10 MUNICIPAL SOLID WASTE AND BIODEGRADABLE MUNICIPAL WASTE

This chapter provides a summary of the management of municipal waste in the region, including details of the biodegradable municipal waste landfilled.

10.1 MUNICIPAL WASTE MANAGED

Municipal waste means household waste as well as commercial waste and other waste that, because of its nature or composition, is similar to household waste. It excludes municipal sludges and effluents.

In the context of this plan and as detailed in **Figure 10-1**, municipal waste managed consists of three main elements, namely household, municipal non-household, i.e. commercial (including non-process industrial waste), and street cleansing waste (street sweepings, street bins and municipal parks and cemeteries maintenance waste, litter campaign material).

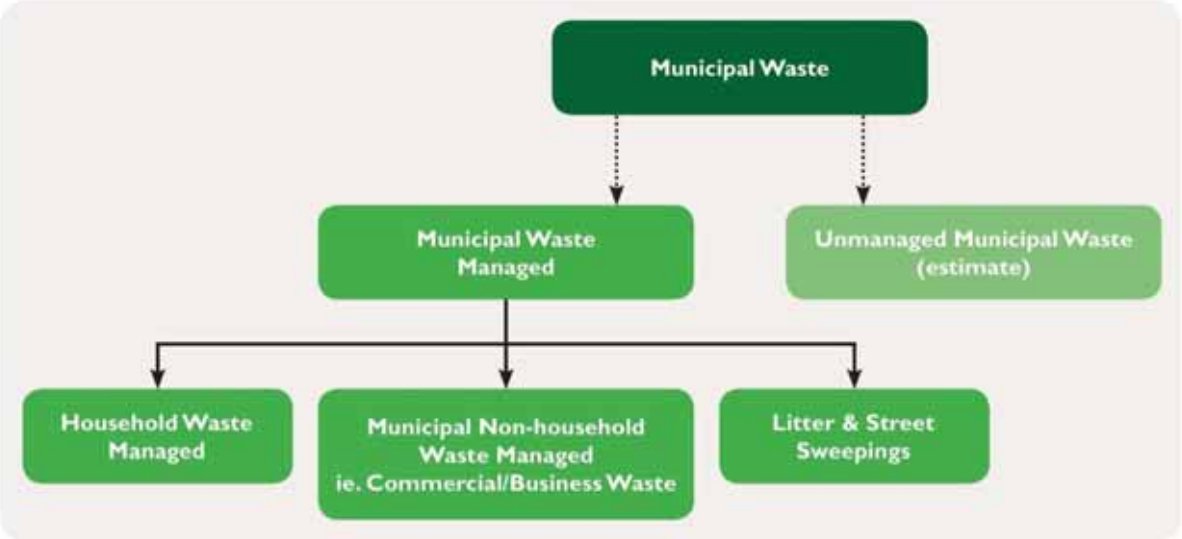


Figure 10-1 Municipal Waste Flow Diagram

Table 10-1 provides details of the municipal waste managed in the SWR in 2012. This table also includes the national municipal waste managed per inhabitant, as reported by the EPA.[47] The municipal waste managed/inhabitant in the SR in 2012 was similar to the national figure.

Table 10-1: Municipal Waste Managed 2012

	2012
SR - Municipal waste managed (tonnes)	860,425
SR - Municipal waste managed / inhabitant (tonnes)	0.558
National - Municipal waste managed / inhabitant (tonnes)	**0.540**

Nationally the total quantity of municipal waste managed has decreased year on year since 2007; however, details in relation to the SR are only available for 2012 due to issues with the reporting format of the WCP AER data prior to 2012.

10.2 MUNICIPAL WASTE RECOVERED

The quantity of municipal waste destined for recovery/recycling in the SR has been estimated using the national recovery rate as reported by the EPA. This rate takes into account the point of final treatment within the State or at the final destination prior to export for treatment abroad. **Table 10-2** details the municipal waste recovered in the SR for 2012.

Table 10-2: Municipal Waste Destined for Recovery/Recycling in the SR, 2012

	2012
SR – Estimate of municipal waste destined for recovery/recycling (tonnes)	507,651
SR – Estimate municipal waste destined for recovery/recycling per inhabitant (tonnes/inhabitant)	0.329
National - % Municipal waste managed recovered	59%

The EPA's *National Waste Reports* indicate that there has been a significant increase in the percentage of municipal waste recovered nationally in recent years. This is due to a number of factors, including:

- Substantial increase in the landfill levy, which is currently €75 per tonne, moving waste to recovery operations;
- The decreasing number of active landfills accepting waste within the country;
- The opening of Ireland's first municipal waste incinerator with energy recovery;
- Increased production of refuse-derived fuels for use both within Ireland and abroad; and
- A signficant increase in the export of unprocessed municipal waste for incineration abroad.

10.3 MUNICIPAL WASTE DISPOSED

An estimate of the municipal waste directed to disposal has been produced for the purpose of the plan by applying the national disposal rate as reported by the EPA.

Table 10-3 details the municipal waste arising in the SR and sent for disposal in 2012. It should be noted that the municipal waste sent for disposal may not have been disposed at facilities located in the SR.

Table 10-3: Municipal Waste Disposed in SR, 2012

	2012
SR – Estimate municipal waste disposed (tonnes)	352,774
SR – Estimate Municipal waste disposed / inhabitant (tonnes)	0.229
National - % Municipal waste managed disposed	41%

Falling rates of disposal are due to a number of factors, including:

- Requirements to divert BMW from disposal to landfill under the Landfill Directive targets;
- Increases in the landfill levy for disposal of waste to landfill in recent years;
- Capacity for incineration of municipal waste in Ireland came on line in 2011;
- Increased availability and reducing gate fees of incineration facilities abroad;
- Increasing mechanical treatment of residual waste at waste facilities, leading to the production of refuse-derived fuel/solid recovered fuel which is used as a fuel, both in Ireland and abroad; and
- The increase export of unprocessed municipal waste for incineration with energy recovery abroad.

In relation to the diversion of BMW from disposal in landfill, the Landfill Directive (1999/31/EC) sets landfill limits (refer to **Chapter 3**). In 2009 the EPA reviewed all operational municipal waste landfill licences and inserted conditions limiting the acceptance of BMW and requiring the determination of the BMW within municipal waste accepted.

Table 10-4 details the percentage of BMW in the municipal waste delivered to landfills in the SWR during the period 2010–2013. The national reported percentage of BMW in the municipal waste delivered to landfills (*National Waste Reports 2010, 2011 & 2012*) is also given.

Table 10-4: Percentage of BMW in Municipal Waste Delivered to Landfills.

	2010	2011	2012	2013
SWR - % BMW in municipal waste	59%	57%	49%	35% (estimate)
National - % BMW in municipal waste	58%	57%	54%	

The percentage of BMW landfilled in the SR has decreased year on year since first quantified in 2010. There was a significant drop in 2011–2013, with an estimated 35% BMW within the MSW landfilled in the SR in 2013. While the national trend has shown a decline year on year, the rate of decline has not been as significant as within the SR. The reduction in the percentage of BMW in the municipal waste landfilled is due to the roll-out of the source-segregated commercial and household organic waste, and the increase in the government landfill levy which makes alternative treatment more cost-effective.

10.4 NON-HOUSEHOLD MUNICIPAL WASTE MANAGEMENT

At the time of publication of this plan, there are approximately 14 major companies engaged in the collection of non-household municipal wastes operating across significant areas of the SR, as well as many smaller, localised collectors operating in different local authority areas. The large collectors generally offer a service to collect a wide range of segregated waste materials, while smaller local operators may focus specifically on some streams of commercial waste, such as cardboard, pallets or bulky waste. A limited number of companies offer a specialist service in the collection and treatment of commercially sensitive material, such as confidential documents and electronic waste.

The most common format for providing a service to commercial customers is that the collector charges a fixed flat fee, coupled with a pay-by-use fee, such as pay-by-lift, pay-by-weight, pay-by-volume or a combination of these charging mechanisms.

Waste collectors in general offer the commercial client a choice of bin size, such as 140 litre, 240 litre, 360 litre, 660 litre or 1100 litre, colour coded or marked according to type of waste. Collectors collect different waste fractions through single, dual or multi-compartment collection vehicles as part of a kerbside collection service or specific collections for individual waste fractions, such as cardboard, pallets, mixed dry recyclables, food waste and residual waste. The larger collectors also provide baler leasing services for the client so that they can manage and present materials such as waste cardboard or shrinkwrap. Specific services are provided on an as-needed basis, e.g. glass collection from hospitality premises. Major collectors often offer the client an initial free audit to help the client manage and present their waste.

Some waste collectors use a compactor for some larger clients for on-site handling of residual waste. This practice can lead to poor segregation of recyclables and food waste fractions, with the easier option of instant compaction being so readily available rather than segregation into different receptacles at source.

Many collectors and many skip hire companies provide a bulky waste collection service for the commercial sector. Alternatively, some authorised facilities and civic amenity facilities accept bulky waste directly from commercial customers which then undergoes segregation into fractions for subsequent recovery and disposal.

10.4.1 Management of Non-Household Municipal Waste (Commercial)

Non-household municipal waste is waste produced by commercial premises such as shops, offices and restaurants, as well as schools, hospitals, etc. It also includes non-process industrial waste arising from factory canteens and offices and similar activities. The management of household municipal waste is described in **Chapter 9**.

The EPA, in its annual NWR, publishes details of the total quantity of non-household municipal waste managed in the country. This figure is calculated based on either the final treatment within the State or the final destination prior to export for treatment abroad. This facilitates a better classification of municipal and non-municipal waste types, particularly for the packaging wastes.

For the purposes of this plan an estimate of the total quantity of non-household municipal waste managed, along with the quantities disposed and recovered/recycled within the SR, has been produced: refer to **Table 10-5**. These estimates were calculated using details from the NWCPO data system and the EPA's report.[47] Estimates of figures for non-household municipal waste recovered and disposed in the region for 2012 have also been calculated using the relevant national rates to provide an indication of the respective tonnage.

The non-household municipal waste managed in the SR is estimated to be almost 400,000 tonnes in 2012, which is equivalent to 0.253 tonnes per inhabitant within the region (the 2012 NWR reported figure is 0.243 per inhabitant). Applying the 2012 national rates for recovery and disposal (61% and 39% respectively), the estimated tonnages of non-household municipal waste recovered and disposed for the SR are 237,000 tonnes and 153,000 tonnes respectively.

Table 10-5: Non-Household Municipal Waste Managed in SR 2012

	2012
Quantity managed (t)	390,403
Quantity managed per inhabitant (t)	0.253
Quantity recovered (t)	237,203
Quantity recovered per inhabitant (t)	0.154
Quantity disposed (t)	153,200
Quantity disposed per inhabitant (t)	0.099

A growing quantity of the non-household municipal organic waste is source-segregated and collected by authorised collectors, i.e. biodegradable kitchen and canteen waste (EWC 20 01 08), edible oil and fat/grease trap waste (EWC 20 01 25) and biodegradable garden and park waste (EWC 20 02 01). **Table 10-6** details the quantity of this stream collected in SR between 2010 and 2012:

Following the introduction of the Waste Management (Food Waste) Regulations 2009 in July 2010 there was a significant increase in the quantity of collected non-household municipal source segregated kitchen and canteen waste (EWC 20 01 08). There was a 45% increase in the quantity collected in 2011 when compared to 2010; however, there was a 19% decrease in the quantity collected in 2012. This decrease corresponds to a similar reduction in the quantity of non-household municipal residual waste collected over the same period.

Table 10-6: Non-Household Source-Segregated Organic Waste Collected in SR 2010–2012

	2010	2011	2012
Non-household source segregated organic waste collected (t)	17,098	24,372	22,498
Non-household source segregated organic waste collected per inhabitant (t)	0.011	0.016	0.015
Kitchen and canteen waste (EWC 20 01 08) fraction (t) (of Non-household source segregated organic waste above)	7,830	17,324	13,964
Kitchen and canteen waste (EWC 20 01 08) fraction collected per inhabitant (t)	0.005	0.011	0.009
Non-household municipal residual waste collected (t)	151,797	156,252	129,356

The source-segregated organic waste collected at kerbside is brought to either a bulking station (prior to onward transport to a composting/anaerobic digestion facility) or direct to a composting/anaerobic digestion facility for treatment in accordance with the animal by-products regulations.

Despite the provision of source-segregated organic waste collection service, EPA characterisation surveys have found significant quantities of BMW in residual bins even where a three-bin service is provided.[53]

[53] http://www.epa.ie/waste/municipal/

The proportion of BMW in the residual waste is either disposed or recovered/recycled (refer to **Table 10-4** for details of the BMW disposed to landfill).

Non-household municipal residual waste collected at kerbside is managed similarly to residual waste collected from household sources. However, unlike household waste, the data available does not allow an accurate breakdown of tonnages by treatment destination.

It is understood that the treatment of non-household municipal residual waste collected in the SR in 2012 is similar to the overall national treatment in respect of the percentages landfilled and sent to thermal recovery facilities.

10.5 LITTER AND STREET SWEEPINGS

Litter and street sweeping waste comprise street sweepings, the content of municipal bins, parks and gardens waste and litter campaign material. **Table 10-7** details the total quantity of litter and street sweeping waste collected within the region between 2010 and 2012.

Table 10-7: Litter and Street Sweepings Collected Waste (Tonnes) 2010–2012

	2010	2011	2012
Total for SWR	24,917	16,372	14,907

The total quantity of litter and street sweeping waste collected in the SR decreased year on year between 2010 and 2012. The local authority areas of Cork City and Limerick City account for the largest percentage of litter and street sweeping waste, in line with the percentage budgeted for litter management as detailed in **Chapter 18**.

11 PACKAGING WASTES AND OTHER PRIORITY WASTE STREAMS

This chapter provides details of the management of packaging waste in the region and other priority waste streams, e.g. construction and demolition wastes, WEEE, batteries, tyres and ELVs.

11.1 PACKAGING WASTES

Table 11-1 provides an estimate of the packaging waste managed in the SR for the years 2010 to 2012. The regional data was estimated using the national packaging waste figure as reported by the EPA and an amount apportioned to each region based on ratio of packaging waste data collected through the NWCPO reporting system. The data presented shows that the total packaging waste managed in the region decreased between 2010 and 2011 but increased in 2012.

The total recovery rate nationally increased from 74% in 2010 to 87% in 2012, which was well in excess of the 60% recovery target for 2011 under the Packaging Directive. The increased rate in 2012 was due to the increased diversion of residual waste, which contains a significant element of packaging waste, from landfill to energy recovery. It is expected that the total recovery rate for the region is similar. It was not possible to report on the quantity of packaging waste landfilled on a regional basis due to the movement of residual waste generated in the region to disposal facilities outside the region.

Table 11-1: Estimated Packaging Waste Managed in the SR

	2010	2011	2012
Estimated Packaging Waste Managed (tonnes)	276,388	224,535	242,850
Estimated Packaging Waste Managed / Inhabitant (tonnes / Inhabitant)	0.179	0.146	0.158
Packaging Waste Recovered (tonnes)	203,819	177,393	210,221
Packaging Waste Recovered / Inhabitant (tonnes / Inhabitant)	0.132	0.115	0.136

11.1.1 Packaging Waste Collection & Recovery System

Packaging waste is collected for recovery via two collection routes: kerbside (commercial 62% and household 23%) and civic amenity sites/bring sites (15%) (Repak, 2012). The recovery route for packaging waste is primarily mechanical recycling and reprocessing, with some quantities of packaging waste being sent for energy recovery. Following segregated collections, packaging waste is delivered to Material Recovery Facilities (MRFs), where it is prepared for recycling. The final stages of recycling take place outside Ireland except for wood and plastics, with 99% and 50% of total recovery of each of these taking place within Ireland.[54] Packaging waste from the processing of municipal residual waste and contaminated packaging from the MDR fraction are being processed into RDF and going for energy recovery.

[54] National Waste Report 2012, EPA (2014).

Major producers of packaging waste can be categorised into four groups:

- Businesses that are self-compliant and arrange for the free take-back, collection and recovery of their own specific packaging waste;
- Businesses that join a compliance scheme;
- Businesses that are below the "de minimis" thresholds of waste tonnages are exempted from major producer obligations (i.e. enterprises with a turnover greater than €1 million and which supply 10 tonnes or more of packaging material or packaging to the Irish market); and
- Businesses that are "non-compliers", which are not exempted from the "de minimis" thresholds and are neither self-compliant nor a member of the compliance scheme.

Sections 11.1.2 and **11.1.3** describe both the compliance scheme and self-compliance systems in more detail. In addition to the requirements for major producers, all producers are responsible for segregation of packaging waste that arises from their premises into specified waste streams and having it collected by an authorised waste operator for recovery.

