

PART 2 EXISTING SITUATION

7 REGIONAL WASTE DATA

7.1 INTRODUCTION

Since 2005 the reporting and recording mechanisms for waste data have improved significantly for most waste streams, in part due to the introduction of a new system, hosted by the NWCPO, which allows waste collectors to submit their annual data return online. Improved surveying and data modelling by the EPA and increased validation of all data by the EPA and local authorities have also contributed to the improvements in data quality.

There is however a need for all stakeholders to improve data management and reporting on an ongoing basis and to ensure that returns are made in an accurate and timely manner.

A national register of waste facilities that facilitates the collation of annual returns from waste facilities needs to be developed during 2015 and supported by all stakeholders.

7.2 REGIONAL WASTE QUANTITIES

The waste management plan for the Connacht Ulster Waste Region is an amalgamation of three previous waste and management regions, namely Connacht, Donegal and the North-East Region. The alteration and consolidation of the waste regions means that the waste data presented in this plan cannot be readily compared to the data in the three previous plans.

The waste quantities presented in the plan are for the years 2010, 2011 and 2012 where available and the key sources of data include the following:

- EPA National Waste Report 2010, 2011 and 2012;
- NWCPO Annual Returns data for waste collection permits data sets 2010, 2011; and
- WEEE Ireland & ERP Compliance Schemes.

It should be noted that some differences exist between the EPA the published NWR data and the data published in this plan and this is due to amendments to the EPA data following publication of the NWR.

Table 7-1 lists the key waste categories in accordance with the requirements set out in the Waste Management (Planning) Regulations 1997.

The total waste arising for 2010 was 1.123 Mt with 0.969 Mt in 2011 and 1.192 Mt in 2012. The reduction in 2011 is attributable to a drop in construction and demolition waste arising in the region.

The figures presented do not include non-natural agricultural wastes, animal by-products and other agricultural wastes. Agricultural wastes (dry solids) are exempt from the requirements of the waste management collection permit system; an estimated 1 million tonnes of this stream was managed in the region in 2012. For full details on the quantities of agricultural wastes refer to **Section 7.1.12**.

The figures include all private sector and any public sector quantities of waste collected in the region including kerbside schemes, from bring banks, civic amenity sites and waste collected under the Producer Responsibility Schemes (PRIs) for WEEE and batteries.

Table 7-1: Wastes Collected in the Connacht Ulster Region

Waste Type	Tonnes per Annum		
	2010	2011	2012
Kerbside Household Waste Managed ¹	173,882	177,323	169,097
Household Waste delivered to CA sites/BB (excluding WEEE & Batteries) ¹	36,255	36,325	30,090
HH Waste delivered to other Bring Facilities (PTUs) and direct to landfill ¹	716	491	136
Bulky Household Waste ^{1[2]}	5,094	8,740	5,424
Estimate of Unmanaged Waste ¹	117,788	113,840	67,847
Litter & Street Sweepings ¹	9,742	6,774	7,615
Commercial – Non-Household Municipal Waste ¹	-	-	156,161
Priority Wastes (Collected)			
Construction & Demolition Waste ²	383,418	205,773	319,095
WEEE – Household ^[3]	5,691	5,059	5,076
WEEE – Non Household ^[4]	1,316	828	3,602
Batteries portable ³	31.238	64.521	56.766
Batteries non-portable ⁴	3,348.76	1,924.47	2,423.23
ELVs (16 01 04 only)	17,563	11,597	10,343
Tyres ²	2,091	2,627	3,593
Healthcare ²	7,868	5,494	3,362
Oils ²	5,576	15,804	11,427
PCBs ²	88	20	37
Other Wastes (Collected)			
Contaminated Soil ²	8	4,803	2,394
Mining & Quarry Waste ²	1,053	137	84
Agricultural Wastes (Refer also to Tables 7-2 and 7-3)	35,420	67,674	36,675
Industrial Waste not otherwise specified – Non-Hazardous ²	35,386	40,522	46,227
Industrial Waste not otherwise specified – Hazardous ²	1,994	2,599	4,703
Industrial Sludges ²	384	1354	454
Ash & Incinerator Residues ²	1,055	297	627
Landfill Leachate ²	152,704	111,611	177,827
Sewage Sludges ²	102,056	122,139	99,794
Water Treatment Sludges ²	22,621	25,725	28,350
Total	1,123,149	969,545	1,192,522

[1] EPA NWR/LA Returns [2] National Waste Collection Permit Office [3] PR Compliance Schemes (WEEE Ireland, ERP) [4] NWCP & PR Compliance Schemes (WEEE Ireland, ERP).

7.2.1 Household Waste

It is estimated that over 170,000 tonnes of household waste is collected annually in the region through kerbside collection systems. Kerbside waste is generally segregated at source and collected by private waste collectors. All local authorities in the region have discontinued the direct collection of household waste, with Galway City Council being the last to do so at the end of 2013.

The waste collected through the kerbside collection system represents 83% of total household waste managed (HWM) in the region in 2012. The comparable national figure for 2012 was 79%.

The quantity of waste collected through the network of bring banks and civic amenity sites in the region represents 14% of the HWM in 2012. The amount of waste managed through this network has fluctuated significantly over the 2010 to 2012 period; however, it is still a significant portion of household waste and support for this infrastructure, almost exclusively provided by local authorities, needs to continue.

Waste collected through pay to use facilities (PTUs) was recorded in one local authority in the region. The future use of PTUs as part of the waste collection system will be a requirement of the new household waste regulations and the waste collection permit regulations.

Unmanaged waste is an estimate of waste created by households not availing of a collection service while it does take account of households who deliver their waste directly to landfills and other bring facilities. The estimate of unmanaged waste has decreased from 59% of the total household waste figure in 2010 to 33% of the total household waste in 2012, representing an increase in the amount of waste managed of over 24,000 tonnes.

The percentage of households in the region in 2012 not availing of a kerbside collection service is estimated to be 42%, which is above the national average of 28%. It is worth noting that some of the less densely populated counties in the region have greater than 62% of households that are not availing of a kerbside collection service (EPA and CSO data 2012). This is a key challenge for the region as the achievement of targets is dependent on the collection of as much waste as possible.

7.2.2 Commercial Waste

The commercial waste collected in the region in 2012 reached almost 160,000 tonnes. Accurate figures for the years 2010 and 2011 were unavailable. The greater part of commercial waste is segregated at source and collected by private waste collectors at the commercial premises where it arises. It is acknowledged that other wastes are also generated at commercial premises and may be recorded under other headings and not separately identified as commercial.

7.2.3 Construction and Demolition Waste (C&D Waste)

The C&D waste collected for the region showed a decrease between 2010 and 2011 and showed an increase from 2011 to 2012. National figures show a major decline over a longer period, with the quantity of C&D waste collected falling from a high of almost 18 million tonnes in 2007 to 3 million tonnes by 2011. The C&D waste figure includes waste collected and deposited at permitted infill sites in the region. As the construction sector begins to recover in the region it is imperative that construction and demolition plans for developments in excess of the specified thresholds are put in

place and enforced. The appropriate processing facilities need to be in place to facilitate increased reuse, recycling and recovery of this waste stream.

7.2.4 Waste Electrical & Electronic Equipment (WEEE)

Since the previous generation of waste management plans the collection and handling of WEEE waste has developed considerably and two compliance schemes, WEEE Ireland and ERP, have been introduced. All local authorities have set up WEEE collection points at civic amenity sites in the region and WEEE is also collected from retailers and at special collection events. The total WEEE collected in the region increased from 5,887 tonnes in 2011 to 8,678 tonnes in 2012. This data does not include an estimate of WEEE segregated from skips and similar sources, therefore the data cannot be compared to the National Waste Reports (Environmental Protection Agency, 2010–2012).

7.2.5 Batteries

The compliance schemes for WEEE also collect and manage certain portable waste batteries. It is estimated that approximately 50 tonnes of portable batteries were collected each year for the past three years. The other main type of batteries is lead acid batteries and collections are estimated at approximately 2,500 tonnes per year. Nationally there is 140 tonnes of portable lead acid batteries collected by the compliance schemes which cannot be broken down per region and hence is not included in the portable battery tonnage for the CUR.

7.2.6 End-of-Life Vehicles (ELVs)

ELVs in the region are mainly managed at Authorised Treatment Facilities (ATFs) which were developed during the last plan period and it is estimated that approximately 10,000 tonnes of ELVs were handled in the region in 2012, which was a decrease when compared to 2010 and 2011 and in line with the national trend.

