill.

<sup>14</sup> 2012 BMW tonnage disposed to landfill

<sup>15</sup> 2013 BMW tonnage disposed to landfill. This is a preliminary figure and is liable to change.

<sup>16</sup> 2011 data, most recent reported to the European Commission. The deadline for reporting 2012 data to the European Commission is 30 September 2014.