11.1.2 Compliance Scheme

Repak Ltd was set up in 1997 as a non-profit company. It is the only compliance scheme to have been approved for packaging waste since the regulatory system commenced and is responsible for the achievement of the national targets. In 2014 Repak reported[55] that it had 2,120 members, with a loss of 122 members in 2013. In 2011, Repak members accounted for 95% (DECLG, 2014) of the compliant obligated producers (Repak members and self-compliers).

Figure 11-1 shows the evolution of Repak membership from 1997 to 2012; it increased significantly up to 2005 but the pace of increase reduced even with the change in the "de minimis" thresholds brought about by the Waste Management (Packaging) Regulations, 2007. Membership continued to increase up to 2009 but decreased from 2010 to 2012. As a result of the recession previous members have been subjected to closures and/or mergers, have abandoned the scheme to reduce costs and due to less packaging placed on the market, some became exempt under the "de minimis" rule.

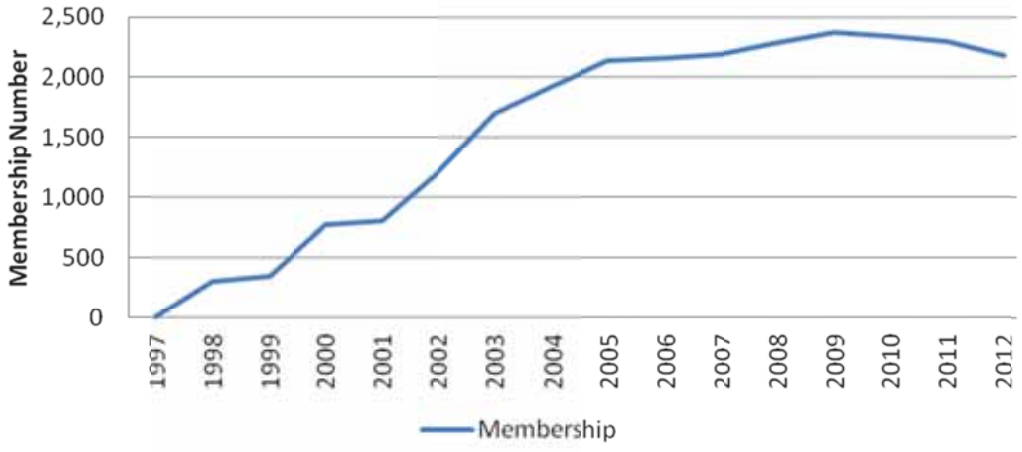


Figure 11-1 Evolution of Repak Membership 1997–2012[56]

[55] Forward Together, Annual Report 2013-2014, Repak (2014).
[56] DECLG (2014) Review of Producer Responsibility Initiative Model in Ireland.

Repak operates the Repak Payment Scheme (RPS) of subsidy payments to fund the recovery of waste packaging that is sourced by service providers. Rates are agreed between Repak and the waste management industry (based on the material type and source, recovery activity for that material, landfill levy, the market value of that material and the recycling and recovery target that Repak is committed to meet).

The quantities of packaging waste recovered by Repak in 2012 amounted to 669,000 tonnes. Repak data showed increases in packaging recovery/recycling for the following material types – plastic: 15%, paper: 7%, wood: 5% and glass: 3%. The 15% increase in plastic packaging recovered primarily reflects strong growth in refuse-derived fuel (RDF). Subsidies for over 87,000 tonnes of RDF were funded by Repak from contaminated paper and plastic, which would have traditionally gone to landfill, representing an increase of 56% in 2012 versus the previous year (DECLG, 2014).

11.1.3 Self-Compliance

Major producers of packaging have the option to self-comply directly with the requirements in the Regulations and have to arrange for the free take-back, collection and recovery of their own packaging waste. All self-complying producers have a legal obligation to submit reports to their relevant local authority on packaging placed on the market and waste packaging reused, recovered and disposed. In 2012, nationally a total of 136 self-compliers were registered with the local authorities (representing 186 unique producers). Twenty-nine of these self-compliers were located in the SR, representing 43 unique producers (refer to **Table 11-2**).

Table 11-2: Packaging Self-Compliers Registered in SR in 2010–2012

Year	No. of self-compliers	No. of premises
2010	23	35
2011	25	42
2012	29	43
SR 2012 Data	**No. of self-compliers**	**No. of premises**
Carlow	1	1
Clare	2	4
Cork City	2	2
Cork County	7	14
Kerry	2	3
Kilkenny	3	3
Limerick City & County	5	8
Tipperary County	5	5
Waterford City & County	2	3
Wexford	0	0

Source: EPA NWR 2012.

From 2011 to 2012 the number of self-compliers increased slightly, from 23 to 29. In 2012 the self-compliers in the SR put 13,228 tonnes of packaging on the market and subsequently recovered 1,896

tonnes of packaging waste (14%) (EPA, 2014[57]). However, the EPA noted that local authorities reported that a small number of self-complying producers failed to provide their full 2012 packaging recovered data in quarterly reports, therefore the packaging recovered tonnage is an incomplete dataset. In comparison with producers that are members of Repak, self-compliers are required to meet their own targets and not the national targets and they also have limited obligations to contribute to public awareness campaigns.

The performance of self-compliers is determined by their ability to take back at their premises packaging waste from the public regardless of where it is purchased. However, as most self-compliers do not take enough packaging waste from the public, they have to purchase packaging waste recovery evidence from waste operators to make up the difference to achieve the targets.

Packaging self-compliers have reported that it has been difficult to purchase this evidence as all the packaging waste recovery is being allocated to Repak. Self-compliers could pay over and above the Repak subsidies, but a waste operator may still decide to allocate all the packaging waste recovery to Repak to simplify Repak audits. This is one of the reasons why self-compliers are under-performing.

11.1.4 Progress against targets

Ireland has met and exceeded the recovery and recycling targets for packaging waste set by the EU Packaging Waste Directive for 2011 (EPA, 2014) (**Figure 11-2**). The success in achieving the targets is due to a combination of measures (DECLG, 2014):

- Financial support from the packaging producers, compliance scheme (introduced in 1997) and the environmental fund which has provided financial support for the recovery of packaging waste;
- Landfill levy which was introduced in 2002 and has steadily increased to its current level of €75 per tonne;
- Landfill bans for specific packaging materials from commercial sources (introduced in 2003);
- Obligation on producers to segregate and recycle specified packaging waste arising on their premises (introduced in 2003);
- Roll-out of household kerbside collection and development of bring bank and civic amenity sites infrastructure (2002 onwards);
- National waste awareness campaign run annually by Repak, raising the profile of waste including packaging waste and helping to drive a change in behaviour towards recovery; and
- Enforcement (ongoing).

11.1.5 Enforcement

Local authorities are responsible for the enforcement of the Packaging Regulations nationally; **Table 11-3** shows that inspections have reduced significantly since 2007.

Table 11-3: National Packaging Inspection Activities by Local Authorities 2007–2011[58]

Year	2007	2008	2009	2010	2011
No. of Inspections	3,104	2,034	2,244	813	1,187

[57] EPA emailed data, 14 August 2014.
[58] Review of Producer Responsibility Initiative Model in Ireland, DECLG (2014).

Figure 11-2 Progress towards EU Packaging Waste Targets

According to Repak, 50 prosecutions were made under the Packaging Waste Regulations between 1997 and 2010 (the majority taking place before 2003) by eight local authorities, with Dublin City Council accounting for 64% of the prosecutions (DECLG, 2014).

It is estimated that 5,000 to 5,200 businesses were likely to be designated obligated major producers by the change in the "de minimis" thresholds under the Waste Management (Packaging) Regulations 2007. This was not reflected in the increase in Repak membership and number of self-compliers registered. These non-compliant businesses put compliant businesses at a competitive disadvantage and risk, which undermines the whole system (DECLG, 2014). More detail on enforcement is included in **Chapter 14**.

11.1.6 Future Activities

In 2012 the DECLG undertook a Review of the Producer Responsibility Initiative (RPI) Model in Ireland for the relevant waste streams including packaging waste. The review examined the operation of the compliance scheme, Repak, the activities of self-compliant members and issues which cut across all of the initiatives including enforcement.

In July 2014 the final report[58] published, as an outcome of the review, a list of recommendations for consideration and many of these will impact on specific activities of the local authorities during the lifetime of this plan, such as enforcement. The following recommendations from the report are relevant:

- Examining how the self-complier reporting system needs improvement, including examining how the existing system can be used to assess distance to targets and allow for financial compensation if the targets are not met.
- Reviewing the fees paid by self-compliers to provide a level playing field between large self-compliers, small self-compliers and compliance scheme members.
- The enforcement activities on non-compliant packaging producers should be increased to tackle free-riders and to improve the financial sustainability of the producer responsibility operator.

To ensure that future targets are attained it is essential that the local authorities assist by improving the self-complier reporting system and increase enforcement activities on non-compliant packaging producers.

11.2 CONSTRUCTION AND DEMOLITION (C&D) WASTES

C&D waste is described in the EPA National Waste Reports (NWRs) as all waste that arises from C&D activities (including excavated soil from contaminated sites). These wastes are listed in **Chapter 17** of the European Waste Catalogue. C&D calculations in this plan also include soil and stone waste collected from gardens and parks (EWC 20 02 02).

11.2.1 Regional Quantities

C&D waste is primarily collected by private authorised collectors, with a small percentage collected at civic amenity facilities (accounting for 0.36% of total C&D waste collected in the SR in 2012). **Table 11-4** details the quantity (tonnes) of C&D waste collected in the SR during the period 2010–2012.

Table 11-4: Quantity of C&D Waste Collected in the SR 2010–2012.

	2010 (tonnes)	2011 (tonnes)	2012 (tonnes)
Total C&D waste collected	916,355	890,680	970,319
Soil and stone waste collected	638,936	569,795	657,446
Contaminated soils collected	975	2,250	3,948

Nationally the quantities of C&D waste managed peaked in 2007 and decreased year on year during the period 2007–2011, mirroring the national economic downturn. The EPA's *National Waste Report 2012* (EPA, 2014) does not provide details on the quantity of C&D waste managed in 2012.

The national year-on-year trend of decreasing C&D waste arisings was evident in the total C&D waste collected in the SR during the period 2010 to 2011, where the total C&D waste collected reduced by 3% and the soil and stone waste collected reduced by 10%. There were signs of recovery in the C&D sector in the region in 2012, whereby the total C&D waste collected increased by 8% and the soil and stone waste collected increased by 13% compared to 2011. The commencement of a number of significant construction projects in Clare, Cork County, Limerick City and County, Waterford City and County and Wexford has impacted on the increased quantities of C&D waste collected.

11.2.2 Management of C&D Waste in the Region

Figure 11-3 shows that the bulk of the C&D waste collected is soil and stones, accounting for approximately 68%, with the remaining 32% consisting of materials such as rubble, metals, timber, plastic, glass, wood, contaminated soils and mixed C&D waste.

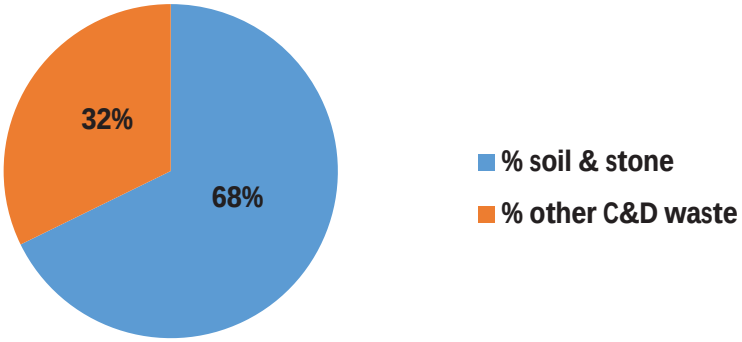


Figure 11-3 C&D Wastes Collected in the Region in 2012

The soil and stone waste collected within the SR is primarily managed at local authority permitted infill sites, with the other C&D waste types primarily managed at EPA licensed activities. Contaminated soils are treated at appropriately licensed hazardous waste sites in the SR.

Traditionally, the recovery of much of the C&D waste stream has been managed by placing it in a variety of land use applications. This treatment, collectively known as backfilling includes land reclamation, improvement or infill works. The largest fraction of the C&D waste stream arising is soil and stones, which (if uncontaminated) typically undergoes little if any treatment prior to recovery at these sites. Many sites selected for infill facilities are considered marginal agricultural land; these may include wetland habitats or lands subject to flooding. There is increasing recognition of the potential ecological and biodiversity value of these types of wetland sites. There is also a sense that at many of these sites, the deposition of waste material was the primary purpose of the activity rather than improvement or development of the land.

Given the sharp decrease in the number of operational landfills nationally, which have been a significant outlet for C&D waste in the past, alternative recovery options will be required in future years. It needs to be considered whether the placement of inert waste at many of the types of infill sites used in the past is an appropriate land use strategy or use of a potentially recyclable material. Concrete, stone and other masonry-type waste can be crushed and screened and used as a substitute for virgin quarried stone material in a variety of engineering applications, if the appropriate technical criteria have been met, e.g. road construction and access tracks for agricultural or forestry holdings. Quarries also frequently require large quantities of soil material to fill voids, and for other remediation and landscaping applications.

11.2.3 Progress against Targets

The EC (Waste Directive) Regulations 2011 set a 70% target for the REUSE, recycling and recovery of man-made C&D waste in Ireland by December 2020. The *National Waste Report 2012* (EPA, 2014) reported that Ireland has achieved this target, with a recovery rate of 97% being reported. Backfilling activities account for a significant portion of the recovery rate, with recycling of C&D

wastes not as prevalent. The quantification of the different treatment options for C&D wastes is important to show whether higher recovery activities, i.e. preparing for reuse and recycling, are growing.

11.2.4 C&D Waste Data & Classification

There are inconsistencies in the classification of construction and demolition wastes post-mechanical processing. In the *National Waste Report 2011* (EPA, 2013), the EPA noted that "*there is an issue with regard to the types of material that the construction industry defines as waste, which may lead to secondary resources not being properly accounted for*".

Many of the local authority authorised sites where recovery of C&D waste is undertaken do not have weighbridges and the figures for quantities of waste managed are estimates. The EPA also noted the importance of good record keeping by waste operators and enforcement and data verification efforts by local authorities, which can have a huge impact of the quality of the national waste datasets.

The use of appropriate EWC codes is critical to the tracking of waste through both the waste collection permitting and waste facility regulatory systems. Skips of mixed waste collected from households, businesses or construction sites are typically recorded as either mixed C&D waste or mixed municipal bulky waste. While there is some overlap between the two streams, for reporting purposes they arise from two distinct sources and should be recorded as accurately as possible. Misclassification of municipal waste as C&D or vice versa could impact the reporting on the collection, generation and management of both municipal and C&D waste. It is important that those involved in regulating the waste industry take a precise approach to the use of EWC codes and that consistent and clear guidelines are communicated to the waste industry. This will require coordination between local authorities, the EPA and other relevant stakeholders.

11.2.5 Future Activities

There is significant potential for recycling of the C&D waste stream given its characteristics. Articles 27 and 28 of the European Communities (Waste Directive) Regulations 2011 set out the grounds by which a material can be deemed to be a by-product rather than a waste (Article 27) and the grounds for deeming a material to be no longer a waste (Article 28).

Article 27 allows an "economic operator" to decide, under certain circumstances, that a material is a by-product and not a waste. Decisions made by economic operators under Article 27 are to be notified to the EPA. The EPA is entitled to decide that a notified by-product should in fact be considered as waste. The EPA is obliged to consult with the economic operator and the relevant local authority before making such a decision.

Article 28 sets out the grounds by which a material which is recovered or recycled from waste can be deemed to be no longer a waste. Certain specified waste shall cease to be waste when it has undergone a recovery, including recycling, operation and complies with specific criteria to be developed in accordance with the following conditions:

- The substance or object is commonly used for specific purposes;
- A market or demand exists for such a substance or object;

- The substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and
- The use of the substance or object will not lead to overall adverse environmental or human health impacts.

To date the European Commission has not developed specific regulations governing the end-of-waste criteria for C&D waste, therefore the EPA is allowed to decide on a case-by-case basis. Proposals for end-of-waste status must come from industry and be funded by industry; however, this is a complex process and the EPA has made no decisions to date under Article 28.

Much of the inert fraction of the C&D waste stream, particularly concrete, can be recycled and used in engineering applications as a replacement for virgin materials. At present, recycling is not being distinguished from recovery in the recording and reporting of waste statistics for C&D waste.

Anecdotally, it is evident that material derived from waste is being sold or transferred from waste facilities for use at unauthorised sites, e.g. shredded wood or processed aggregate being used by farmers and other members of the public, without securing end-of-waste status.