7.2.7 Healthcare Wastes

Healthcare wastes are generated from hospitals, clinics, pharmacies and medical practices. Healthcare waste is collected by the private sector and delivered to a number of specialist facilities. It reduced from a high of nearly 8,000 tonnes in 2010 to 3,362 tonnes in 2012.

7.2.8 Oils

Oil wastes include both mineral based and non-mineral based oils. There was an increase in the waste oils collected from 5,576 tonnes in 2010 to 11,427 tonnes in 2012.

7.2.9 Polychlorinated Biphenyls (PCBs)

Capacitors and transformers containing polychlorinated biphenyls account for most of the PCB waste stream in Ireland. Use of electrical equipment containing PCBs was banned in 1986 and therefore the tonnage collected largely represents old PCB waste coming to its end of life. The figures presented in **Table 7-1** vary depending on the quantity of this historic waste discarded per annum.

7.2.10 Contaminated Soils

Contaminated soil is generally generated from construction projects and the quantity collected has fluctuated. There was a large increase from a low of eight tonnes in 2010 to 2,394 tonnes in 2012.

7.2.11 Mining & Quarry Wastes

Mining and quarry wastes collected decreased since 2010 under the waste collection permit reporting systems. There are no active mines in the region and only 84 tonnes was reported as collected in 2012.

7.2.12 Agricultural Wastes

The agricultural wastes shown in **Table 7-2** are presented as two categories: non-natural agricultural waste and natural agricultural wastes. The figures for non-natural agricultural wastes collected fluctuated by approximately 30,000 tonnes during the three-year period, with 36,675 tonnes reported in 2012, the greater part of which was generated within the intensive agricultural cluster in County Monaghan. Non-natural agricultural waste includes but is not limited to discarded packaging, waste rubber, plastic film and scrap metal/machinery.

Table 7-2: Agricultural Wastes in the Connacht Ulster Region

Waste Type	Tonnes per Annum			Source
	2010	2011	2012	
Non-Natural Agricultural Wastes	35,420	67,674	36,675	EPA NWR/LA RETURNS
Natural Agricultural Wastes – Dry solids	-	-	950,146	CSO/S.I. -610 of 2010

Farming organisations and the compliance schemes have made considerable efforts to collect farm film plastics over the past few years by hosting local collection events with the cooperation of the local authorities and, as shown in **Table 7-3**, there has been a steady increase in the tonnage collected.

Table 7-3: Farm Plastics in the Connacht Ulster Region

Waste Type	Tonnes per Annum			Source
	2010	2011	2012	
Farm Film Plastics	5,516	5,704	6,603	IFFPG & FRS

Natural agricultural sludges are generated directly from animals and animal washings from housing of animals and **Table 7-2** indicates an estimated tonnage, based on a standard calculation of quantities generated in 2012. While some of this sludge would be available for shipment to facilities such as anaerobic digestion, significant quantities are managed on farmlands (unmanaged sludges generated from outdoor management of farm animals are not considered).

7.2.13 Industrial Wastes

Table 7-1 shows industrial hazardous and non-hazardous wastes: there has been a steady increase in both the non-hazardous and the hazardous waste reported. This is possibly a result of the recovery in the economy over the period driven by the export of industrial products.

7.2.14 Sludges

Sludges are generated from a range of different sources as shown in **Table 7-1**. Industrial sludges such as industrial organic sludge generated by the food and drink industry fluctuated over the three years and were reported as 454 tonnes in 2012. Sewage sludges show fluctuations from year to year. Water treatment sludges are steadily increasing as a result of improved water treatment infrastructure.

7.2.15 Ash & Incineration Residues

Ash and incineration residues peaked in 2010 and subsequently decreased to 627 tonnes in 2012. Ash and incineration residues are attributable to the Masonite Plant in Carrick on Shannon.

7.2.16 Landfill Leachate

Landfill leachate generation in the region varied over the three years with the figure in 2012 being the highest at 177,827 tonnes. Leachate generation is dependent on a number of factors including rainfall and landfill operations (extent of the landfill face exposed etc.). This figure is expected to decrease going forward as many more landfills close and become permanently remediated.

The landfill leachate generation figure does not include leachate from landfills discharging directly to the sewerage system as there is no recording system for this waste. An important consideration is the strength of the leachate and regular analysis of its parameters, in particular metal concentrations, is required as these are generally processed in waste water treatment plants controlled by Irish Water.

Policy

The local authorities recognise that the waste plan must take account of waste streams which are not covered currently by European or national performance targets. The management of these wastes needs to be addressed over the plan period to ensure the systems in place are appropriate and the risk to the environment is managed and minimised.

In relation to the management of sludges in the region, the local authorities will coordinate with Irish Water and other stakeholders to ensure sludge management is safe and compliant. The effective communication between stakeholder groups addressing the control and management of sludge in an environmentally sustainable manner will provide for long-term protection of the environment.

Policy:

- H1. Work with the relevant stakeholders and take measures to ensure systems and facilities are in place for the safe and sustainable management of sludges (sewage, waterworks, agricultural, industrial, and septic tank) generated in the region having due regard to environmental legislation and prevailing national guidance documents, particularly in relation to the EU Habitats and Birds Directives.

The local authorities recognise that other non-hazardous and hazardous waste streams often require specialised management. The suitability or likelihood of a national compliance scheme for these niche streams, be it voluntary or mandatory, is uncertain. The local authorities in the region are keen to explore opportunities to investigate if management of these streams can be improved. Opportunities to improve the rate of reuse and recycling may exist and the local authorities are committed to piloting measures. Such schemes would protect the environment and may lead to reduced quantities of toxic waste entering the atmosphere, ground or surface waters provided all schemes are conducted in an environmentally sustainable manner.

Policy:

- H2. Investigate the opportunity to establish and expand management schemes for particular hazardous and non-hazardous waste streams including (but not limited to) paints, medicines, mattresses, other bulky wastes, agricultural and horticultural chemicals and waste oils (where technically, environmentally, and economically practicable).

8 PREVENTION AND REUSE

8.1 INTRODUCTION

Waste prevention is to be preferred to any other waste management option. Waste prevention is any measure which is taken before a substance, material, or product has become waste that reduces the quantity of waste arising, the adverse impacts of the waste and the content of harmful substances in materials and products.

The Waste Framework Directive puts prevention at the pinnacle of the waste hierarchy as it is better not to create waste if possible. The manufacture of products inevitably gives rise to some waste, therefore the focus must be on the prevention of unnecessary waste and the minimisation of waste generation. This can be achieved through sustainable design and packaging of products, smarter shopping by customers and by extending the life of products we already own. Member States are also required under the WFD to promote the reuse of products and preparing for reuse activities, notably by encouraging the establishment and support of reuse and repair networks.

Ireland has a well-established National Waste Prevention Programme (NWPP) which represents the work of the public and private sectors in the waste prevention area. One of the programme's objectives is to encourage and promote reuse and preparation for reuse through activities and projects. A National Waste Prevention Committee (NWPC) was established in 2004 consisting of a broad stakeholder group who meet periodically to provide strategic direction to the EPA with regard to the NWPP. *Towards a Resource Efficient Ireland* (DECLG, 2012) sets out the National Strategy to 2020 for waste prevention and contains a range of objectives which broadly aim to implement policy on resource efficiency to break the link between economic growth and environmental impact.

In 2011 under the EC (Waste Directive) Regulations (S.I. No. 126) waste prevention was defined as: *"Prevention means measures, taken before a substance, material or product has become waste, that reduce:*

- *The quantity of waste; including through the reuse of products or the extension of the lifespan of products;*
- *The adverse impacts of the generated waste on the environment and human health; or*
- *The content of harmful substances in materials and products."*

Despite the high importance attached to waste prevention in the waste hierarchy it continues to be a challenge to embed the concept and to promote waste prevention actions. This is in part due to the "feel good" factor associated with recycling actions and the misconception that all recycling actions are good for the environment. The roll-out of recycling infrastructure over the past decade coupled with a well-resourced publicity campaign ensured that recycling developed as normative behaviour. However, the challenge is now to promote the concepts of resource efficiency, waste prevention and preparing for reuse as best environmental practice, and to raise awareness of how these activities sit above recycling in the waste hierarchy. One of the primary objectives of this plan is to prioritise waste prevention through behavioural change activities to decouple economic growth and resource use.

The European Commission report *Roadmap to a Resource Efficient Europe* published in 2011 outlined how *"changing consumption patterns of purchasers, both private and public, will help drive resource efficiency"* and how *"consumers can save costs by avoiding waste themselves and buying products that last, or that can easily be repaired or recycled."*

Reuse initiatives in Ireland and across Europe are often associated with the social enterprise economy, which provides training and employment opportunities and therefore typically requires significant public support in terms of funding, training and mentoring. This sector continues to grow and the proliferation of the charity shops in particular provides significant opportunities for reuse.

The national launch of FreeTrade Ireland in 2010 also now provides a platform for the free exchange of goods in the region.

8.2 PROGRESS TO DATE: WASTE PREVENTION

The evaluations of the previous Connacht, Donegal and North East Waste Management Plans indicate significant progress on waste prevention. Waste prevention has been driven by Local Authority Environmental Awareness Officers (EAOs) through the Green Schools Programme, participation in the National Waste Prevention Demonstration Programme and through general waste awareness initiatives. EAOs have engaged directly with community organisations, small and medium enterprises, industry and institutions to emphasise the benefits of prevention. The evaluations recommended that prevention activities should be maintained and grown and that engagement with the NWPP should be continued.

Each local authority in the region has a post of Environmental Awareness Officer; however, the post has not always been filled in all local authorities. The evaluations emphasised the lack of resources in the prevention area and found this was undermining work in waste prevention.

8.2.1 Waste Prevention – Community/Households/Business

EAOs across the region are tasked with developing and implementing comprehensive education and awareness programmes for their local authority area targeting households, communities, schools and local business. They use a variety of established networks, traditional and new media to deliver campaigns and this group are at the forefront of the progress to date in developing an awareness of waste prevention.



Many campaigns and initiatives are delivered by EAOs through community groups. The Tidy Towns network in particular is a rich source of activity for both awareness raising and prevention initiatives. Tidy Towns committees are a catalyst for change and have become increasingly active at promoting waste prevention and resource efficiency.

Figure 8-1 Tidy Towns Logo

The Tidy Towns competition has included a waste prevention/resource efficiency category since 2013. In addition, a new EPA-sponsored Special Category Award for Best Waste Prevention Initiative has been introduced, with a prize fund of €2,000.

Waste prevention initiatives aimed at Tidy Town groups across the region include preventing household hazardous waste (HHW) through Greener Cleaning, which is promoted across all counties and participation in the Green Home Programme which was piloted in County Roscommon.

EAOs also work with communities on the promotion of food waste prevention and composting. Roscommon County Council has participated in a Master Composter Pilot Programme which educates communities on prevention and the art of composting while Mayo County Council has established a number of composting demonstration sites.



Master composters are individuals who have committed some of their time to promoting food waste prevention and composting throughout Ireland in their local communities. This is a voluntary programme and the national pilot of this initiative was held in Frenchpark, Co. Roscommon in 2009 where 30 members from local communities became Ireland's first master composters.

Figure 8-2 Master Composter

Galway City Council, in conjunction with Galway County Council and local chefs, has developed a recipe book for food leftovers to promote food waste prevention. The booklet is available for free and is distributed at events such as the Galway Food Festival.

Sligo County Council is a participant in the national pilot of the Brown Bin Advisor Pilot Programme to promote the continued diversion of biodegradable waste from landfill through the use of the brown bin. This project includes waste characterisation work before and after the rollout of the brown bin, followed up by Brown Bin Advisors calling to individual households to advise them in relation to prevention and the proper use of the brown bin.

Donegal County Council has provided support to the North West Garden Show Event for the past four years by setting up a display focusing on composting and food waste prevention.

EAOs engage with business through the Local Chamber of Commerce organisations, providing talks and information on prevention and the associated cost savings that can be made.

Monaghan County Council produced *Calling Time on Waste* (**Figure 8-3**), a publican's guide to a leaner, greener cost base through waste prevention. The booklet was distributed to over 4,600 publicans nationally.

Monaghan Council also worked with a range of agricultural enterprises including mushroom, dairy, poultry, pig and suckler farms to highlight the need for prevention of farmyard hazardous wastes. The initiative resulted in the production of the booklet *Farming the Environment – How to Protect the Environment, Prevent Waste, Save Money* (**Figure 8-3**). Galway County Council prepared and distributed *Changing Behaviours – Saving Resources*, a Green Guide for Businesses and *Greening Your Workplace* Environmental Information Packs.

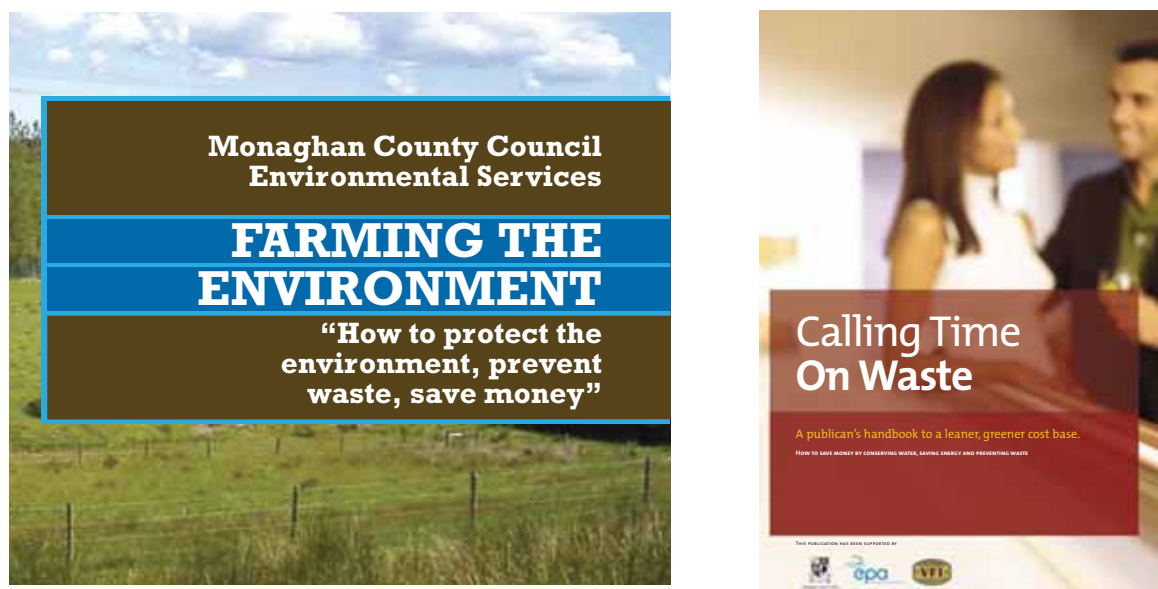


Figure 8-3 Farming the Environment and Calling Time

Galway City Council has developed the *Think Green Campaign* and the pledge website www.greengalway.ie. Through this website, individuals, businesses and groups pledge to make one small change to their environmental habits, with waste prevention being the key message.

The range of waste prevention initiatives in the community and with business is rich and varied across the region and provides a significant platform to continue to build the prevention agenda during the life of the plan.

8.2.2 Waste Prevention – Events

As Ireland continues to develop its tourism offering there is a growing emphasis on waste prevention at events. There has been significant growth in the number of festivals and local events nationally and within the region in recent years. Some of this activity is driven by communities and businesses at a local level to help boost the local economy and because of the growing number of “staycations” Irish families have taken in recent years.

Festivals and events can generate significant quantities of waste. Most are organised and run by local committees on a part-time or voluntary basis. In 2010 the Limerick Clare Kerry Region developed a waste prevention guide for festival and event organisers as part of the LAPN programme. The guide was very successful and the initiative went national and was further developed with improved resources and a supporting website, www.greenyourfestival.ie

Galway County Council has co-produced an *Event Manager's Resource Pack* containing four steps for a cleaner, greener event. The four-step guide to green your festival, event or location shows how an event can be made more environmentally friendly.