For a material to be no longer deemed a waste, the criteria outlined above must be met. It is important that a consistent approach is taken, at both EPA-licensed and local authority authorised facilities, to ensure that operators who comply with the regulatory process are not undermined by those in non-compliance or operating outside it.

Another emerging issue will be dealing C&D fines. C&D fines material are produced from the trommelling/screening of C&D wastes and may contain contaminants such as gypsum, glass and biodegradable waste. C&D fines may be suitable for landfill cover, subject to EPA agreement, and will likely require ongoing testing and verification to ensure that only suitable material is being applied. Other options for the reuse or recovery of C&D fines must be tracked as waste movements.

11.3 WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

The collection and treatment of WEEE generated in Ireland has been regulated since 2005. The most recent regulations, the EU (WEEE) Regulations 2014 (S.I. No. 149 of 2014), published in March 2014, implement the requirements of EU Directive 2012/19. These regulations introduce more onerous collection and recovery targets in the period up to 2019.

WEEE generated within the SR is collected via the following routes:

- At civic amenity facilities;
- Retailer take-back schemes, operated at the point of sale;
- One-off collection events; and
- Authorised waste collectors.

Table 11-5 details the quantities of household and non-household WEEE collected in the SR between 2010 and 2012.

Table 11-5: Quantity of Household and Non-Household WEEE Collected in the SR (2010–2012)

Year	Quantity of household WEEE (tonnes)	Quantity of non-household WEEE (tonnes)
2010	13,173	0[59]
2011	11,674	4,503
2012	11,317	6,425

Details of the quantity of household WEEE collected were obtained from the PRI compliance schemes and **Section 9.3.6** above provides further details. According to the latest EPA waste data report[47] in 2012 large household appliances (i.e. fridges, televisions, electric cookers etc.) accounted for almost 55% of the national total WEEE collected with small household appliances (i.e. kettles, toasters, radio etc.) accounting for over 5%.

In addition to household WEEE, the industrial and commercial sectors also produce WEEE. The quantities of non-household WEEE reported in **Table 11-4** above were obtained from the NWCPO.[41] In 2012 the non-household WEEE accounted for approximately 36% of the total WEEE collected in the SR however this is likely to be an underestimate due to smaller non-household WEEE items being incorporated under the household WEEE details.

11.4 BATTERIES AND ACCUMULATORS

The collection of waste batteries and accumulators is currently regulated in accordance with the EU (Batteries and Accumulators) Regulations 2014, which give effect to the various Batteries Directives (2006/66/EC, 2008/103/EC and 2009/603/EC). Subject to certain exceptions, this legislation affects virtually all batteries that are commonly used by households and commercial organisations, including automotive batteries. **Table 11-6** details the quantities of portable and non-portable batteries and accumulators collected in the SR between 2010 and 2012.[42]

Table 11-6: Quantity of Batteries and Accumulators Collected in the SR 2010–2012

Year	Quantity of portable batteries & accumulators (tonnes)	Quantity of non-portable batteries & accumulators (tonnes)
2010	82	2,330
2011	149	5,154
2012	143	4,524

Portable batteries and accumulators include types such as AAA, AA, Cell C, Cell D, PP3, and are used in household appliances, toys, mobile phones, remote controls, watches, etc. Details of the quantity of portable batteries and accumulators collected were obtained from the PRI compliance schemes and **Section 9.3.7** provides further details.

The non-portable batteries and accumulators primarily consist of lead acid batteries, which are used in motor vehicles and account for approximately 97% of the total weight of batteries and accumulators collected in the SR each year.

[59] No details available for 2010.

In accordance with the Batteries Directive (2006/66/EC), a minimum 25% collection rate for portable batteries and accumulators was set for the end of 2011, with this figure increasing to 45% by September 2016. According to the *National Waste Report 2012* (EPA, 2014) Ireland has achieved the 2011 target but is at risk of failing to meet the 2016 target, as the 2012 national collection rate is reported as 28%.

11.5 WASTE TYRES

The Central Statistics Office (CSO) indicated that in 2012 approximately 3 million tyres were imported for supply in Ireland, which equates to approximately 24,000 tonnes of tyres.

While waste tyres are not classified as hazardous waste, they can cause environmental pollution if disposed of incorrectly or irresponsibly. Stockpiles of tyres may cause environmental pollution due to the potential for uncontrolled fires to occur and the subsequent emission of toxins which are detrimental to both humans and animals. The *National Waste Report 2012* (EPA, 2014) reported that approximately 24,165 tonnes of waste tyres were managed in the State in 2012.

The Waste Management (Tyres and Waste Tyres) Regulations 2007 (S.I. 664 of 2007) were enacted in Ireland on 1 January 2008. These regulations allow for the environmentally sound management of waste tyres by providing a regulatory framework for comparing quantities of waste tyres arising with the quantities placed on the market and tracking the movement of waste tyres. Persons who supply tyres to the Irish market and waste tyre collectors must either register with each local authority area where they operate or register with a compliance scheme. TRACS (Tyre Recovery Activity Compliance Scheme) is currently the only operating compliance scheme.

Table 11-7 details the quantity of waste tyres collected by authorised collectors within the SR for the period 2010 to 2012. The details provided were obtained from the WCP AER returns to the NWCPO.

Table 11-7: Quantity of Waste Tyres Collected by Authorised Collectors within the SR 2010–2012

	2010	2011	2012
Quantity of waste tyres collected (t)	7,151	9,402	8,705

The quantity increased by 31% in 2011 compared to 2010. This increase can be linked to the development of new waste tyre recovery facilities and an increase in authorised waste tyre collectors within the SR. The quantity collected in 2012 was down slightly on the 2011 figure.

According to the EPA,[54] in 2012 approximately 40% of the total managed waste tyres in Ireland were exported, with the majority used as fuel (33%). The main treatment activity in the State in 2012 was the crumbing of waste tyres for conversion into saleable products (41% of the total managed waste tyres in Ireland).

11.6 END-OF-LIFE VEHICLES (ELVS)

The management of ELVs is currently regulated under the EU (End-of-Life Vehicles) Regulations 2014 (S.I. No. 281 of 2014), which consolidate previous regulations made under the Waste Management Act. The provision of the ELV Regulations under the European Communities Act will allow for fixed penalty notices for certain breaches in the Environment Miscellaneous Provisions Bill 2014.

The ELV Regulations require owners of intact end-of-life cars or light commercial vehicles to deposit such vehicles at an appropriately permitted or licensed Authorised Treatment Facility (ATF). An ATF may not charge for accepting an end-of-life vehicle. A certificate of destruction must be issued to the owner once such a vehicle undergoes destruction at an ATF. The recording and reporting of certificates of destruction has been problematic in recent years but the regions will attempt to address these issues over the lifetime of the plan. In addition to vehicle owners bringing ELVs to ATFs, authorised collectors also collect ELVs and are obliged to report the quantity collected as part of their WCP AER return to the NWCPO.

Table 11-8 details the quantity of non-depolluted ELVs (EWC 16 01 04*) accepted at ATFs within the SR during the period 2010–2012. As there are issues with the classification of ELVs within the WCP AER reporting system, the details in the table were obtained from the EPA, as it collates statistics in relation to the quantity of waste accepted at ATFs.

Table 11-8: Quantity of ELVs (EWC 16 01 04* only) Collected at ATFs within the SR 2010–2012

	2010 (tonnes)	2011 (tonnes)	2012 (tonnes)
Quantity of ELVs (EWC 16 01 04* only) collected	33,931	41,781	28,011

The quantity of ELVs accepted at ATFs within the SR increased by 23% in 2011 compared to 2010. However, the quantity collected in 2012 was down 33% on the 2011 figure. The annual variation in ELVs accepted at ATFs correlates with annual new car sales trends reported by the Society of the Irish Motoring Industry.

The 28,011 tonnes of ELVs collected in the SR for 2012 is the equivalent of one in every 20 households disposing of a car in 2012.

In relation to ELVs collected in Ireland in 2012, the total reuse and recycling rate was 81.8% and the total reuse and recovery rate was 87.8% (*National Waste Report 2012* (EPA, 2014)). These percentages meet the EU targets of 80% for reuse and recycling and 85% for reuse and recovery. However, these targets increased to 85% for reuse and recycling and 95% for reuse and recovery on 1 January 2015 and Ireland is currently at risk of not meeting them.

12 PRE-TREATMENT AND RECOVERY INFRASTRUCTURE

This chapter provides details on pre-treatment and recovery infrastructure in place in the SR. Pre-treatment infrastructure covers a wide variety of facilities in the region, but is mainly mechanical sorting, separation, and processing plants which can vary in scale and sophistication. Recovery infrastructure covers a wide range of activities which fall within the treatment tiers of preparing for reuse, recycling and other recovery. Pre-treatment and recovery facilities can be authorised either by the EPA, under a waste license, or by the local authorities, under a waste facility permit (WFP) or certificate of registration (CoR). A list of the facilities authorised by local authorities and the EPA is given in **Appendices D** and **E.**

12.1 LOCAL AUTHORITY WASTE AUTHORISATIONS

The local authorities in the region authorise waste facilities under one or more classes of activity, as prescribed by the Waste Management (Facility Permit and Registration) Regulations, S.I. No. 821 of 2007 (as amended). There are 12 classes of authorised activities covered by WFPs and 13[60] classes of authorised activities covered by CoR.

A single database of all local authority authorised waste sites did not exist prior to the preparation of the waste plans. The local authorities spent considerable time developing a baseline of treatment capacities for the purpose of the regional waste management plan. This data has been compiled using information[61] provided by each local authority and, for the first time, detailed analysis of local and national capacities and activities has been undertaken.

12.1.1 Facilities and Treatment Capacities in the Region

Figure 12.1 provides details of all local authority authorised facilities in the region. The figure shows the distribution of WFP and CoR facilities and the scale of capacity authorised in each local authority area.

In mid-2014 there were 376 local authority authorised facilities in the region (102 CoR and 274 WFP) with an estimated total market authorisation of 3.15 million tonnes.

The data shows that 49% of the authorised capacity in the region is in the functional areas of two local authorities, namely Cork County Council and Limerick City & County Council. The local authorities with the least authorised capacity are Carlow County and Cork City Council, followed by Wexford, Clare and Kilkenny County Councils.

Cork City is the largest urban centre in the region, and the only exclusively urban functional area, and Carlow is geographically the smallest county in the region, so it is not surprising to see low percentages of authorised capacity for these local authority areas.

Cork County Council has the greatest number of authorised facilities (100) with Carlow County Council holding the smallest number (12). This trend is repeated in capacity terms, where Cork

[60] Class 8 of the certificates of registration is a spare class, not used.
[61] Includes local authority permitting records and Annual Environmental Reports.

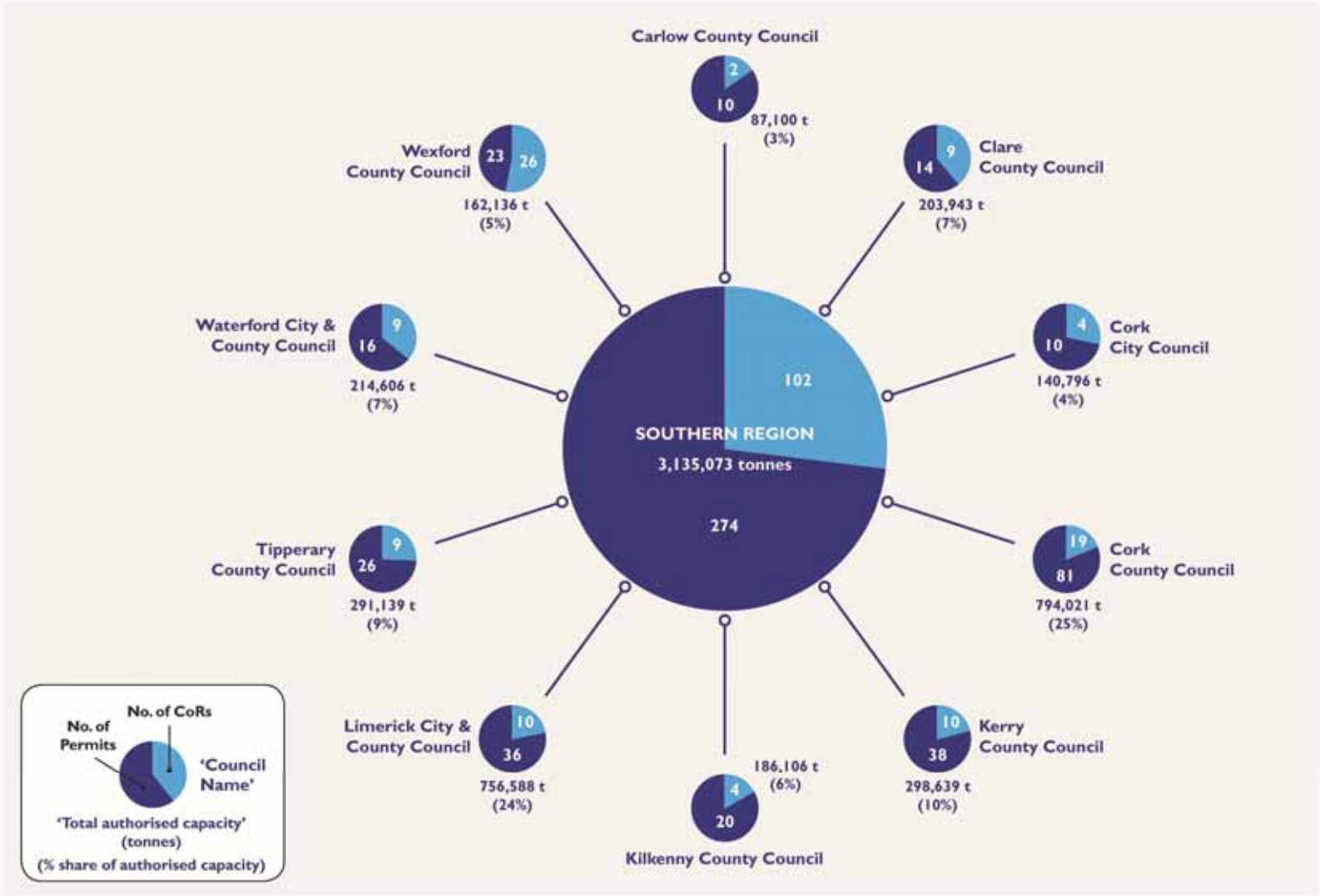


Figure 12-1 Number and Capacity of Local Authority Authorised Facilities in the SR

County Council has the greatest percentage of authorised capacity in the region, at 25%, with the lowest level in Carlow County Council at 3% of the regional total. Wexford County Council was the only council where the number of CoRs was greater than the number of WFPs; this was largely due to the high number of Pay-to-Use (PTU) compactor units in use.

12.1.2 Market Capacity in the Region by Group

There are similarities between many of the classes of waste activities authorised by WFPs and CoRs. To allow for effective analysis of the treatment capacity, including an examination of the use of existing treatments in the region, the local authorities have grouped similar activities together into nine groups where possible. **Table 12-1** presents the grouped activities created for the purpose of the plans to analyse the treatment market. The groupings cover the 25 classes of activities detailed in the regulation, and the table describes the number of facilities in the region by group.

Table 12-1: Number of Facilities Authorised by Activity Group

Group and Description	WFP Classes[62]	COR Classes[63]	WFP (No. of Facilities)	COR (No. of Facilities)
G1 – Store/Processes/transfer of waste including MSW & C&D Waste	1,7,10	1,7,10	77	2
G2 – Metals and ELVs	4,12	-	106	-
G2a – Other waste vehicles	2	3	6	3
G3 – WEEE, Batteries	3,9	4	2	-
G4 – Land improvement	5,6	5,6,9	62	51
G5 – Biological	8	11,12	14	10
G6 – Organic landspread	-	13	-	2
G7 – Storage of Non-haz & Refrigerant Wastes	11	14	7	0
G8 – Temp. storage	-	2	-	34
Total	**12 classes**	**13 classes**	**274**	**102**

Figure 12.2 provides details of the number of facilities in each group and indicates that land improvement/backfilling (group 4) represents the largest number of facilities, with 30% of all local authority authorised facilities.

This activity group is followed by group 2, which includes scrap metal and authorised treatment facilities (ATFs) for ELVs, accounting for 28% of all authorised facilities.

Group 1 accounts for 21% of the local authority permitted facilities, and includes activities involved in storage, processing and transfer of waste, including municipal type wastes.

[62] Under Part 1 of Third Schedule, Waste Management (Facility Permit and Registration) Regulations, S.I. No. 821 of 2007 (as amended).
[63] Under Part 2 of Third Schedule, Waste Management (Facility Permit and Registration) Regulations, S.I. No. 821 of 2007 (as amended).