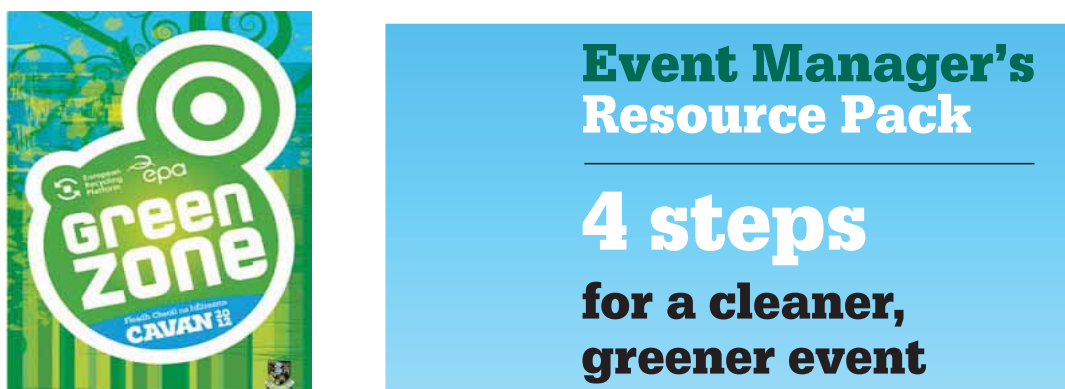


Figure 8-4 Regional Prevention Events

In 2012 Cavan hosted its third Fleadh Ceoil na hÉireann, which is a week-long festival of traditional music competitions, sessions, concerts, exhibitions, fun-days and parades. Cavan County Council introduced An Fleadh Ghlas – the Green Fleadh when the festival first took place in the town in 2010. This initiative has firmly established the ‘Greening’ concept with waste prevention at its centre. Sligo has gone on to embrace the concept and will again Green the Fleadh in 2015.

Galway City Council successfully partnered with the Galway Arts Festival to ‘Green the Galway Arts Festival’. Support and guidance was provided to all festival venues and events to help them adhere to environmental best practice. In addition, all businesses in the city were invited to participate in the scheme and over 40 businesses signed a pledge and committed to ‘going green’. The focus at all times was on waste prevention.

In 2013 many festivals in the Connacht Ulster Region registered on www.greenyourfestival.ie and undertook resource efficiency measures at their festival. Organisers are encouraged, with the support of their local authority, to develop benchmarks for annual improvement, measuring for example kg of waste per visitor/exhibitor.

Table 8-1: Participating Festivals and Venues, Green Your Festival Initiative, 2013

County	Festival	Month
Galway City	Galway Arts Festival	July
Galway County	Connemara Pony Festival	August
	Clarenbridge Oyster Festival	August
Mayo	Westport Festival of Music and Food	June
Monaghan	Taste of Monaghan	October

8.2.3 Waste Prevention – Education

Each local authority supports environmental education and awareness through the An Taisce Green Schools and Green Campus programmes. The Green Schools programme is hugely successful: it has a modular approach to raising awareness and taking steps to improve the school’s environment; the first theme for which a flag is awarded is *Litter and Waste*.

Waste prevention is included in this theme although it is only in recent years, largely through the work of the EAOs, that schools have begun to place more emphasis on preventing waste generated at school. A decade ago schools applying for green flags would have placed greater emphasis on litter elimination and source segregation of waste.

Typical examples of waste prevention initiatives at school level include “Zero Waste Lunches” aimed at raising awareness about packaging waste and choosing tap water campaigns that encourage the reuse of water bottles or drinking beakers to reduce plastic waste.

At secondary level the ERP funded the *Junk Kouture* initiative which encourages second level students to design and make couture pieces from waste (particularly WEEE) and is now well established and delivered in many schools as part of the TY (Transition Year) programme. In 2013 80 schools from the Connacht Ulster Region participated in this programme and 20 schools made it to the Grand Final, which was held in May. This creative and novel approach to encourage students to view waste as a resource is particularly successful despite targeting an age group that does not typically engage in resource efficiency.



Figure 8-5 Junk Kouture Logo

The TY and CSPE (Civic, Social and Political Education) programmes in secondary schools are particularly well structured to encourage engagement with environmental and social issues. In recent years TY students have been used to assist local authorities across the region to deliver behavioural change messages about waste prevention.

The importance of the Green Schools programme as a mechanism for raising awareness about waste prevention cannot be overestimated. The Department of Education and Skills reports that for academic year 2012/13 pupil numbers for this region were as shown in Table 8.2.

Table 8-2: Pupil Numbers 2012/2013, CUR

No. of Mainstream Primary School Pupils	94,059
No. of Secondary Level Pupils	65,014

Source: Dept of Education and Skills .

Additionally as the Green Schools programme requires an element of outreach to the local community (particularly pupils' families), there is great potential to communicate a waste prevention message as part of this programme.

The interest shown by schools in engaging in environmental campaigns is evidenced by the 2012 service indicators for local authorities, which report on the percentage of schools participating in Environmental Campaigns per local authority (**Table 8-3**).

Table 8-3: Schools in the CUR Participating in an Environmental Campaign

County	Total Number of Primary Schools	Total Number of Secondary Schools	% of Primary Schools participating	% of Secondary Schools participating
Galway City	29	11	100	100
Galway County	211	34	90.8	91.4
Mayo	174	27	85.8	96.3
Roscommon	93	8	92.9	100
Sligo	69	14	95.5	100
Leitrim	42	8	97.5	100
Donegal	178	27	88.1	100
Cavan	77	10	90.9	80
Monaghan	63	12	78.8	83.3

There is one university, National University of Ireland Galway (NUIG), and three Institutes of Technology, Galway, Sligo and Letterkenny, located in the region. NUIG and the Institute of Technology Sligo (ITS) both participate in the An Taisce Green Campus Programme, which has a strong focus on waste prevention, particularly food waste prevention.

All of the institutions have long established Environment Committees which liaise with their local EAOs to develop campus-wide initiatives and awareness raising campaigns.

Policy

The evaluation reports completed by the local authorities on the previous waste plans identified the lack of resources as a key barrier to the successful implementation of a coherent prevention programme. The aim of the local authorities is to build on the prevention activities which are under way throughout the region and the appropriate staff need to be in place in each authority. The role of local authority awareness staff, in particular the Environmental Awareness Officer, is central to building a strong waste prevention programme across the region. In addition to putting in place the necessary resources, funds need to be made available by the local authorities to ensure programmes and campaigns can be effectively delivered. Prevention is the most effective waste management option in terms of protection of the environment and human health. Waste prevention provides environmental and economic savings through a reduced need for transport of materials and wastes and reduced requirements in terms of capacity for collection, treatment and disposal of waste.

Policy:

- B1.** Local authorities in the region will ensure that the resources required to implement waste prevention activities are available through the lifetime of the plan.

The local authorities in the region are involved in many different types of prevention activities. These have been documented in the evaluation reports and in the waste plan and demonstrate the wide scope of work being undertaken by local authorities in implementing national campaigns at a local level as well as establishing prevention activities specific to their functional area. Over the plan period local authorities in the region will continue to implement local campaigns and activities. The restructuring of the region also affords the opportunity to make the most of all local authority prevention resources through collective and regional collaboration. This approach will be established and over the plan period will deliver greater coordination of activities and ultimately a better use of existing staff in an area which is resource intensive. Education and awareness is an important policy area in terms of environmental protection as it offers the greatest scope to reduce negative behaviours at the individual, community, regional and national levels. Behavioural changes leading to the prevention of waste ensure reduced levels of waste and consequently reduced requirements to manage waste, which positively affects the natural environment.

Policy:

- B2.** Promote behavioural change and extend waste prevention activities through information campaigns, targeted training and local capacity building, working with households, communities, schools, business, and other public institutions.

8.3 PROGRESS TO DATE: REUSE

Reuse as a waste management concept is still very much in its infancy in Ireland. However, that is not to say that reuse doesn't happen; in fact reuse is practised widely but in an informal way. From a waste management perspective one of the difficulties with informal reuse is that it is almost unquantifiable. For example, passing on household items, children's clothes, equipment and toys to family and friends constitutes reuse. This type of informal exchange doesn't even register as being reuse; it is seen instead as part of everyday social interaction.

The EU's Resource Efficiency Roadmap, for example, sets an aspirational target that by 2020 waste generation per capita will be in absolute decline, reuse and recycling will be at their maximum level and European waste policy will have been fully implemented.

The challenge therefore of driving forward the resource efficiency agenda and advancing reuse activities lies in our attitudes to and awareness of reuse, and there remains room for significant improvement. Some progress has been made in the Connacht Ulster Region in recent years and some examples are presented in **Sections 8.3.1 and 8.3.2** below.

8.3.1 FreeTrade Ireland

FreeTrade Ireland has been online since July 2010, providing a national platform for users to engage in the reuse of items and for LAs to support and promote the better use of resources. The service was developed from the FreeTrade service previously hosted on www.dublinwaste.ie from 2006 onwards.