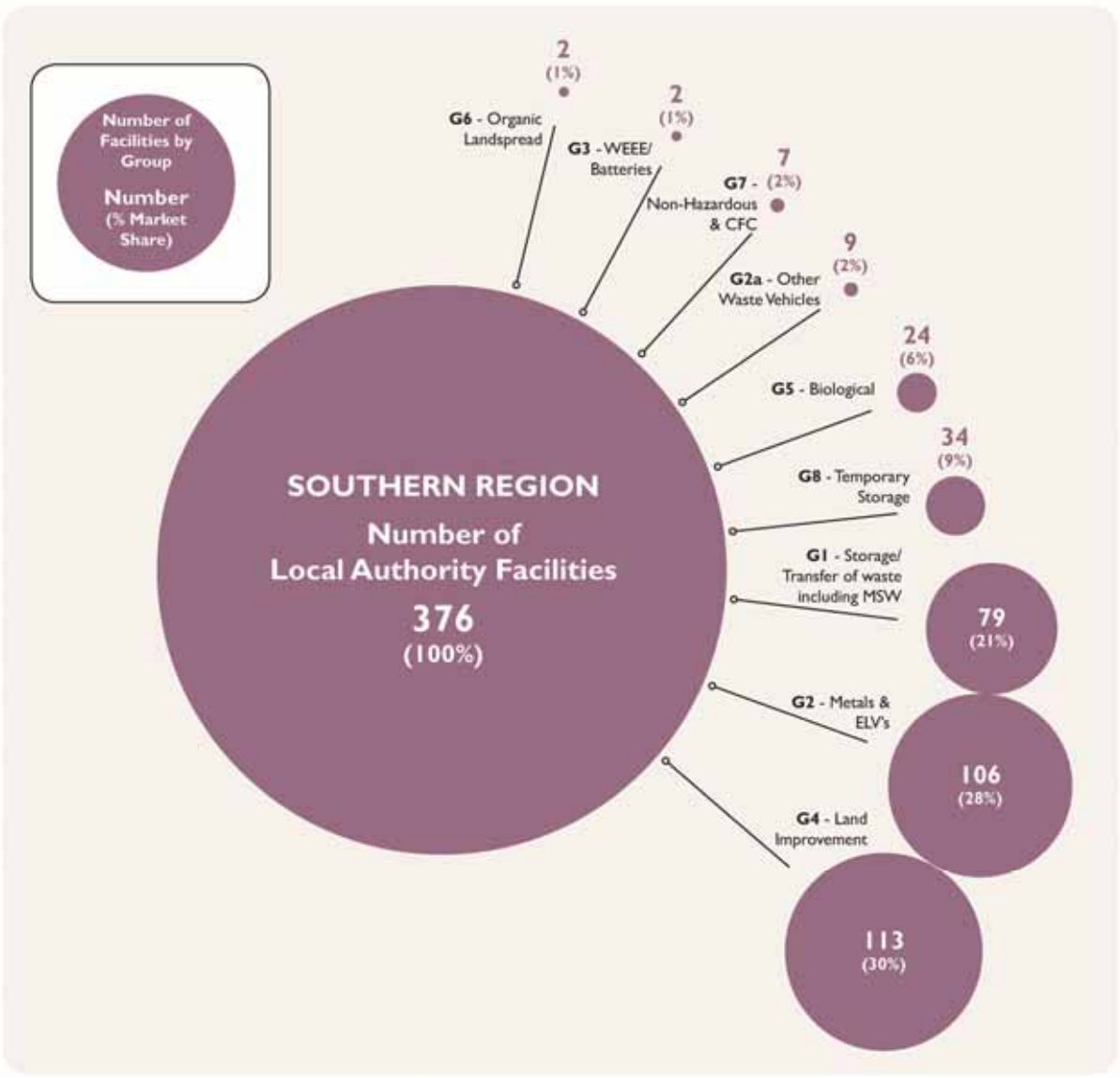
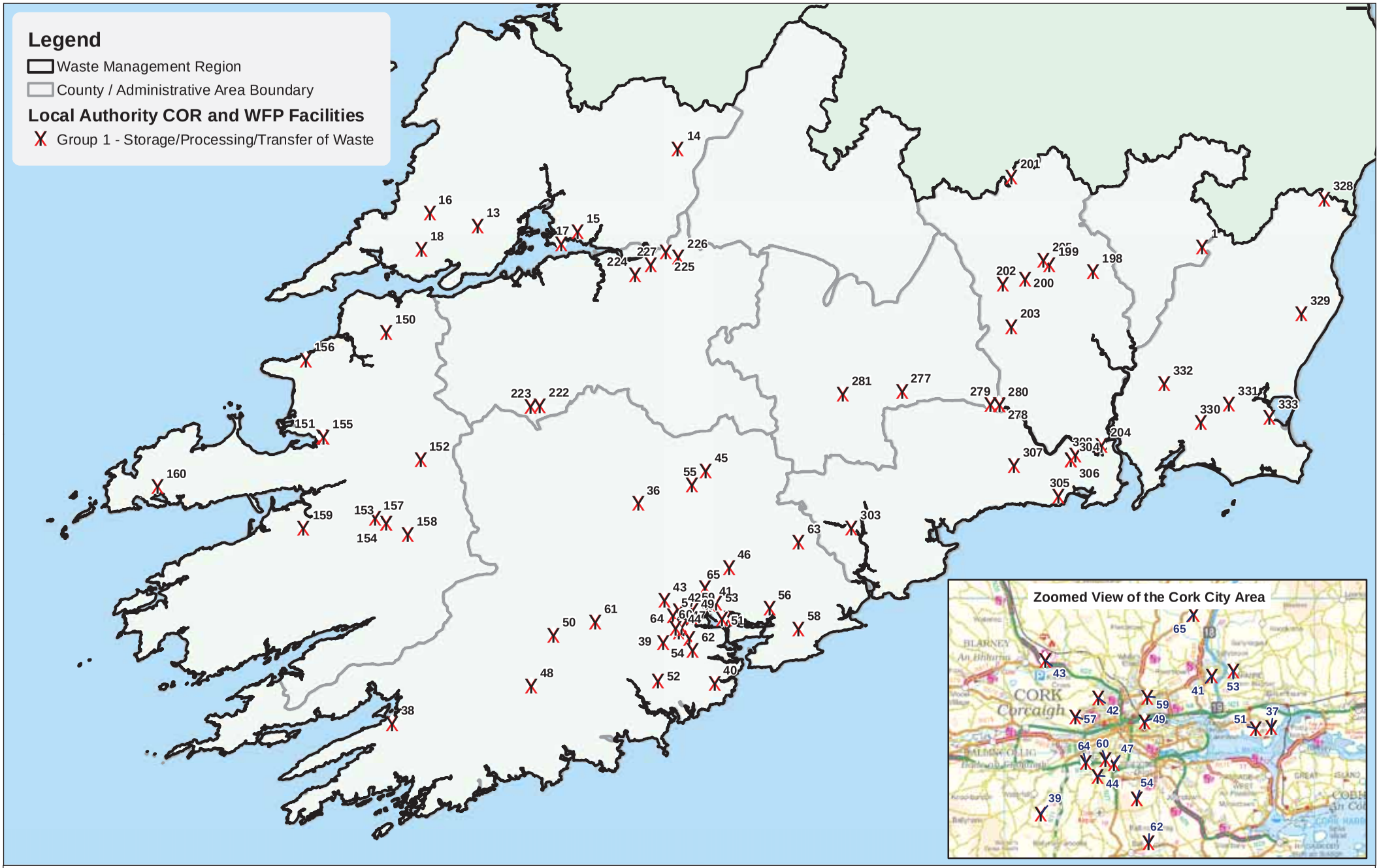


Figure 12-2 Local Authority Waste Authorisations by Group

The location of WFP and CoR facilities is mapped by group in the following figures. The references for the facilities in the figures correspond to the facility number in **Appendix D**.

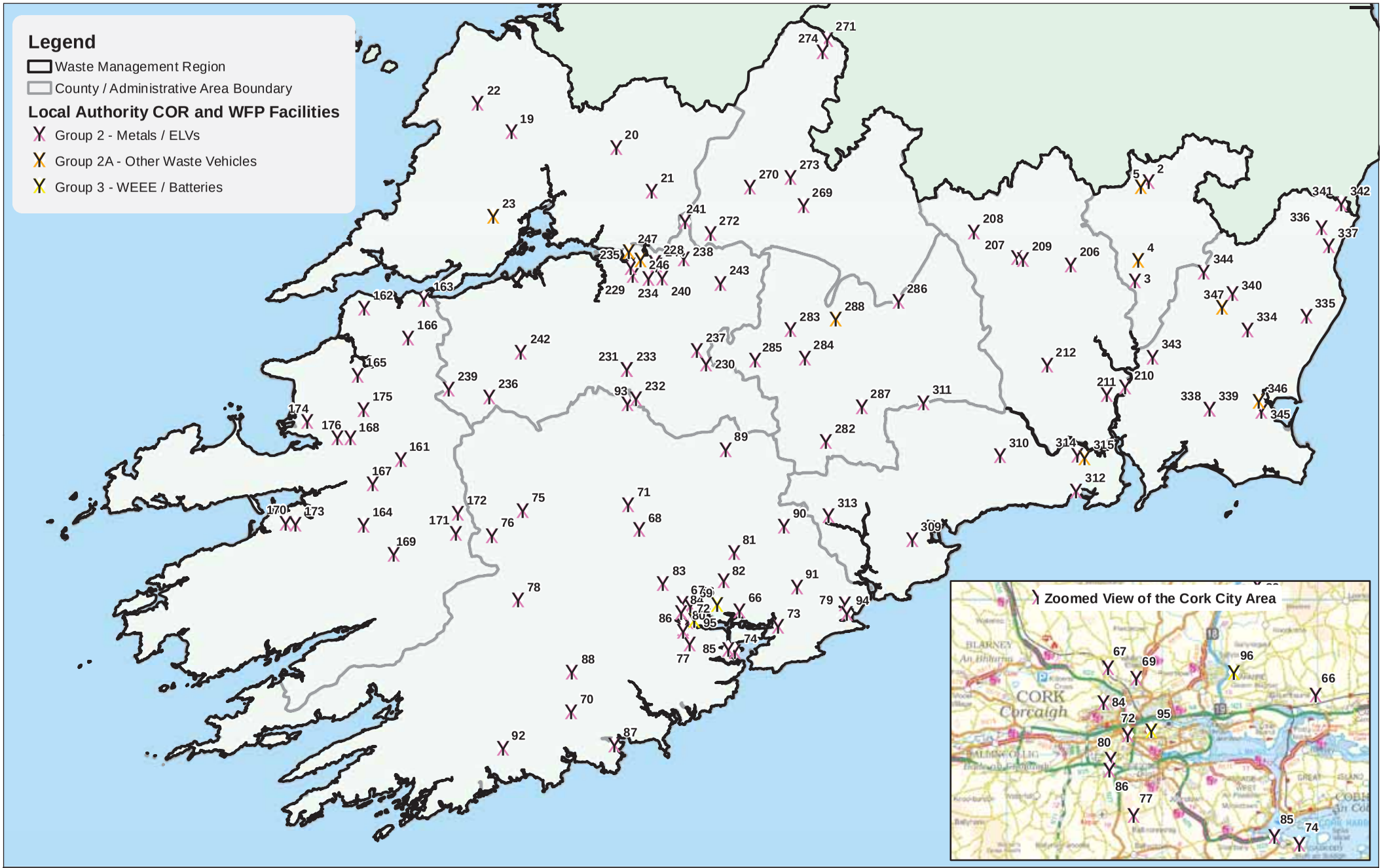
- **Figure 12-3** – Group 1;
- **Figure 12-4** – Groups 2, 2a, and 3;
- **Figure 12-5** – Groups 4 and 5; and
- **Figure 12-6** – Groups 6, 7 and 8.



Regional Waste Plans, SEA and AA

File Ref: MDR0998Arc0103F02

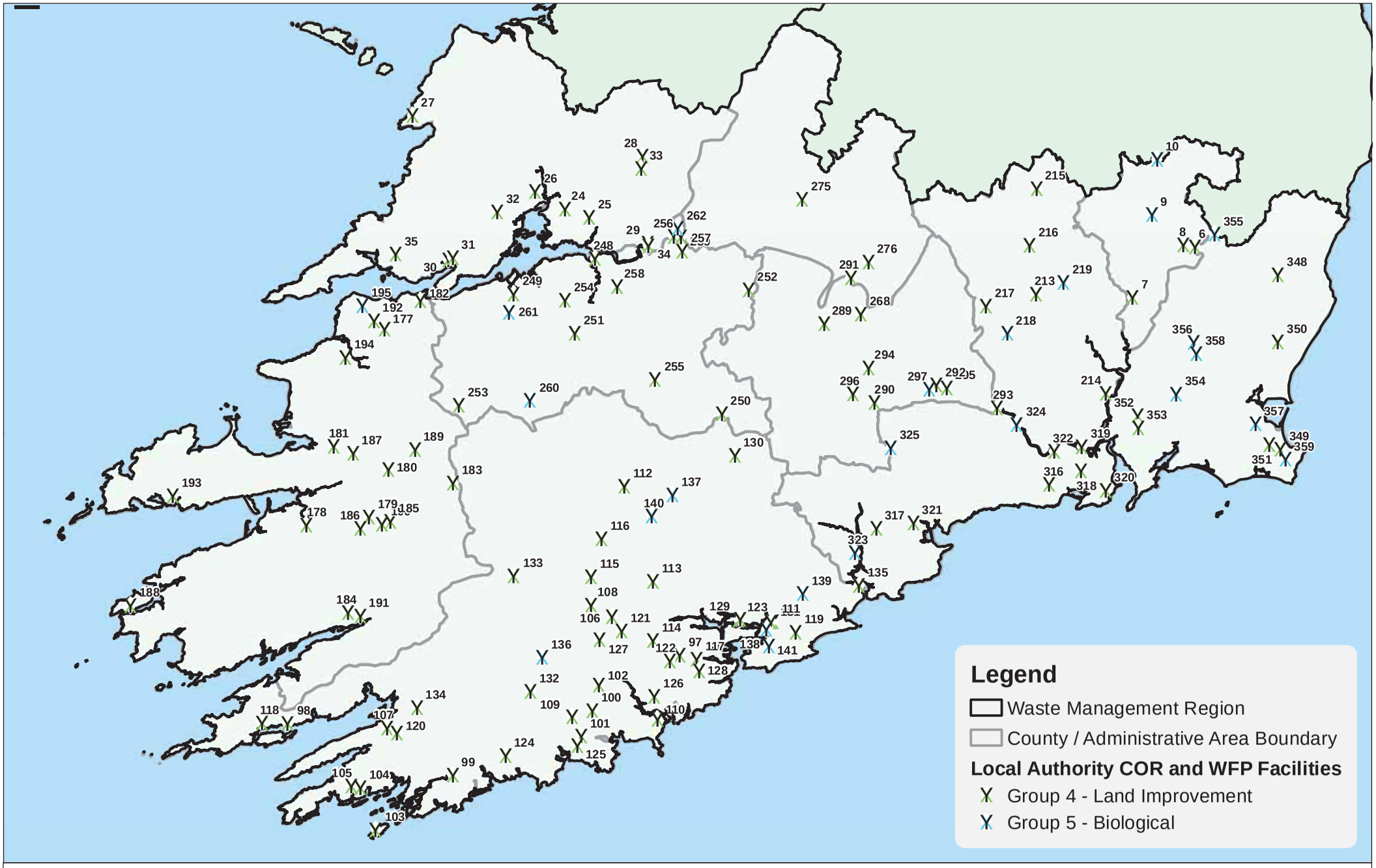
Figure 12-3 Group 1 Local Authority Authorised Waste Facilities in the Southern Region



Regional Waste Plans, SEA and AA

File Ref: MDR0998Arc0104F01

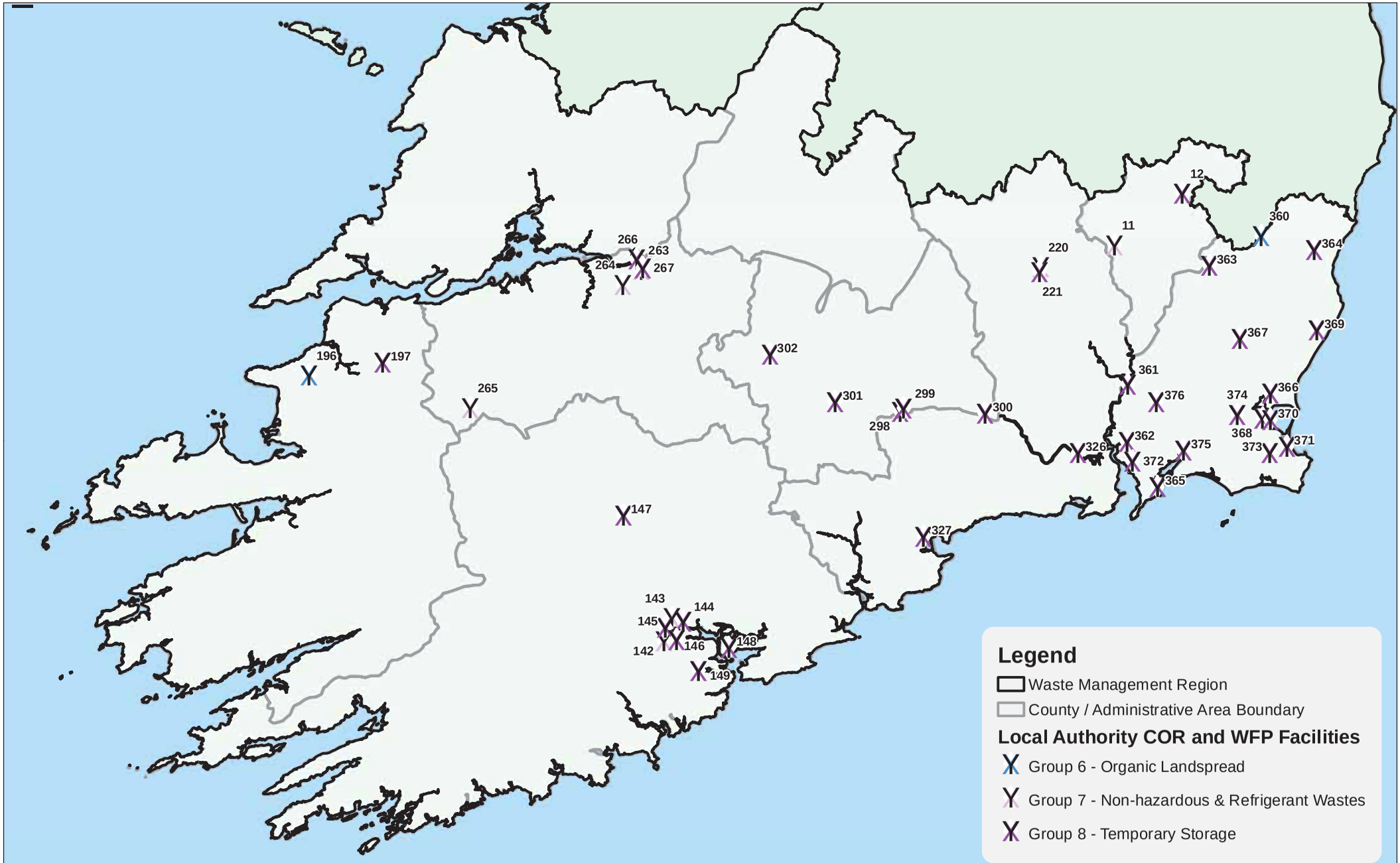
Figure 12-4 Group 2, 2A and 3 Local Authority Authorised Waste Facilities in the Southern Region



Regional Waste Plans, SEA and AA

File Ref: MDR0998Arc0105F02

Figure 12-5 Group 4 and 5 Local Authority Authorised Waste Facilities in the Southern Region



Regional Waste Plans, SEA and AA

File Ref: MDR0998Arc0105F02

Figure 12-6 Group 6, 7 and 8 Local Authority Authorised Waste Facilities in the Southern Region

12.2 EPA WASTE AUTHORISATIONS

In 1996 the EPA began licensing activities in the waste sector carried out by local authorities and private operators. These include significant waste recovery activities such as materials recovery facilities, mechanical treatment facilities and thermal recovery facilities.

The EPA also issues CoRs to local authorities for smaller scale waste activities listed in the regulations[63] that are primarily bring facilities (civic amenity and bring banks). These activities have not been included in the capacity analysis as the waste accepted at these sites is handled by other waste facilities along the waste management chain.

12.2.1 Overview of Waste Licensed Facilities in the Region

The EPA provided data to the local authorities relating to waste licensed pre-treatment & recovery activities in the region. The facilities licensed by the EPA in the region are presented in **Figure 12-7** (data accessed through the EPA geo-portal website and current as of October 2014).

Table 12-2 provides a summary of the pre-treatment and recovery facilities in the region. This classification is based on the recovery or disposal code for the principal activity undertaken at the site and as assigned by the EPA. The recovery and disposal waste activities codes are defined in Eurostat Waste Methodology Handbook, 2013.

Table 12-2: Active EPA Authorised Waste Facilities (Pre-treatment and Recovery)

	No. of active facilities	Total Capacity (tonnes)
Pre-treatment - Disposal	18	347,594
Pre-treatment - Recovery	10	385,500
Recovery	9	609,400
Total	**34**	**1,342,494**

Table 12-2 shows that the majority of EPA authorised facilities in this region are pre-treatment facilities and details the corresponding capacities. There are only nine EPA authorised facilities with recovery codes (R3 and R5) as their principal classes of activity, with a combined capacity of just under 50% of the total EPA authorised pre-treatment/recovery capacity in this region. Further analysis of the pre-treatment and recovery capacity is presented in **Chapter 16**.

Policy

The data presented in this chapter shows that the authorised capacity for the treatment of waste is substantial, particularly the scale of local authority authorisations at WFP and CoR facilitites. To date local authorities in the region have not coordinated authorisation activities. This has has resulted in some over-authorisation of capacity and it is evident that there are inconsistencies in the approach to the issuing of permits and certificates of registration. Over the plan period the local authorites in the region, led by the lead authority, will develop a better understanding of treatment capacity in the wider region. The local authorities will work with operators, through regulatory measures and guidance, to improve the quality and value of material collected and processed. Better quality secondary material will have access to more reliable end destination markets as well as helping to support indigenous enterprises requiring quality recyclates.

Policy:

C2. Optimise the value of recycled and residual waste resources in the system to turn these materials into reliable sources of secondary raw materials for reprocessing and recovery.

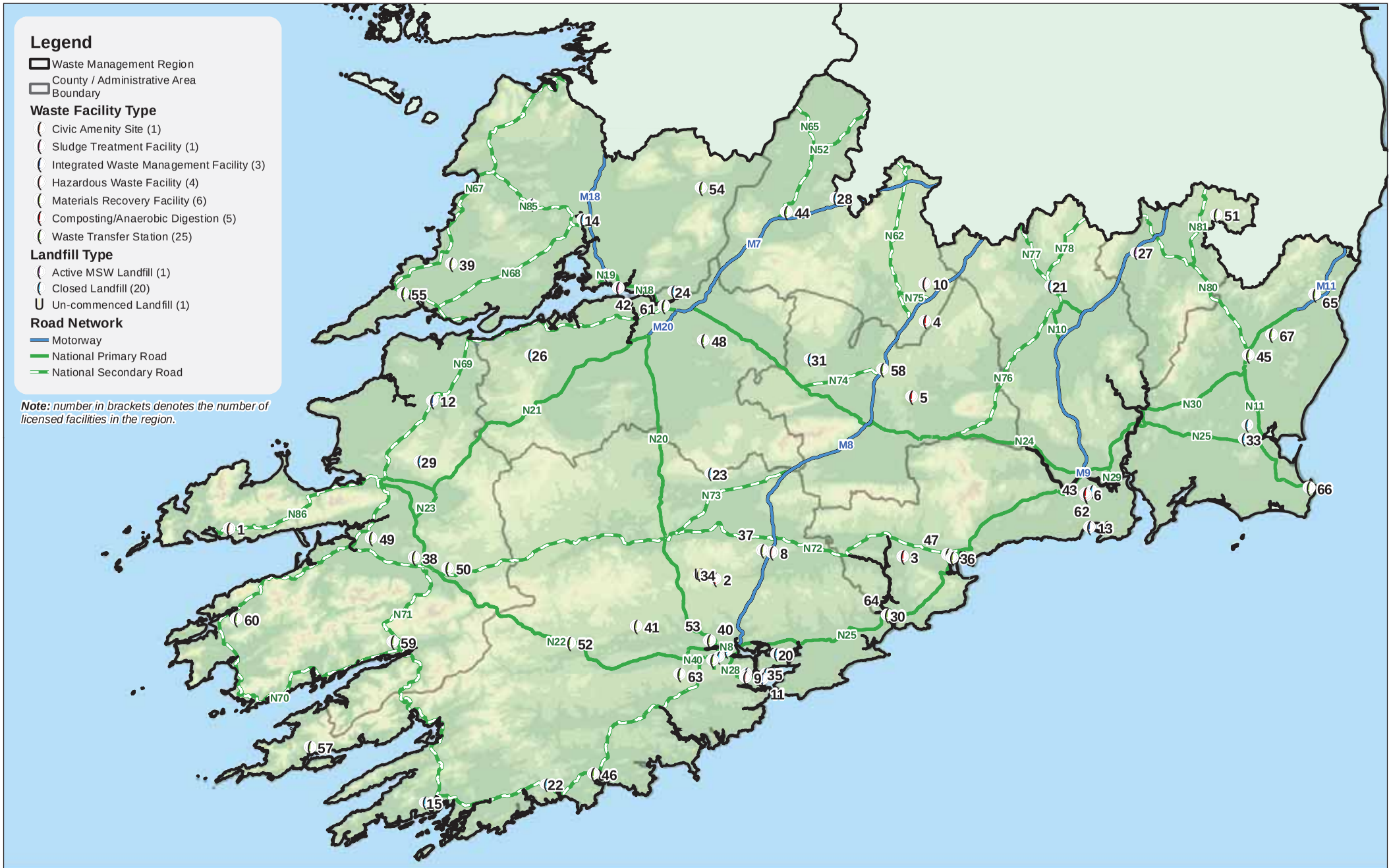
The potential for reprocessors and recyclers of secondary waste materials to establish indigenous enterprises will be supported by the local authorities over the plan period. The local authorities recognise that better interaction is needed between the waste (environment) section and relevant departments that are working with small businesses with a focus or need for secondary wastes as part of their operation. Growth of secondary material markets will ensure more material is diverted from landfill and other lower tier recovery options, which would have a positive impact on the environment.

Policy:

C3. Identify and promote the growth of secondary material markets and enterprises in the region through regional and local supports.

12.3 CAPACITY

The details provided in this chapter focus on the spatial distribution of pre-treatment and recovery infrastructure in the region. A comprehensive market analysis of treatment capacity in the region, which also considers national capacity levels for certain treatments, is provided in **Chapter 16**.



Regional Waste Plans, SEA and AA

File Ref: MDR0998Arc0021F02

Figure 12-7 Waste Licensed Facilities in the Southern Region

13 DISPOSAL INFRASTRUCTURE

This chapter sets out the existing disposal infrastructure and capacity in the region, which has changed significantly. One of the key objectives of the previous plans was to reduce the reliance on landfill as the primary treatment method for municipal waste and in doing so to meet the challenging targets set for Ireland in the EU Landfill Directive (1999/31/EC) with regard to the diversion of BMW from landfill.

Significant increases in the landfill levy annually since 2008 have assisted in diverting waste away from landfill and in driving waste up the hierarchy towards waste-to-energy facilities and increased recycling rates. The landfill levy increases per tonne are shown in **Table 13-1**.

Table 13-1: Landfill Levy 2002–2013

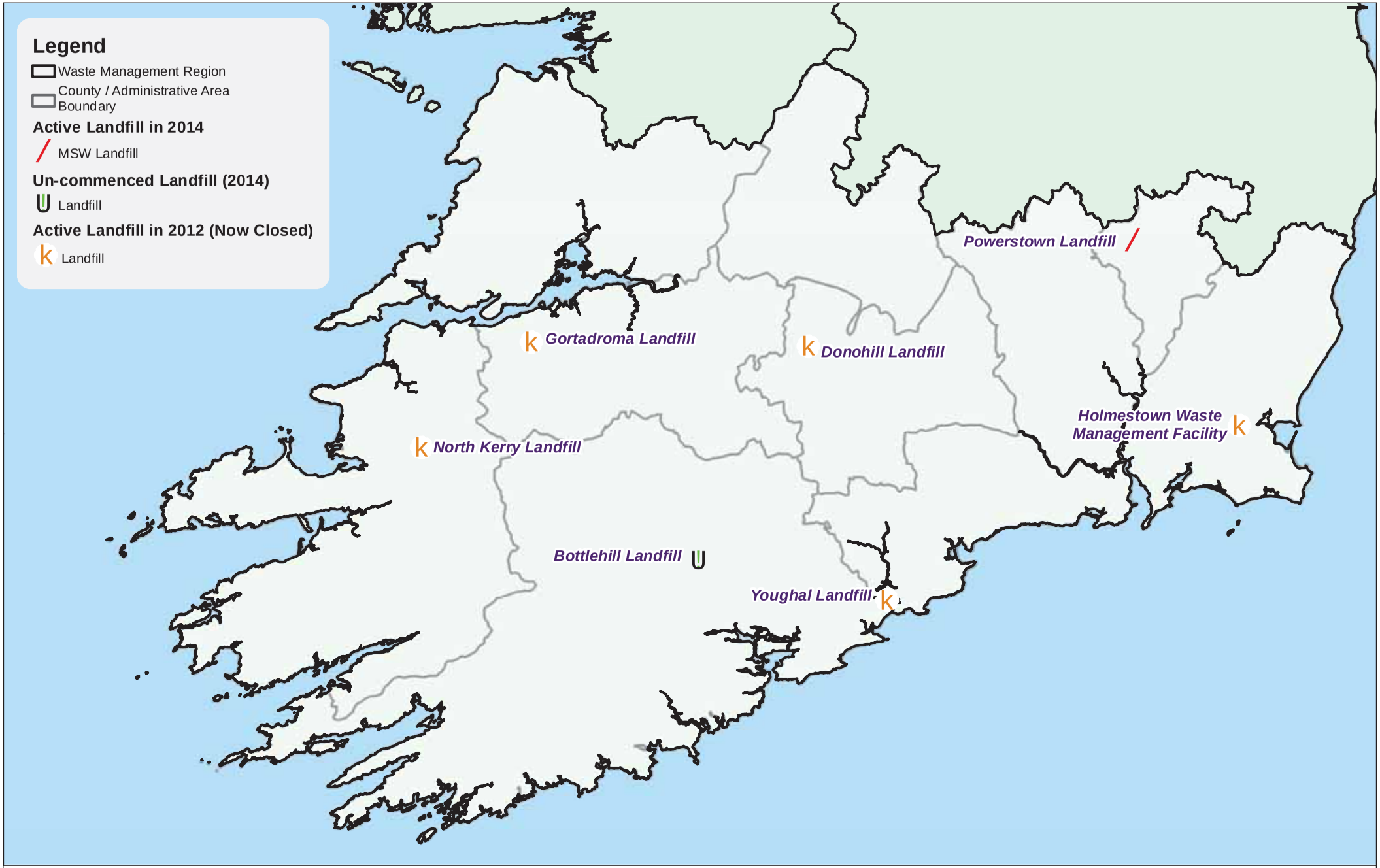
Year	Cost of levy per Tonne	Date of Introduction
2001	€15	1 June 2002
2008	€20	1 July 2008
2009	€25	31 Dec 2009
2010	€30	1 Feb 2010
2011	€50	1 Sept 2011
2012	€65	1 July 2012
2013	€75	1 July 2013

While the local authorities operating landfills were aiming to meet the EU landfill diversion targets, there was uncertainity regarding economic viability of continuing to operate landfills as waste contractors sourced alternative outlets for residual waste, which was predominantly exported to waste-to-energy facilities.

13.1 ACTIVE LANDFILLS IN THE SR

In the SR there is only one active landfill still in operation (March 2015), which is Powerstown Landfill operated by Carlow County Council. Gortadroma Landfill in Limerick, North Kerry Landfill and Donohill Landfill in Tipperary all closed in early 2014.

Two other landfills in the region have significant remaining constructed capacity but it is not deemed financially viable to open them at this time; these are Bottlehill Landfill, owned by Cork County Council, and Holmestown Landfill, owned by Wexford County Council. **Figure 13-1** maps the landfills in the SR.



Regional Waste Plans, SEA and AA

File Ref: MDR0998Arc0084F02

Figure 13-1 Active Landfills in the Southern Region

13.1.1 Remaining Capacity

The remaining disposal capacity for landfills accepting municipal waste is shown in **Table 13-2**, in which:

- Remaining consented disposal capacity includes all authorised capacity but may not be developed yet;
- Remaining constructed disposal capacity is the remaining built capacity that is fully developed; and
- Remaining life expectancy figures are calculated using landfill limits per annum.