Figure 8-6 Free Trade Ireland Homepage

FreeTrade Ireland was developed with funding provided by DECLG and is currently financed on an ongoing basis by the EPA. **Table 8-4** contains a summary of items reused in the CUR.

Table 8-4: Free Trade Ireland Data for CUR

Items Reused	Diversion (kg)	Savings (€)
245	5,204	25,541

Source: FreeTrade Ireland.

The take-up of this service is still poor in the region (and indeed outside of Dublin) in general. Significant efforts have been made by the EAO's to promote the service through seminars, work with Tidy Towns groups, social media etc. Once awareness of what the site offers gains traction it is likely to become more popular, particularly in the urban areas of the region.

8.3.2 Connacht Creative Resource Centre

The Creative Resource Centre, Castlebar, is part of WesternCare and was established 14 years ago to create employment for people with disabilities and also to educate and create awareness. The Centre sources non-toxic waste materials from industry throughout the region. Materials range from offcuts of fabric to plastic containers, thread, wool, card and paper. The waste is sourced and collected by the staff of the Centre and then sorted and used as raw materials for Arts and Crafts

purposes. The materials are then used by the Connacht Creative Resource Centre members, which include schools, playgroups, youth groups and local artists. The centre has over 1,000 members who are able to take away a trolley of materials at each visit.

8.3.3 Upcycling, Reuse and Preparing for Reuse

Upcycling and preparing for reuse enterprises have been setting up and developing across Ireland in recent years. With the significant contraction in the national economy the level of income available to families has altered and as a result so have consumption behaviours. A renewed interest in the value and lifespan of materials has taken root with many new businesses employing innovative solutions to the management of waste materials.

In the recently published EC Barometer *Attitudes of Europeans towards waste management and resource efficiency* it was found that more than 70% of people would buy second-hand furniture in Sweden, Finland and Denmark but 43% of all respondents in the barometer believed that second-hand goods were inferior. If we are to move reuse and upcycling from niche to mainstream, successive regional awareness raising programmes are required.

Upcycling is the repurposing of items that may otherwise be seen as waste or useless products. The process converts these waste materials into new materials or products of higher value and quality, giving them a new purpose and most importantly avoiding adding them to landfill. Upcycling and similar prevention and preparing for reuse activities can no longer be viewed as add-ons to our waste management system. If waste is to become a resource which is fed back into the economy as a valuable and usable resource then much higher priority needs to be given to reuse and recycling. There are direct social, environmental and financial benefits to be gained by those working in the sector and for consumers.

Fiscal, technical and regulatory supports are being provided by the EPA to specific upcycling groups and local authorities also provide funding and support where possible to local initiatives in the sector. However the availability of funding supports through environmental and local sources is limited and cuts to existing funding are making it more challenging for dependent activities to survive. To ensure lasting viability, upcycling activities must have a commercial plan from inception and all funding avenues, such as local enterprise grants, should be explored to help kick-start and grow the business.

Upcycling activities are varied: in some instances items or products which have never become waste are renewed and converted into higher value items, e.g. an old piece of furniture painted or upholstered. In other cases waste materials are repaired or modified or cleaned into usable and valuable products and items, e.g. a discarded broken bike. From a waste perspective upcycling activities straddle waste prevention and preparing for reuse treatments as defined on the waste hierarchy. Nevertheless both activities represent an efficient use of resources and the expansion of this sector is a positive outcome of the recession in Ireland, creating direct employment for many people.

Figure 8-7 Upcycling Case Studies in the CUR**Cumann na bhFear/Men's Shed³⁶**

Cumann na bhFear or the Men's Shed movement is very active in Galway city. Through its many upcycling and reuse projects, the group give life to unwanted items, including bicycles that featured in the 2014 St Patrick's Day parade. There is also a social benefit to the initiative in that it brings men together who are unemployed or retired who have skills that they can share or develop further.

Members of Cumann na bhFear have prepared a fleet of vintage bicycles known as "High Nellys" which will be used by tourists and visitors to Galway to cycle along the Slí na gCaisleán (The Way of the Castles), a network of "Greenways" that will link seven castles on the east side of Galway city with historical mansions and castles in the north and east of the county.

**RoundySquares**

Roundy Squares is an initiative established in Leitrim for the making of handmade soft toys using upcycled fabrics. Unused items are provided to Roundy Squares by the customer and then transformed into a personalised soft toy or one of the originally designed characters used by Roundy Squares including Owl, Mouse, Monkey, Penguin, Cat and characters Loop and Scoop.

The Community Reuse Network is an umbrella body for community-based organisations who are engaged in reuse activities. Funded by the EPA under the NWPP, CRNI members are involved in both direct reuse and preparing for reuse upcycle activities. The members of the group work together to promote the reuse movement, to expand the organisation, and to share experiences. The group is researching and developing a unified brand for the reuse sector in Ireland. It is anticipated that this brand will operate in a similar style to a quality mark, with the intention of elevating the profile of the reuse sector and addressing some of the misconceptions relating to upcycled and reused goods. The growth of the organisation through innovative projects such as this will help to strengthen the collective voice of the upcycle movement.

In summary, being more efficient with our resources offers the means to achieve a balance between allowing current generations to prosper and develop and safeguarding the future for generations to come. Increasing activities such as upcycling and preparing for reuse can help Ireland's transition to a resource-efficient circular economy by preventing unnecessary and inefficient consumption of resources.

³⁶ www.cumannnabhfear.com accessed on 14 May 2014.

Policy

The recent publication, Action Plans for Jobs 2014, by the Government supports the reuse sector (which incorporates preparing for reuse and upcycling) in Ireland, which is implementing a direct action calling for “job creation through the greater use of waste as a resource”. This specific job creation action is part of the transition towards a greener, healthier and more sustainable economy which mirrors the underlying strategy of the regional waste plan. The local authorities recognise the value that vibrant reuse, repair, upcycling and preparing for reuse activities can add to communities and the economy. The development of these enterprises will be supported and encouraged by the local authorities over the plan period. From an environmental perspective the reuse of materials to prevent them becoming waste in the first place is significant, with many positive impacts on the environment. Reuse reduces the quantity of waste to be managed and thereby reduces the associated environmental impacts with recovery and disposal of wastes.

Policy:

CI. Establish reuse, repair, and preparing for reuse activities and networks to recirculate and extend the lifespan of items.

8.4 NATIONAL PROGRAMMES

A summary of national prevention programmes which are ongoing in the region is given in the following sections.

8.4.1 National Waste Prevention Programme (NWPP)

The NWPP was established in Ireland in 2004 and the National Waste Prevention Committee, appointed by the Minister for the DECLG, oversees the strategic development and implementation of the programme. It is chaired by the EPA and comprises a wide range of stakeholders from Industry, Commerce, Agriculture, Local Authorities, NGOs and Government Departments. In 2012, the DECLG published *A Resource Opportunity* providing a roadmap for the future of waste management in Ireland, which stresses the environmental and economic benefits of better waste management, particularly waste prevention.

8.4.2 Green Business Initiative

Established in 2007, the www.greenbusiness.ie project is the flagship project of the Green Business Initiative and is aimed at delivering a free high-quality service to businesses or any other commercial or public sector organisation. Green business is a free and confidential resource efficiency service for all types of SMEs in Ireland. The service is funded by the EPA under the NWPP with the objective of delivering substantive resource efficiency improvements and cost savings, through waste prevention and reductions in water and energy consumption.

8.4.3 Green Hospitality Award

The Green Hospitality Programme (GHP) provides a step-by-step approach to environmental management within the hospitality and catering sectors with awards given at Eco-label, Silver, Gold and Platinum levels. The programme supports the Green Hospitality Award and the Green Hospitality Eco-label, as well as workshops, training and conferences. It is recognised internationally, and has all major stakeholders supporting the project within Ireland, including Fáilte Ireland, Irish Hospitality Institute and Irish Hotels Federation. There has been significant engagement with this programme in the Connacht Ulster Region since its inception in 2007.

8.4.4 Green Healthcare Award

The Green Healthcare Programme is a collaborative and cooperative set of activities by three main stakeholders:

- Irish healthcare facilities, who are the main target group;
- The Environmental Protection Agency (EPA), the agency that protects the Irish environment, which commissioned the programme; and
- Clean Technology Centre (CIT), who are leading experts in resource efficiency and are working with the healthcare facilities.

The programme has been supporting healthcare facilities in Ireland since an initial pilot project in 2009 and has provided direct advice and assistance to a number of hospitals in the Connacht Ulster Region. These facilities have benefited from detailed waste surveys, follow-up reports, recommendations and customised advice. The programme provides hospitals with an invaluable information-based resource to save money and become more efficient. The programme also aims to allow hospitals themselves to become more resource efficient through the provision of guidance documents that staff can use on a day-to-day basis in their work, to prevent waste and reduce costs. Guidance includes:

- Benchmarks (providing hospitals with valuable information upon which they can rate themselves and act);
- Case Studies (based on actual work done in Irish hospitals to reduce costs and waste)
- Best Practice Guides (providing hospitals with valuable assistance in achieving best practice in waste reduction);
- How To Guides (giving step by step instruction to hospitals to reduce costs and become more resource efficient); and
- Factsheets (offering valuable information on a range of waste-related topics in Irish hospitals).

8.4.5 The Stop Food Waste Campaign

The Stop Food Waste (SFW) programme is funded under the EPA National Waste Prevention Programme (NWPP). This Framework Programme is managed by The Clean Technology Centre and run in conjunction with:

- Composting & Recycling Consultants Ireland;
- Irish Peatland Conservation Council (IPCC); and
- Wastedown Consultants

Since 2009, when SFW started, it has worked with householders, communities, schools, local authorities, Tidy Towns groups and businesses, providing comprehensive information about food waste and how to prevent this through RETHINKING how to shop, store food, cook it and reuse it. However, as there will always be some food waste, SFW also has extensive information on all forms of composting.

Most importantly the programme aims to assist the individual or business to save money as well as preventing food waste. SFW has developed numerous toolkits and campaigns such as the Food Waste Challenge to guide householders in particular with rethinking and improving their shopping and cooking habits. It is estimated by SFW that the average household wastes €600 in food waste annually. In Ireland the national spend on food is €7bn and if one-third of this is wasted, that's a loss of €2.3bn.

8.4.6 Local Authority Prevention Network

The Local Authority Prevention Network (LAPN) is a cooperative programme between the NWPP and local authorities in Ireland. LAPN aims to build capacity initially among local authority staff to enable and promote waste prevention at a local and grassroots level for the benefit of the region.

Begun in 2010, LAPN follows on from the successful completion of the Local Authority Prevention Demonstration (LAPD) Programme (2006–2009), which also involved a range of waste prevention projects around Ireland. The network acts as a mechanism to engage with local authorities directly in implementing waste prevention and resource efficiency projects both within their own organisation's activities and throughout their functional areas.

There are three main stakeholders in the LAPN: the Local Authorities, the EPA and the CTC. To date the most active local authority participants in the Connacht Ulster Region have been Galway City and County and Counties Monaghan, Cavan and Mayo.

Awareness of waste prevention in the SME sector, the community in general and at household level has been greatly enhanced on foot of the region's involvement in LAPN. Additionally many local authorities within the region have undertaken in-house resource efficiency initiatives as part of LAPN, which has also significantly improved and enhanced staff other than EAOs' attitudes to waste prevention.

Policy

The NWPP is an exemplar national waste prevention strategic programme and its cross-sectoral initiatives have raised awareness and changed behaviours of households, businesses and industry participants. The evaluation of the previous waste plans identified the need for the local authorities to continue to work with the NWPP and to better coordinate their activities to deliver more consistent and effective messaging. Over the plan period the local authorities in the region will seek to build on the relationship which many have with the NWPP and through the lead authority to implement campaigns and activities regionally where appropriate. Having a strong partnership with the NWPP will lead to better integration of established and new national prevention programmes with the potential to lead to waste reduction gains and positive impacts on all environmental receptors.

Policy:

- B3. Build and maintain a strong partnership with the National Waste Prevention Programme.

The national hazardous waste plan identifies the regional waste plans as the appropriate mechanism through which to implement hazardous wastes prevention activities targeting households and small businesses. The local authorities recognise the need for better synergies between the plans in areas of common interest. In addition to this plan there are other national programmes and producer responsibility schemes which are carrying out activities related to those of the regional waste plan. The local authorities will explore the opportunities to work with other stakeholders and authorities to extend the reach of waste prevention awareness and messaging.

Policy:

- B4. Harmonise prevention activities in the region to link with the national hazardous management plan, producer responsibility operators and other related programmes (such as litter, sludge, water etc).

9 MANAGEMENT OF HOUSEHOLD WASTE

This chapter provides an overview of the management of household waste in the Connacht Ulster Region (CUR). The data presented is for the most part on a regional basis, with the corresponding data for the individual local authorities tabulated in **Appendix C**.

Household waste generated in the CUR is collected through a number of collections systems, which include:

- Kerbside collection systems;
- Civic amenity facilities;
- Bring banks;
- Residual waste directly to landfill;
- Bulky waste collected by authorised collectors; and
- Waste electrical and battery take-back schemes.

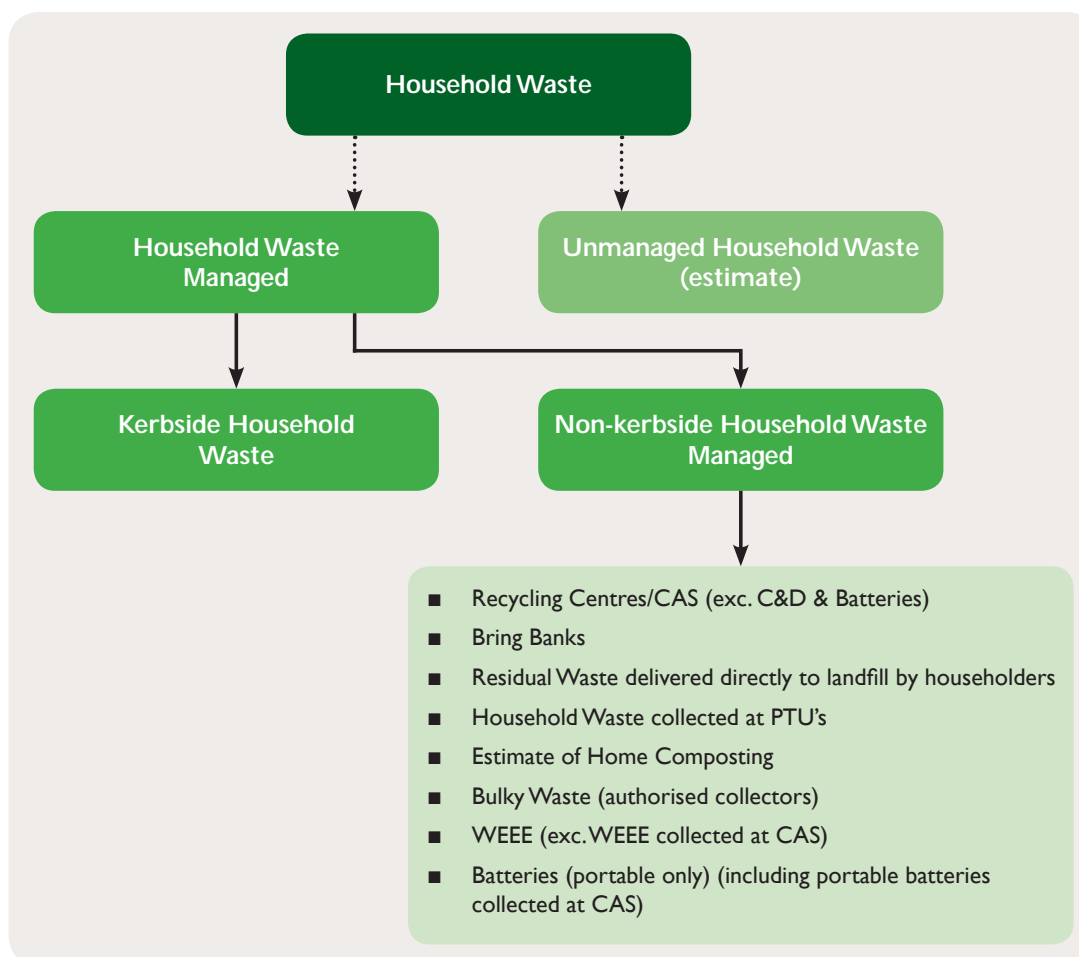


Figure 9-1 Household Waste Flow Diagram

Household waste managed (HWM) is the sum of the household waste collected at kerbside and the non-kerbside household waste collected (**Figure 9-1**). The kerbside household waste collected includes residual waste, mixed dry recyclables (MDR), organic and glass wastes, collected by authorised collectors and local authorities within the CUR.