Table 13-2[64]:- Approximate Remaining Disposal Capacity at landfills accepting MSW (2014)

Licensee	Landfill	EPA licence reg. no.	Remaining consented disposal capacity (t)	Remaining constructed disposal capacity (t)	Remaining life expectancy consented (years)	Remaining life expectancy – constructed and consented (years)	Operational status
Cork Co. Co.	Bottlehill	W0161-02	5,392,000	675,000	29	4	Un-commenced
Carlow Co. Co.	Powerstown	W0025-03	91,000	91,000	2.5	2	Open
Wexford Co. Co.	Holmestown	W0191-02	1,100,000	150,000	20	3	Closed
			6,583,000	**916,000**	-	-	

As there is only one landfill active and open in the region, there was only 91,000 tonnes of landfill disposal capacity for residual type municipal waste available at the end of 2014.

13.1.2 Quantities of Waste Disposed

The total quantities of household, commercial and industrial waste accepted at landfill in the region from 2010 to 2012 are shown in **Table 13-3**.

Table 13-3: Waste Accepted at Landfills (Disposal and Recovery) in the Region 2010 to 2012[64]

Facility Name	Waste Licence Reg. No.	Total waste accepted 2010 (t)	Total waste accepted 2011 (t)	Total waste accepted 2012 (t)
Powerstown Landfill	W0025-03	13,663	10,146	9,246
Central Waste Management Facility (Inagh)	W0109-02	28,826	36,346	-
Youghal Landfill	W0068-03	58,965	25,911	3,403
Derryconnell Landfill Site	W0089-02	4,225	-	-
North Kerry Landfill	W0001-04	21,276	16,504	71,078
Dunmore Landfill	W0030-02	1,470	-	-

[64] EPA National Waste Reports 2010–2012 and Annual Environmental Reports for landfill facilities.

Facility Name	Waste Licence Reg. No.	Total waste accepted 2010 (t)	Total waste accepted 2011 (t)	Total waste accepted 2012 (t)
Gortadroma Landfill	W0017-04	117,138	135,487	139,538
Ballaghveny Landfill	W0078-03	17,044	9,770	-
Donohill Landfill	W0074-03	15,271	17,281	15,051
Holmestown Landfill	W0191-02	33,782	24,120	4,466
Total	-	**311,660**	**275,565**	**242,782**

There were further reductions in the total waste accepted at landfills in the region in 2013 and 2014 due to the closure of the most of the region's landfills. The initial estimates for 2013 show that less than 200,000 tonnes of waste was accepted at landfills in the region, and it is estimated that this will have reduced to less than 100,000 tonnes for 2014. **Figure 13-2** shows the sharp reduction in waste accepted at landfills from 2010 to 2013.

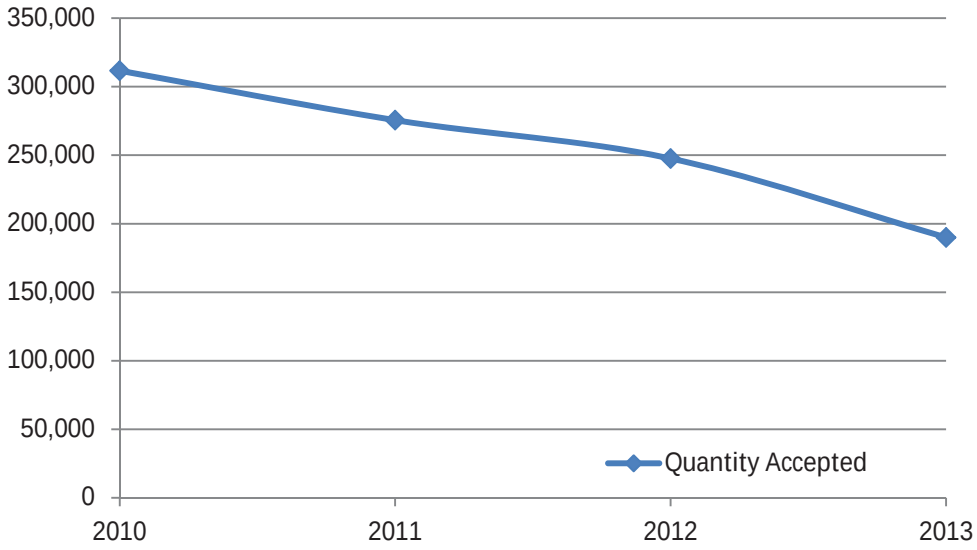


Figure 13-2 Quantities of Wastes (Tonnes) Accepted at Landfills in SR (2010–2013)

In 2010 10 landfills in the region were accepting municipal waste; this reduced to eight in 2011, six in 2012, and only four landfills were accepting MSW in 2013. By mid-2014 only one landfill was accepting MSW.

As shown in **Table 13-4**, the quantities of MSW accepted at landfill reduced by 4% in 2011 to 2010. In 2012 the MSW accepted at landfill had reduced by a further 9% compared to 2011; this is a smaller decrease when compared to the national figure of 28%[65] reduction in MSW for the same period. The quantity of MSW accepted at landfill per annum reduced from 260,929 tonnes in 2010 to 227,447 in 2012, and in 2013 it was estimated to be less than 200,000 tonnes.

[65] EPA National Waste Report 2012.

Table 13-4: MSW Quantities Accepted 2010–2013

Year	Quantity MSW Accepted at Landfills in the SR	Percentage Decrease Year-on-Year
2010	260,929	-
2011	250,321	4%
2012	227,447	9%
2013	196,024	14%

While the region is moving in the same general direction as the national figure, the MSW accepted at landfill decreased at a slower rate for the period up to 2013, but with a further reduction in landfill options in the region initial findings indicate that the MSW accepted at landfill has reduced further in 2014. The decreasing trend of MSW accepted at landfills is presented in **Figure 13-3**.

Figure 13-3 Quantities (Tonnes) of MSW accepted at Landfills (2010–2013)

MSW is the most significant element of the total waste accepted at the landfills in this region every year, and even since the introduction of the commercial food waste and household food waste regulations there has been no major shift in the proportions of MSW of total waste accepted at landfill. This is illustrated in **Figure 13-4**.

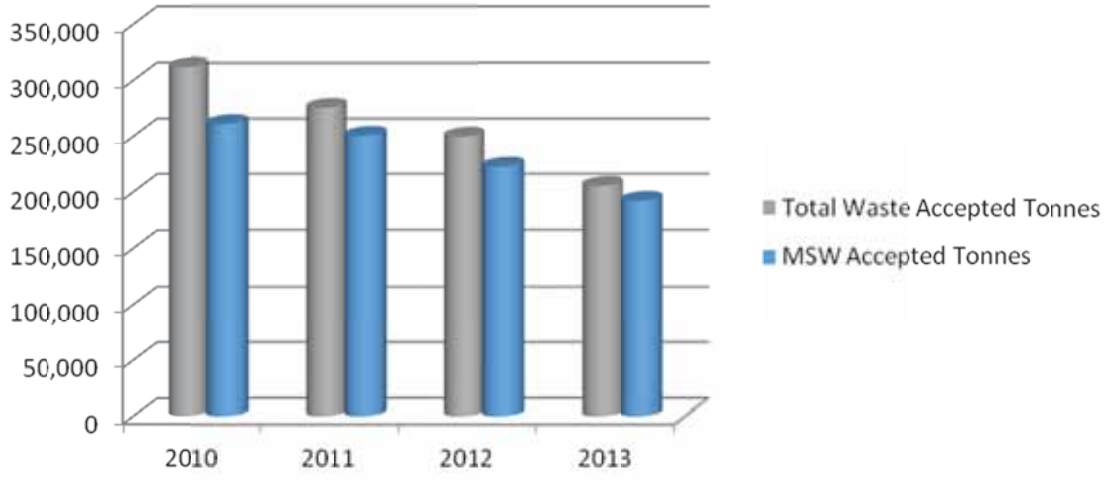


Figure 13-4 Total Waste Accepted vs Municipal Waste Accepted in SR

13.1.3 Biostabilised Solid Waste Accepted at Landfills

Biostabilised solid waste is generally an output from composting plants that process a type of waste from mechanical processing facilities that it is typically referred to as "organic fines". Mechanical processing plants accept and process mixed municipal residual waste. This material has a BMW content. The residual waste is put through a series of mechanical segregation processes (such as shredding and screening), which gives rise to several fractions, including the organic fines material. The composting plant then accepts and processes the organic fines to produce a compost-like output that has been stabilised.

This compost-like output does not meet quality compost standards, as it is generated from mixed residual waste, and consequently it is currently directed to landfill. The EPA has set stability standards for biostabilised waste that is being landfilled. A more restrictive standard will come into effect from 2016[66] onwards, as follows:

> **"Stabilisation" means the reduction of the decomposition properties of biowaste to such an extent that offensive odours are minimised and that the Respiration Activity after four days (AT4) is <10 mg O_2/g Dry Matter (DM) (until 1 January 2016), and <7 mg O_2/g DM thereafter.**

The estimated national figures for biostabilised residual waste reported as having been accepted at landfills between 2012 and 2014 are presented in **Table 13-5**.

Table 13-5: Quantity of Biostabilised Waste Accepted at Landfill in 2012 and 2013 (National)

Year	Quantity Accepted at Landfill (Tonnes)
2012	36,800
2013	58,257
2014	77,000 (estimate)

This table indicates that there has been a trend of increasing production of biostabilised residual waste in recent years. However, the region anticipates that increased segregation of household and commercial bio-waste will reduce the volumes of biostabilised residual waste requiring disposal in coming years.

Decreasing availability of landfill as an option for this stabilised waste requires the region to research alternative options for biostabilised residual waste.

13.2 LANDFILLS CLOSED PRIOR TO 2012

In 2008 and 2009 there were 11 operating licensed landfills in the SR accepting municipal waste, but by 2012 this had reduced to six. As stated previously, in 2014 there was only one operating landfill in the region accepting municipal waste. The cost of remediation of closed licensed landfills is a major cost for local authorities and the remediation programme timelines are in agreement with the EPA. In most cases these costs are covered in the aftercare costs but in some cases the aftercare

[66] Municipal Solid Waste – Pre-treatment & Residuals Management, An EPA Technical Guidance Document, 2009.

fund has not been sufficient to meet the total remediation costs. Landfills that closed from 2008 to 2012 are:

- Central Waste Management Facility (Clare County Council);
- Kinsale Road Landfill (Cork City Council);
- Derryconnell Landfill (Cork County Council);
- Ballaghveny Landfill (Tipperary County Council); and
- Dunmore Landfill (Kilkenny County Council).

13.3 LEGACY & HISTORIC LANDFILLS

Under the WMA, 1996 Section 22(7)(h) the waste management plan is required to include an inventory of sites identified as previous disposal/recovery sites. A risk assessment of these sites is required as well as identifying the remedial action to be taken. In 2005 a Ministerial Direction was issued by means of Section 60 policy guidance under the WMA (reference Circular WIR 94/05) requiring local authorities to meet the Section 22 requirements in the last round of waste management plans.

To assist local authorities with risk assessments of old sites the EPA issued a *Code of Practice for Environment Risk Assessment for Unregulated Waste Disposal sites* in April 2007. The code of practice was produced to ensure a consistent approach to environmental risk assessments by local authorities. The risk assessment methodology is a structured, transparent and practical process that allows for the prioritisation of the sites in high, moderate and low risk, known as Class A, B and C respectively. The EPA further developed an online tool to record the details of the risk assessments. The methodology has three phases:

- Tier 1: Qualitative risk assessment (risk screening and prioritisation);
- Tier 2: Site investigations and refining risk screening;
- Tier 3: Quantitative risk assessment (detailed site specific).

Following on from the European Court of Justice (ECJ) Case (494-01) the minister also issued the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008. This required all landfills closed in the period 1977–1997 to have at a minimum Tier 1 assessments completed by 31 December 2009 and that Tier 2 and 3 stages would follow on as soon as possible.

When the Tier 1, 2 and 3 assessments are completed the local authority applies for a Certificate of Authorisation from the EPA. The EPA has now developed an online application process for Certificates of Authorisation for all closed landfills.

Other closed landfills include landfills closed prior to 1977 and landfills where the operational dates are unknown.

All lists will include private sites as follows:

- **Type 1**: Known sites in private ownership operated illegally but never by a local authority, all costs for these sites to be borne by the owner (Reference Circular No. WPR 14/08 30 July 2008 (Section 4.3);
- **Type 2**: Sites previously owned by local authorities used as landfills and sold on after closing the landfill; and

  Type 3: Sites in private ownership operated by local authorities as landfills for a period but remaining in private ownership.

13.3.1 Legacy Landfills and Historic Landfills in the SWR

Historic landfills are the landfills that were in operation in the period 1977–1997; they were not in breach of national legislation at the time but are now required to be placed on an inventory and to have at least a Tier 1 risk assessment as they may be considered to pose a risk to the environment and human health. Legacy landfills are those that ceased operation prior to 1977 and where possible local authorities investigated some of these also. A summary of the total number of high-, medium- and low-risk sites is shown in **Table 13-6** as well as the total number of historic and legacy sites, including those privately owned. Difficulties arose in investigating private sites due to access issues, therefore they have not all been risk classified. A list detailing the sites per local authority area and their classification as high (A), medium (B) and low (C) risk sites is provided in **Appendix F**.

Table 13-6: Number of Historic/Legacy Landfills in the SR

Description	Total No. of Sites	High Risk	Medium Risk	Low Risk	Not Risk Assessed to Date
Illegal Sites (Historic & Legacy)[67]	8	1	2	2	3
Local Authority Sites (Historic & Legacy)[67]	130	30	47	50	3
Pre-1977 Sites (Legacy)	44	1	0	19	24
Private Sites (Historic & Legacy)[67]	35	2	0	8	25
All Sites (Historic & Legacy)	217	34	49	79	55

The DECLG has provided funding for the investigation of landfills in the region over the past few years, and many of these landfills have now completed Tier 2 and Tier 3 assessments.

Ten Certification of Authorisation applications were completed for sites in this region and to date (March 2015) only one Certificate of Authorisation has been granted. Many local authority budgets are under pressure and therefore LAs do not want to commit to the application fee for authorisations. Local authorities are also concerned about the possibility of time limits imposed by the EPA for completion of remediation.

[67] An accurate breakdown of the number of historic and legacy landfills in the illegal sites, local authority sites and private sites categories is not available.

In August 2012 the DECLG published a circular, WP 15/12, which set a road map of deliverables for bringing the historic landfills through to Certificate of Authorisation application stage, but as this was contingent on the availability of funding it left an enormous challenge to complete the roadmap by 2016. In order to prioritise the high-risk sites, the three waste management regions have now agreed a process for the investigation, authorisation and remediation of the remaining Class A (high-risk) facilities over the lifetime of these plans. The process will firstly rank the high-risk landfills according to risk screening process and these sites will be dealt with in the following order:

1. Sites with a gas source–pathway–receptor linkage containing hazardous waste;
2. Sites with a gas source–pathway–receptor linkage;
3. Sites with a ground water vulnerability source–pathway–receptor linkage; and
4. Sites with a surface water vulnerability source–pathway–receptor linkage

Following the ranking, a Class A (high risk) road map will be prepared both for the process of application for Certificate of Authorisations when investigations are complete and for the remediation of these high-risk sites over the lifetime of this plan.

Policy

The local authorities recognise the need to address legacy, historic and closed licensed landfills in the region over the plan period. The risk to environmental receptors, such as ground and surface water, from waste buried at these sites needs to be tackled and minimised. A clear process to remediate sites has been discussed with the DECLG. These communications have shaped the policy and implementable actions in the plan. The local authorities are committed to targeting and addressing the highest risk sites as soon as possible, subject to funding being made available by the DECLG.

Policy:

G2. Roll-out the plan for remediating historic closed landfills prioritising actions to those sites which are the highest risk to the environment and human health.

14 ENFORCEMENT AND REGULATION

Since the introduction of the WMA 1996 and subsequent regulations, the task of regulation and enforcement has become increasingly important in the region, particularly since the landmark ECJ judgment (Case C494/01) in April 2005 which ruled that Ireland had infringed the WFD by generally and persistently failing to fulfil its obligation to fulfil various articles under that Directive. This ruling has resulted in structural and administrative deficiencies as well as site-specific cases being addressed. In addition, other issues such as unregulated ELVs and other illegal sites or orphan sites, such as Irish Ispat Ltd, were subsumed under the case. A comprehensive response to the case is available on the DECLG website.[68]

14.1 ROLES AND RESPONSIBILITIES

The DECLG, EPA, NTFSO and the local authorities all have roles and responsibilities in relation to waste enforcement in Ireland.