The non-kerbside household waste collected includes bulky household waste collected by authorised collectors, waste brought by householders to landfills, bring banks, civic amenity facilities and WEEE and batteries brought to retailers and collected on specific collection days.

Unmanaged household waste is an estimate of the quantity of waste generated by households but not collected through one of the above collection systems. This is explained further in **Section 9.4**.

9.1 QUANTITY OF HOUSEHOLD WASTE

The HWM within the CUR increased by approximately 3% between 2010 and 2011 and decreased by 8% between 2011 and 2012. **Table 9-1** details the HWM within the CUR, for the period 2010–2012. In 2012 the percentage of HWM directed to recycling/recovery exceeded the percentage disposed. The decrease in the percentage disposed is linked to the increasing quantity of residual waste sent for export.

Table 9-1: Details of HWM within the CUR, 2010–2012

Year	HWM (tonnes)	HWM / inhabitant (tonnes)	% HWM directed to recovery	HWM - Directed to recovery per inhabitant (tonnes)	% HWM disposed	HWM - disposed / inhabitant (tonnes)
2010	221,181	0.26	34%	0.11	57%	0.15
2011	226,830	0.27	39%	0.11	60%	0.16
2012	209,532	0.25	53%	0.13	45%	0.11

Each year the EPA reports³⁷ on the national HWM per inhabitant along with the percentage recovered and disposed. **Table 9-2** compares the national figures with the CUR figures.

Table 9-2: HWM in the CUR Compared to the National Figure

Year	CUR - HWM / inhabitant (tonnes)	National - HWM / inhabitant (tonnes)	CUR- % HWM directed to recovery	National- % HWM directed to recovery	CUR- % HWM disposed	National - % HWM disposed
2010	0.26	0.31	34%	41%	57%	59%
2011	0.27	0.307	39%	47%	60%	53%
2012	0.25	0.297	53%	57%	45%	43%

The HWM per inhabitant in the CUR is similar to or slightly lower than the national figure reported in each year. The percentage of HWM directed to recycling/recovery in the CUR is lower than the national figure.

The household residual waste collected at kerbside in the CUR is brought either directly to landfill, to a bulking station or to a mechanical treatment facility. The waste collection permit (WCP) annual returns (AR) provide information on the local authority area where the waste was collected and the waste facility to which it was delivered. The eventual treatment of waste delivered to bulking

³⁷ EPA's annual report on waste in the National Waste Report publication.

stations within CUR is not available from the WCP AR dataset as only the first destination of the waste is recorded (for waste collected from non-waste facilities). **Figure 9-2** shows that the greater part of household residual waste collected at the kerbside in the CUR in 2012 was delivered directly to bulking stations (50%), with the balance delivered to mechanical treatment facilities (8%) and to landfill (35%). Only 8% of residual household waste collected in the CUR in 2012 was delivered directly to a thermal recovery facility.

In 2012 the EPA reviewed the *National Waste Report* returns for bulking stations and assigned the percentage of outgoing household residual waste from these stations by type of destination, on a national and regional basis. This analysis shows that most household residual waste delivered directly to bulking stations in the CUR went for either disposal to landfill (77%) or thermal recovery (15%). The remaining 8% of the residual waste was brought to another waste facility (either a bulking station or a mechanical treatment facility) for further treatment. Waste was often moved between sites owned by the same company.

The analysis of destinations post-bulking stations resulted in a much clearer picture of the treatment of household residual waste in the CUR. The treatment of household residual waste collected at the kerbside in 2012 in the CUR can be broken down as follows:

- 73.2% sent for disposal to landfill;
- 22.7% sent for recovery (15% sent for thermal recovery and 7.5% sent for mechanical treatment destined for recovery); and
- 4.1% sent to another waste facility (either bulking station or mechanical treatment facility) and its final treatment was not analysed.

MDR waste collected at kerbside is brought to either a bulking station (prior to onward transport to a material recovery facility) or direct to a material recovery facility for sorting and baling prior to being recycled or recovered in Ireland or abroad. The latest data shows that Ireland exported 58% of the total municipal waste collected (of which a significant portion is household waste) (EPA, 2014).

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. The recovery of this waste is primarily occurring within the State.

Source-segregated glass collected at kerbside is brought to either a bulking station (prior to onward transport to a recycling facility) or direct to a recycling facility. The reprocessing of glass cullet into new glass containers at present occurs outside the State.

Non-kerbside household waste collected is mostly source segregated at bring banks, civic amenity facilities or specific collection points for the WEEE and batteries, and after collection is either sent directly to a recovery/recycling or disposal facility or to a bulking station prior to onward transport. Bulky waste³⁸ collected is generally brought to a mechanical treatment facility for sorting.

³⁸ It has been assumed that collected bulky waste consisted of 7.6% of mixed waste sent for disposal with the remaining 92.4% sent for recycling/recovery (*All island Bulky Waste Reuse Best Practice Management Feasibility Study*, RX3, 2013).

Connacht - Ulster household kerbside residual waste treatment (2012 data)

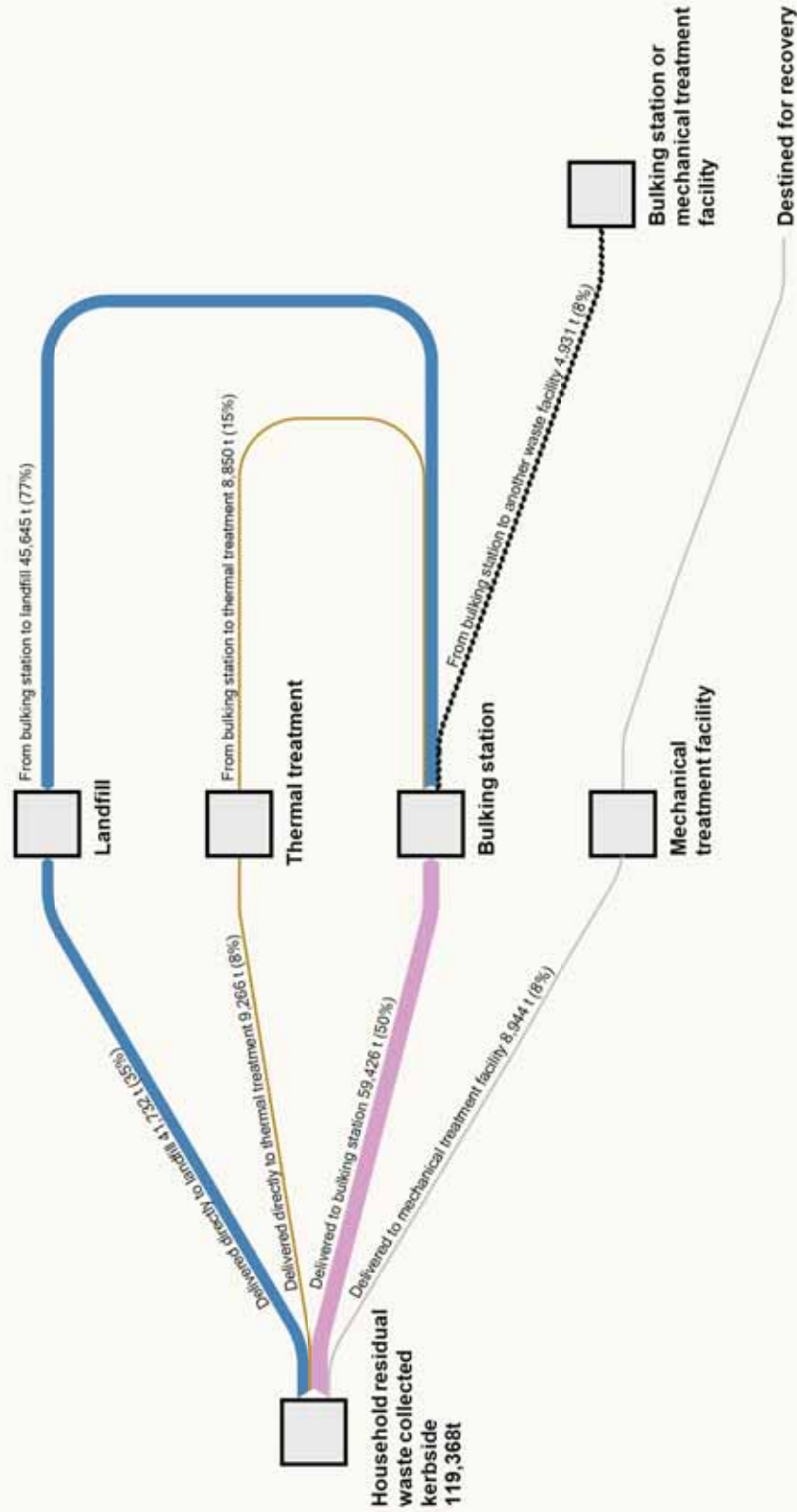


Figure 9-2 Treatment of Residual Household Waste

9.2 KERBSIDE HOUSEHOLD WASTE

Approximately 81% of HWM in CUR in 2012 was collected at the kerbside. This percentage had increased since 2010 (79%). This increase occurred despite the decrease in the quantity of HWM during the period. **Table 9-3** details the quantity of kerbside HWM collected within the CUR between 2010 and 2012.