14.1.1 Department of the Environment, Community and Local Government (DECLG)

Under the WMA 1996 the Minister for the Environment, Community and Local Government is responsible for developing and maintaining the policy and legislative framework for waste management in Ireland.

The Minister is precluded by law (Section 60(3), WMA) from exercising any power or control in relation to the performance by the EPA or a local authority of any functions conferred on them under the Act.

14.1.2 EPA

The EPA carries out its waste enforcement functions through the Office of Environmental Enforcement (OEE) and the Office of Climate, Licensing, Resources and Research (OCLRR).

The OEE, which was established in 2003 under the EPA, has a mandate to deliver enhanced environmental compliance through enforcement of EPA licences issued for waste, industrial and other activities. It exercises a supervisory role in respect of the environmental protection activities of local authorities. In this regard, the OEE acts as a resource to members of the public who have exhausted all other avenues of complaint.

The OEE's main functions in relation to waste enforcement are to:

- Improve overall compliance with environmental protection legislation;
- Raise awareness about the importance of enforcement of environmental protection legislation;

[68] http://www.environ.ie/en/Publications/Environment/Waste/FileDownLoad,30458,en.pdf

- Enforce waste licences, Integrated Pollution Control (IPC) licences and Industrial Emission Directive (IED)[69] Licences;
- Enforce certificate of registrations issued to local authorities;
- Audit and report on the performance of local authorities in their environmental protection functions, including enforcement in respect of breaches of waste permits, taking action on illegal dumping, implementation of waste collection permits, and enforcing producer responsibility initiatives in areas such as packaging waste;
- Take action against local authorities that are not discharging their environmental protection functions properly;
- Prosecute, or assist local authorities to prosecute, significant breaches of environmental protection legislation, in a timely manner; and
- Assist local authorities to improve their environmental protection performance on a case by case basis, through establishing an enforcement network to promote information exchange and best practice, and by providing guidance.

In terms of its supervisory role in relation to local authority enforcement performance, the OEE may:

- Request information from local authorities on the discharge of their statutory environmental protection functions;
- Carry out broad assessments of their environmental performance, such as environmental audits;
- Provide advice, recommendations, assistance or support; and
- Where appropriate, issue a direction to a local authority to take specific action within a specified timescale where the OEE is of the view that there is a real and imminent risk of significant environmental pollution due to a local authority's failure to carry out its statutory environmental protection functions or to follow advice or recommendations made by the OEE.

Complex legislation and many different enforcement authorities, often with overlapping jurisdictions, necessitate the requirement for a high degree of coordination. As a result the OEE set up and now coordinates the Network for Ireland's Environmental Compliance and Enforcement (NIECE) network. NIECE brings key enforcement bodies together within a framework of coordination and cooperation in their enforcement efforts, thereby ensuring efficiencies and consistency among environmental regulators. The enforcement network has now over 1,000 public sector staff registered from about 50 agencies within Ireland.

Further enforcement responsibility is assigned to the OCLRR including:

- Producer responsibility enforcement related to WEEE and batteries; and
- Maintenance of the National PCB (polychlorinated biphenyl) Inventory;

[69] Activities which require an IPPC Licence or Waste Licence and are listed in Annex I of the Industrial Emissions Directive are now required to hold an Industrial Emissions Licence. Existing IPPC Licences and Waste Licences which relate to activities listed in Annex I have been amended by the Agency (December 2013–January 2014) to bring them into compliance with the Industrial Emissions Directive. The amendment of these licences converted them into Industrial Emissions Licences.

Details of the enforcement actions undertaken by the OEE are detailed in reports published by the EPA. The most recent report[70] provides details of Ireland's enforcement of environmental law in the period 2009 to 2012 by the EPA and local authorities.

14.1.3 National Transfrontier Shipment Office (NTFSO)

In 2007 Dublin City Council was designated as the national competent authority for the export, import and transit of waste shipments under the Waste Management (Shipments of Waste) Regulations 2007 (S.I. No. 419 of 2007). Dublin City Council subsequently established the NTFSO to implement and enforce these Regulations. The regulations empower the NTFSO to supervise and monitor the shipment of waste and to prevent illegal shipments for the protection of the environment and human health. The NTFSO works closely with the enforcement staff of the local authorities, particularly when dealing with local issues.

In July 2011 the DECLG introduced the European Communities (Shipments of Hazardous Waste Exclusively within Ireland) Regulations 2011 (S.I. No. 324 of 2011), which made the NTFSO the sole authority for the administration of hazardous waste movements within Ireland.

14.1.4 Local Authorities

Each of the local authorities within the SR has a dedicated waste enforcement team which is partly grant funded, since 2004, by the DECLG under the Local Authority Enforcement Measures scheme using monies from the Environment Fund. Revenues from the levies on plastic shopping bags and the landfill of waste are paid into the Environment Fund; however, revenues into the fund have decreased in recent years due to the drop in the quantity of waste landfilled in the country. Nevertheless the DECLG is committed to continuing this scheme of grants until at least mid-2015.

Following the establishment of the SR, in 2013, a task group for waste enforcement and regulation was set up by the Southern Regional Waste Management Office (SRWMO). Each local authority within the region has a representative on the task group which meets a minimum three times per year. The group meets to discuss and address issues of common concern in relation to waste enforcement and regulation and also to ensure consistent enforcement and regulation across the region.

The primary objective of local authorities in terms of waste enforcement is to achieve regulatory compliance in relation to waste activities in the local authority's functional area. This covers a wide range of roles, but can be grouped into the following categories.

Regulatory enforcement:

- Undertaking inspections and taking appropriate measures to bring the relevant parties into compliance. This includes enforcement of regulations in relation to waste facilities, waste collection, ELVs, WEEE, food waste, packaging, plastic bags, batteries and accumulators, farm plastics, tyres and waste tyres and prohibition of waste disposal by burning.

[70] *Focus on Environmental Enforcement in Ireland 2009–2012* (EPA, 2014).

It should be noted that the forthcoming household waste legislation will allow enforcement staff to issue fixed penalty notices (FPNs) to waste collectors for breaches of their permit, i.e. collecting waste types not listed, using facilities not listed, failure to maintain appropriate insurance or failure to submit an AER. It is intended that an automatic review of their permit shall be initiated where more than three FPNs have been issued over a five-year period. From July 2016, it is intended to have FPNs for households which cannot demonstrate proper management of their waste.

Addressing unauthorised waste activities:

- Enforce provisions of the WMA 1996 in relation to unauthorised waste activities. This encompasses a broad range of possible infringements of legislation, from individual householders or businesses not handling waste correctly to the large-scale illegal deposition of waste. Sections 32, 34 and 55 of the WMA 1996 may be utilised to address these issues. However, as provided for in the Section 60 Policy adopted by each local authority in 2009, the higher courts may also be accessed for this purpose.

Fly-tipping:

- There is considerable overlap between enforcement of the Litter Act and of the WMA. For example, litter patrols are often the first to come upon other unauthorised waste activity.

Complaints:

- Responding to complaints is a significant part of local authority waste enforcement activity.

It is a matter for each individual local authority to deal with any instances of illegal disposal of waste in its functional area and take the appropriate enforcement action. Local authorities have significant powers under the WMA to enable them to tackle illegal waste activity, including, power to:

- Investigate complaints;
- Issue on-the-spot fines;
- Prosecute offences;
- Apply to the courts for the imposition of fines;
- Enter onto and inspect premises at any time where there are reasonable grounds for believing that there is a risk of environmental pollution;
- Direct a holder of waste to dispose of it in a certain way and in a specific timeframe;
- Request the assistance of An Garda Síochána in exercise of these powers; and
- Monitor and inspect waste holding, recovery and disposal facilities.

Notwithstanding these very significant powers and responsibilities, in recent years there has been considerable centralisation of waste management functions previously discharged by the local authorities, which are detailed in **Section 14.4** below.

14.2 ENFORCEMENT IN SR

Waste enforcement in the SR is primarily carried out by the EPA and the local authorities.

14.2.1 Local Authorities

Since 2007 all local authorities have been preparing RMCEI plans in accordance with the 2001 European Parliament and the Council adopted *Recommendation providing for Minimum Criteria for Environmental Inspections plan* (RMCEI). The purpose of RMCEI is to strengthen compliance with, and to contribute to, a more consistent implementation and enforcement of environmental legislation in all EU Member States. The RMCEI establishes criteria for environmental inspections of installations, other enterprises and facilities whose air emissions, water discharges or waste disposal or recovery activities are subject to authorisation, permit or licensing requirements.

Planning of inspection activities is a key requirement of the RMCEI, with a risk-based approach taken to inspection scheduling. Planning is about defining and explaining as accurately as possible beforehand the work that is going to be undertaken so that it can be performed in an effective, efficient, transparent and accountable way.

The key requirements of the plan are:

- Prepare a plan for environmental inspections;
- Undertake inspections of relevant regulated facilities; and
- Produce written reports of site inspections.

Copies of the annual RMCEI plans along with annual reports for the preceding year are prepared by the local authorities and submitted to the EPA on an annual basis for assessment. The EPA routinely audits the local authorities in relation to the implementation of these plans.

The EPA, in cooperation with the DECLG, also provides annual guidance to local authorities in relation to the national waste priorities for the following year. The local authorities take these into consideration when preparing their RMCEI plans.

In 2008 local authorities were directed to prepare an enforcement policy in respect of unauthorised waste activities to encourage and promote systematic and consistent enforcement actions against illegal waste operators across Ireland. The EPA published the *Code of Practice for the Development of an Enforcement Policy for Unauthorised Waste Activities* (EPA, 2009) for use by local authorities. All local authorities have now developed documented enforcement policies that set out how instances of illegal waste activities in their functional area will be handled.

Local authorities undertake different types of inspections as follows:

- Routine waste inspections carried out to assess compliance with specific waste legalisation, i.e. waste permitted facilities, waste collectors, food waste, tyres, hazardous waste and illegal burning. Local authorities within the SR enforce over 280 waste facility permits, 105 certificate of registration sites and over 1,300 waste collection permits. These inspections are normally planned in accordance with the RMCEI plan.
- Routine producer responsibility inspections (PRIs) to assess compliance with PRI regulations, i.e. packaging, WEEE, batteries and ELV.
- Non-routine waste inspections carried out in response to non-litter waste complaints and unauthorised activities (i.e. ELV sites, abandoned cars and follow-up on CCTV surveys). They also include inspections in relation to WFP and WCP applications and extractive industries.

Figure 14-1 shows the number of the various waste inspections (excluding routine litter patrols/investigations) undertaken by local authorities in the SR between 2010 and 2012.

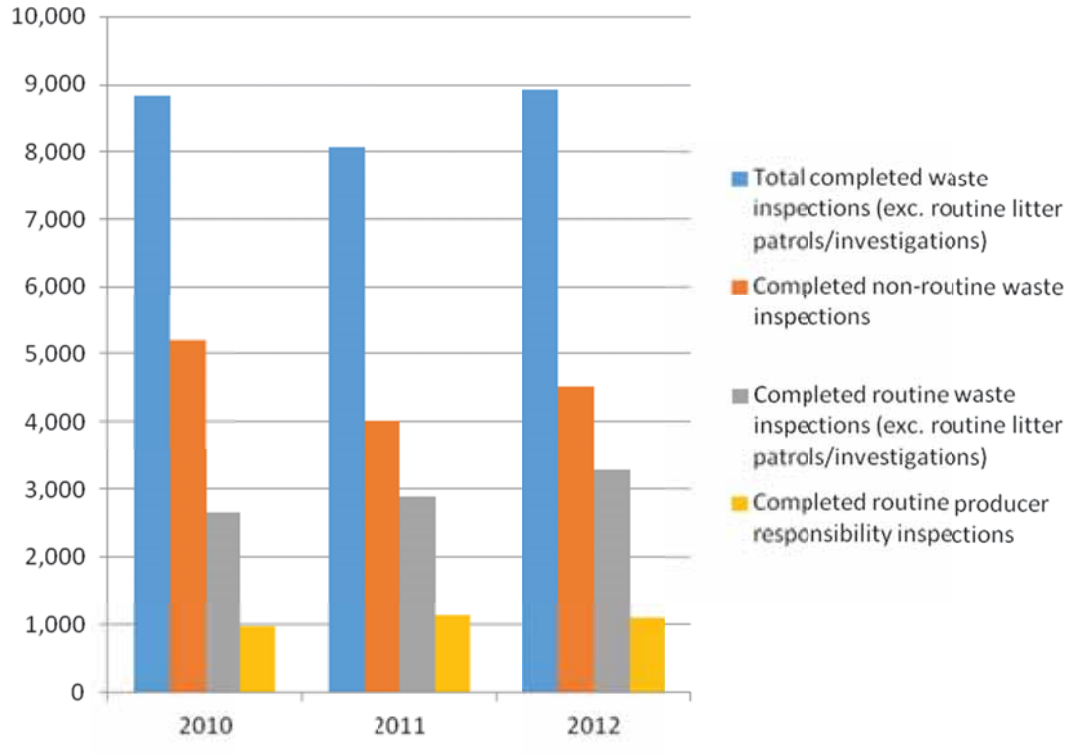


Figure 14-1 Waste Inspections Undertaken in the SR 2010–2012[71]

As evident from **Figure 14.1**, almost 8,800 waste inspections (excluding routine litter patrols/investigations) were completed in the SR in 2012.

Non-routine waste inspections account for approximately 50% of all waste inspections carried out year on year in the SR. The investigations that may follow represent a significant function of the local authority environmental enforcement teams and have to be given due consideration in planning the annual work programmes. Investigations arising out of the non-routine waste inspections may lead to the taking of an enforcement action, resolution of the issue, or no further action. Due to the annual variations in the nature and number of the inspections, with unpredictable resourcing requirements, it is very difficult for local authorities to fully factor non-routine waste inspections into their workload.

Figure 14-2 details the total number of various completed routine waste inspections within the SR for the years 2010–2012.

[71] Local Authority RMCEI Annual Return 2010–2012.

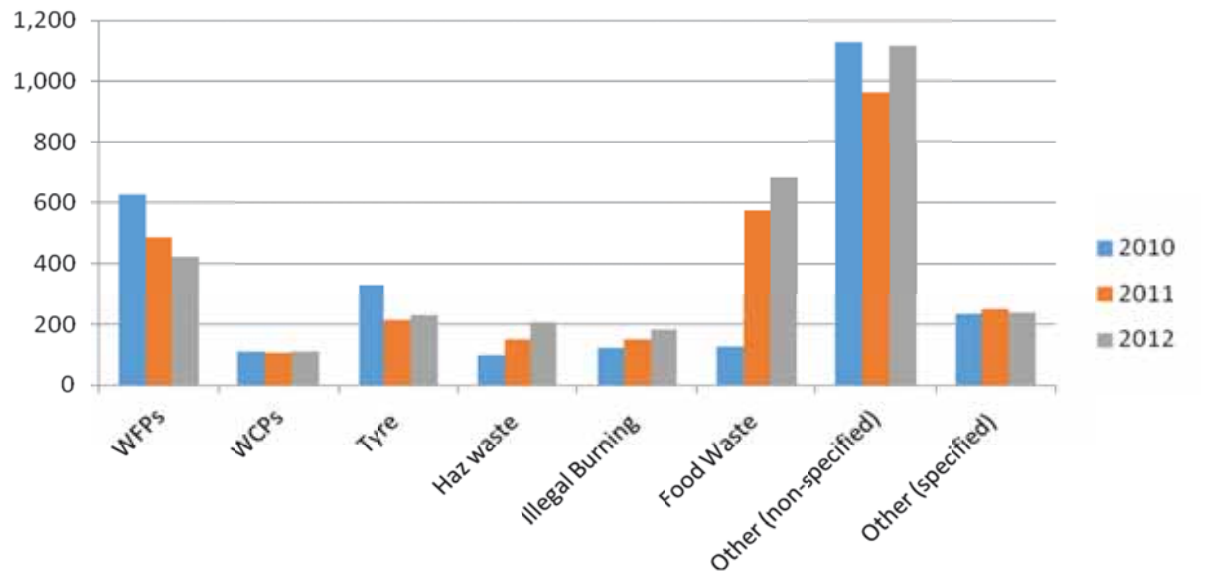


Figure 14-2 Completed Routine Waste Inspections Undertaken in the SR 2010–2012[71]

Most of the routine waste inspections are classified as "other (non-specified)" and include the following types of inspections:

- Waste bye-laws;
- Roll-out of segregated bins;
- Waste surveys;
- Court case inspections;
- Illegal dumping/Litter patrols;
- Historic landfills; and
- Unauthorised sites.

The number of inspections of food waste producing premises increased significantly year on year since the introduction of the commercial food waste regulations in July 2010. A number of enforcement teams within the SR have targeted specific urban areas, visiting all relevant waste food producing premises with subsequent follow-up as required. In a number of cases all relevant premises were written to prior to inspection informing them of the regulations and the forthcoming inspections. This approach appeared to result in a higher compliance rate at initial inspection and reduced the number of reinspections. A number of other enforcement teams within the SR have targeted specific sectors, i.e. hotel and restaurant sectors within their local authority area.

The number of WFPs and tyre inspections peaked in 2010 while the number of other inspections such as WCPs, hazardous waste and illegal burning remained largely unchanged year on year. The inspections classified as "other (specified)" include vehicle checkpoints, CoRs, ECJ inspections[72] and C&D handling inspections and the total number of these inspections remained largely unchanged during the period 2010 to 2012.

Details of the number of completed producer responsibility inspections within the SR for the years 2010–2012 are shown in **Figure 14-3**.

[72] European Court of Justice (ECJ) primarily related to unauthorised ELV site inspections and specific closed landfills.

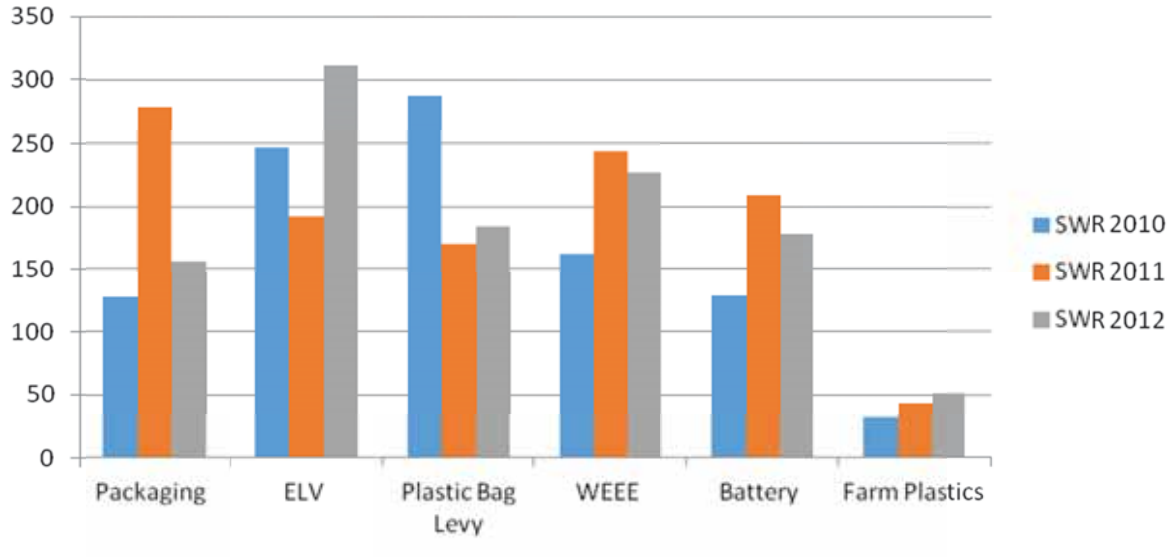


Figure 14-3 Producer Responsibility Waste Inspections Undertaken in the SR 2010–2012[71]

The total number of completed producer responsibility inspections increased in 2011 and 2012 compared to 2010 due to increased packaging inspections. Ensuring all potential major packaging producers become compliant with the regulations is an ongoing issue, especially since the threshold for "major producer" status reduced from 25 tonnes to 10 tonnes in the 2007 packaging regulations. The EPA *Focus on Environmental Enforcement in Ireland 2009–2012* (EPA, 2014) stated that it had identified over 5,000 businesses as potential major producers.

The peak in packaging inspections in 2011 was due to the following factors:

- Kerry County Council's targeted focus on suspected major producers and specific inspections in relation to the general storage and presentation of packaging waste;
- Clare County Council's targeted focus on combined food and packaging inspections.

Local authorities within this region have allocated a significant amount of resources in recent years to regulating ELV sites to ensure compliance with the ELV regulations and the ECJ case ruling (ECJ C494/01). A number of multi-agency actions took place during the period, often overcoming difficult operational obstacles. Almost all of the identified unauthorised ELV sites within the region, from November 2010, have now either been closed or regularised. Unauthorised ELV sites identified since November 2010 are addressed as they arise, with the number of ELV inspections varying year on year due to the nature of the inspection regime required.

The number of plastic bag levy inspections peaked in 2010 compared to the following two years. The reduction in the number of plastic bag levy inspections undertaken in 2011 and 2012 was due to a high compliance rate and awareness among the retailer sector evident during inspections carried out pre-2011.

The WEEE and battery inspections combined accounted for 34% of all producer responsibility inspections in the SR in 2012 and this percentage had remained largely unchanged from the preceding years. Inspections to assess compliance with the Farm Plastic Regulations 2001, which are designed to promote the collection and recovery of silage plastic waste from farmers, account for approximately 4% of annual producer responsibility inspections in the SR.

14.2.1.1 Enforcement

Enforcement includes both the issuing of notices (legal and non-legal) and prosecution actions, in accordance with the WMA 1996. Enforcement notices issued by the local authorities include:

- Non-legal notice, i.e. warning letter;
- Legal notice issued under the WMA 1996, which includes:
  - Section 18 notice (request for specific information);
  - Section 55 notice (requirement to undertake specific measures);
  - Section 71 notice (abandoned vehicles); and
- Other – which includes notices served under various regulations issued under the WMA 1996 and EC Act 1972, i.e. packaging and landfill levy regulations.

Figure 14-4 provides details of the number of waste enforcement notices, both legal and non-legal, initiated by local authorities in the SR between 2010 and 2012.

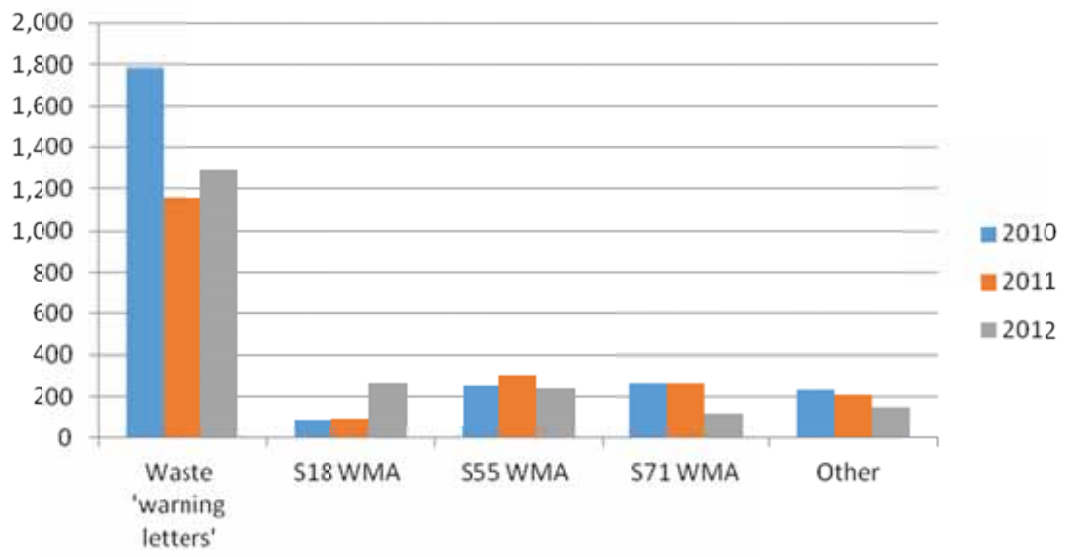


Figure 14-4 Waste Enforcement Non-Legal and Legal Notices Initiated 2010–2012[71]

In 2012 over 60% of all notices initiated in the SR were non-legal notices, i.e. warning letters, with a similar percentage closed off, indicating that warning letters are an effective enforcement tool in addressing waste issues arising.

The percentage of Section 18 notices (request for specific information) issued increased significantly in 2012 compared to the previous years due to Limerick City Council issuing a significant number of notices to householders requiring details on how their household waste was managed. The percentage of Section 55 notices (requirement to undertake specific measures) issued varies slightly each year depending on issues encountered. The percentage of Section 71 notices (abandoned vehicles) peaked in 2010/2011, corresponding to increased enforcement activity against illegally operating ELV sites.

The category classified as "other" mainly consisted of Section 14 notices (powers of authorised person) issued by local authorities; it also included notices issued under the packaging and landfill levy regulations. The number classified as "other" decreased slightly in 2012 compared to the preceding years.

Local authorities within the region initiate legal prosecution action in cases where there has been unauthorised management or treatment of waste or where notices issued are not complied with. However, it should be noted that bringing legal proceedings to a final stage can be quite a cumbersome and slow process.

The legal prosecution actions taken within the SR mainly include actions under:

- WMA 1996 in particular:
  - Section 18 – failure to comply with a notice for specific information;
  - Section 32 – unauthorised management or treatment of waste;
  - Section 34 – unauthorised collection of waste;
  - Section 39 – failure to hold and/or comply with a waste licence/permit;
  - Section 55 – failure to comply with a notice to undertake specific measures;
- Other (non-specified) – generally consists of legal prosecution actions taken under the Litter Pollution Act, Section 14 of the WMA 1996 and breaches of various regulations issued under the WMA 1996 and EC Act 1972, i.e. packaging and tyre regulations.

Figure 14-5 provides details of the number of waste prosecutions initiated by local authorities in the SR between 2010 and 2012.

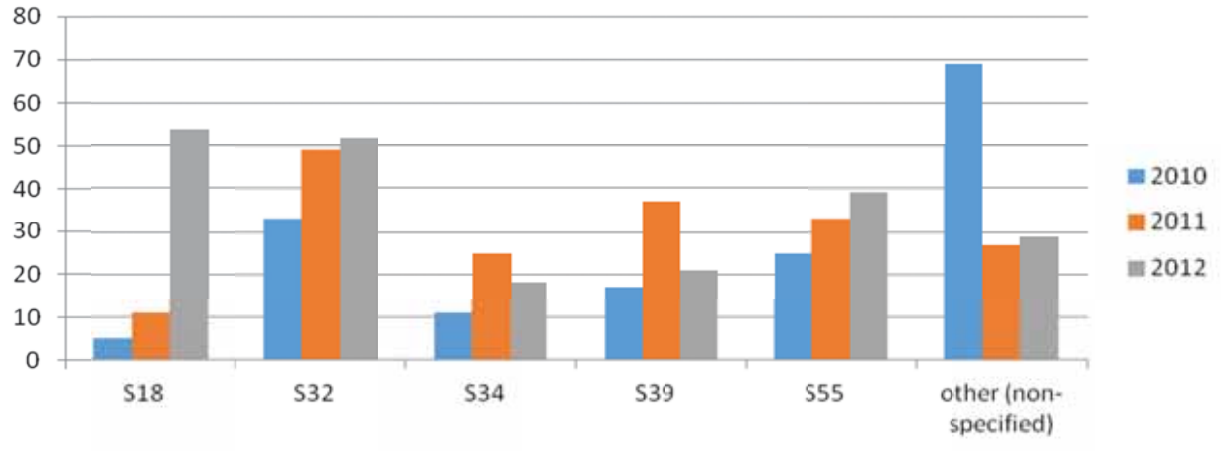


Figure 14-5 Number of Waste Prosecutions Initiated in the SR 2010–2012[71]

Between 2010 and 2012 the total number of waste prosecution actions initiated by local authorities within the SR increased year on year from 163 in 2010 to 182 in 2011 and to 213 in 2012. The increase in 2012 was in part due to Limerick City initiating a number of prosecutions under Section 18 of the WMA 1996 corresponding to the increase in the number of Section 18 notices issued in 2012.

The largest number of prosecution actions initiated during the period related to the illegal management or treatment of waste in a manner which causes or is likely to cause environmental pollution (Section 32 of the WMA 1996), followed by breaches of Section 55 of the Act. The number of prosecution actions initiated under Section 39 of the Act peaked in 2011 while the percentage of actions under the category "other" (non-specified) peaked in 2010.

Policy

The local authorities recognise that they have an enhanced waste enforcement role which will require them to build on the platform of knowledge, activities and systems currently in place. Over the plan period the local authorities will continue to plan and prioritise enforcement activities in the region. The intention is to improve the coordination of enforcement through a sharing of experiences and to collaborate on the ground to deliver a more effective and consistent approach. Increased monitoring activities and enhanced waste enforcement will have a positive impact on the environment through increased awareness and compliance.

Policy:

F2. Enforce all waste regulations through increased monitoring activities, and enforcement actions for non-compliance with authorisations and regulatory obligations.

In relation to unauthorised waste activities the local authorities need to put in place consistent systems which are effective and accessible. The development of a consistent approach to the recording, management and issuing of corrective actions, as appropriate, to tackle unauthorised waste activities will be implemented over the plan period. Specific programmes will be put in place in the region to tackle specific criminal activities involving wastes. Implementation of policy and measures to combat unauthorised waste activities in the region will ultimately have a long-term benefit to the environment and society.

Policy:

F3. Take measures to prevent and cease unauthorised waste activities by way of investigation, notifications, remediation requests or legal action as appropriate.

14.2.2 Multi-Agency Cooperation

Ongoing enforcement efforts in relation to monitoring of the unauthorised movement of waste across counties have included regional organisation of enforcement activities. For example, during 2011 nine local authorities,[73] all now within the SR, organised a concerted regional action programme to tackle unauthorised waste movement. Other parties included: An Garda Síochána, Revenue/Customs, Special Investigation Unit of the Department of Social Protection, Eircom and ESB. Multi-agency checkpoints were organised across all the aforementioned local authority areas. Information arising from these enforcement activities was investigated and further joint operations subsequently planned.

In addition to the above, Cork County Council undertook and coordinated multi-agency operations in 2011 where four unauthorised ELV sites were targeted. Three truckloads of waste comprising ELVs and associated parts and other waste were removed off-site.

[73] Cork County, Cork City, Limerick City, Limerick County, North Tipperary, South Tipperary, Waterford City, Waterford County and Wexford County Council.

Similarly in Limerick a multi-agency operation was undertaken and coordinated jointly by Limerick County and City Council in 2011 with a specific unauthorised ELV site targeted. Nearly 30 vehicles and 90 tonnes of scrap metal, engines and other vehicle components were removed. Also a large number of people were interviewed by the Special Investigation Unit of the Dept of Social Protection in relation to social welfare issues.

14.3 RECENT CHANGES AND FUTURE CHALLENGES

In July 2007 local authorities' role in relation to the transfrontier shipment of waste was consolidated into the NTFSO Office (Dublin City Council), which now has a dedicated enforcement team in place to tackle the illegal shipment of waste abroad.

In July 2011 local authorities' role in relation to the authorisation of hazardous waste movements within Ireland was also consolidated into the NTFSO Office.

In July 2012 the DECLG published the policy document *A Resource Opportunity*, which specified the measures through which Ireland would make the further progress necessary to become a recycling society. Many of the areas covered in the policy had/have implications for waste enforcement work undertaken by local authorities and the EPA.

Measures implemented to date include:

- Reduction of the waste planning regions from 10 to three in 2013;
- Establishment of the NWCPO in Offaly County Council in 2012. This office has significantly streamlined the collection permitting system from 10 issuing authorities into a single entity.
- Introduction of the EU (Household Food Waste and Bio-waste) Regulations 2013;
- In July 2012 the DECLG commenced a wide-ranging review of the existing PRI agreements. In 2013 four reports were published for public consultation and these included corporate governance, packaging levy, ELVs and tyres. On 4 July 2014 the final report *Review of the Producer Responsibility Initiative Model in Ireland* (DECLG 2014) was published, with a further period of public consultation until mid-September 2014; and
- Publication of the EPA report *Guidance on assessing and costing environmental liabilities* (Draft July 2013).

Measures due will include implementation of the forthcoming household waste collection regulations. These regulations follow on from the DECLG consultation paper *Regulation of Household Waste Collection* in November 2013 and changes will include a requirement in law that householders avail of a waste collection service or demonstrate how their waste is being managed, the mandatory implementation of the pay-by-weight system of charging and the introduction of customer charters. New local authority enforcement structures are also due to be implemented in 2015, following a recent review of waste enforcement governance in Ireland which involved the DECLG, EPA, local authorities and An Garda Síochána. This should lead to a smarter waste enforcement system that is better equipped to tackle serious environmental crime.

The implementation of the above measures will have a significant impact on how enforcement is carried out in Ireland, over the lifetime of this plan. Unless alternative arrangements are agreed with the DECLG and the CCMA following the outcome of the review of waste enforcement governance in Ireland, the SRWMO will continue to host the enforcement task group in an effort to achieve consistent enforcement in the SR.