Table 9-3: Details of the Kerbside HWM within the CUR 2010–2012

Year	Kerbside HWM (tonnes)	Kerbside HWM / household served (tonnes)	Total residual kerbside household waste collected / household served (tonnes)	Total kerbside household waste collected for recovery / household served (tonnes)
2010	173,822	1.03	0.75	0.28
2011	177,323	1.03	0.73	0.29
2012	169,097	0.97	0.69	0.29

Kerbside HWM and total residual kerbside household waste collected per household served, in the CUR, decreased in 2012 compared to the preceding two years. Despite this decrease the quantity of non-residual kerbside household waste collected per household served remained static during the period 2010–2012.

9.2.1 Collection Service

In recent years the household waste collection market has gone through a period of rapid transition, with all local authorities in the CUR exiting the market and collection being undertaken by private operators.

While there are 64 waste collection companies permitted to collect in the CUR, 23 waste collection companies provide household waste kerbside collection systems and 10 of these collectors were servicing over 90% of the householders on a kerbside collection service.

In 2012 approximately 58% of the permanent private households within the CUR were signed up to a kerbside collection service. This percentage increased slightly in the period 2010–2012. **Figure 9-3** shows the percentage of households signed up to a kerbside collection service for each local authority within the CUR.

Figure 9-3 indicates a generally higher participation rate in urban areas, i.e. Galway City. There was in general a steady increase in participation over the period involved. Some rural counties have quite low levels. The lower participation rate in rural areas is due to householders bin sharing and driving to landfills/ transfer stations or civic amenity facilities.

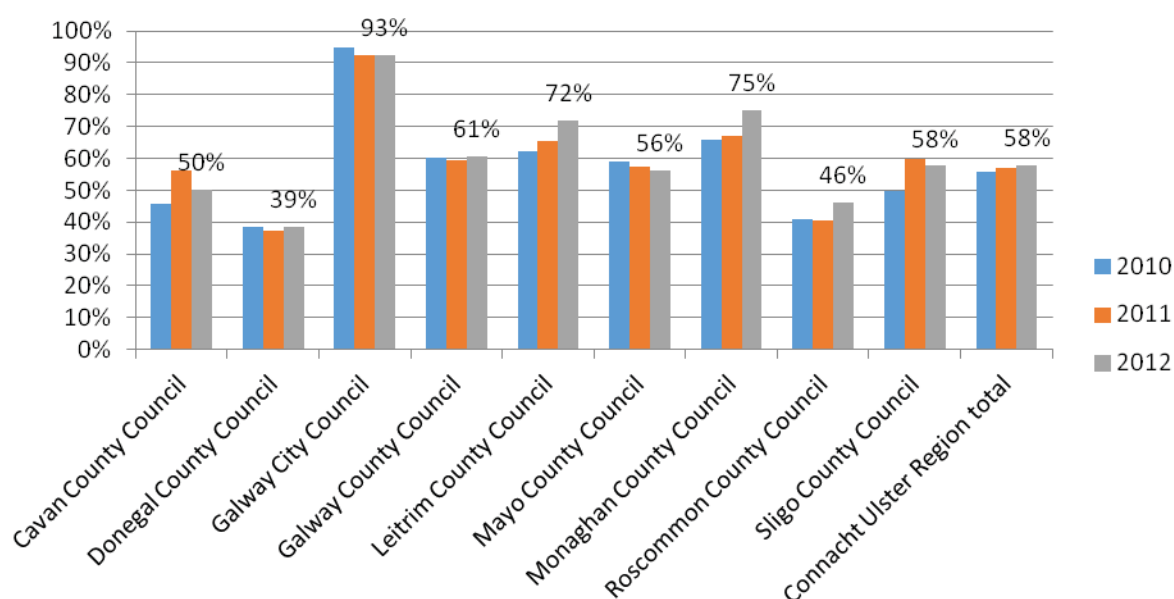


Figure 9-3 Percentage of Householders Signed up to a Kerbside Collection Service 2010–2012

Figure 9-3 indicates that in 2012 42% of occupied houses within the CUR did not avail of, or were not offered, a kerbside collection service. The overall percentage for the CUR had remained largely unchanged since 2010; however, some local authority areas showed greater variations. It should be noted that the percentage of households not participating in a kerbside collection service is likely to be an overestimation for a number of possible reasons:

- Many householders share a bin with relatives/neighbours and this is not recorded;
- Where a collector operates a tag-a-bin service it is difficult for them to accurately estimate the number of customers/households; and
- Not all operators accurately report the number of apartments they service and figures reported are often an estimate.

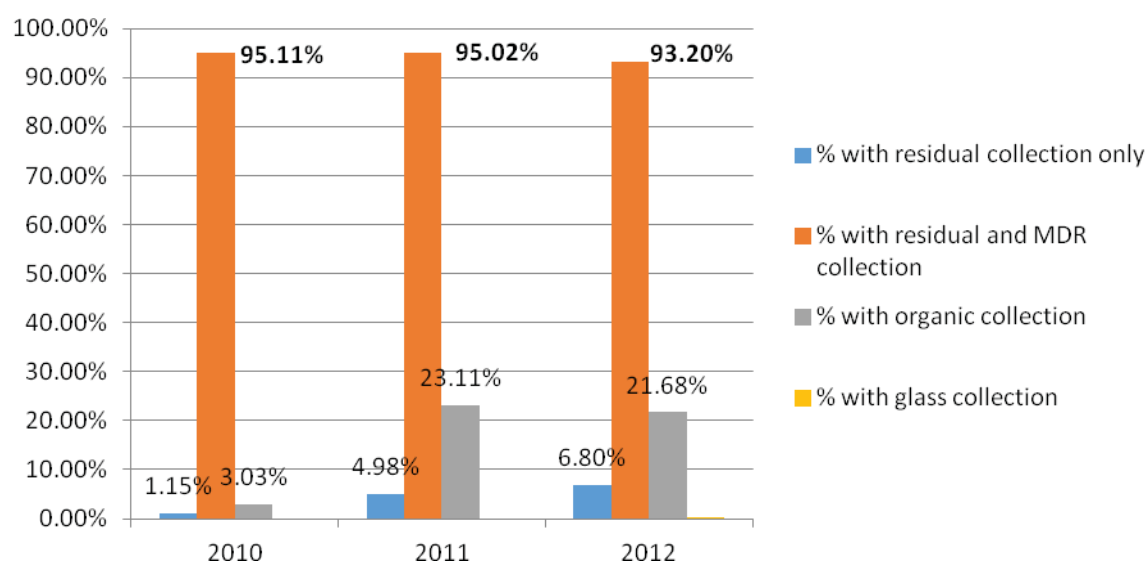


Figure 9-4 Household Waste Collection Service in CUR

Household waste collectors are required to provide all householders with a minimum two-bin collection service, i.e. mixed dry recyclable (MDR) and residual waste bins, in accordance with their

WCP. Collectors are also required to provide householders with organic waste bins in accordance with the EU (Household Food Waste and Bio-waste) Regulations 2013, in specified areas. Some household kerbside collectors provide a fourth bin to their customers for the collection of source-segregated glass. **Figure 9-5** illustrates the extent of waste services provided showing the type and proportion of collections service provided to householders in the CUR between 2010 and 2012. **Figure 9-4** provides details on the household waste managed and waste services in the CUR.

9.2.2 Residual Waste Collection Service

Although household waste collectors are required to provide all householders with a minimum two-bin collection service, i.e. mixed dry recyclable (MDR) and residual bins, in accordance with their WCP, **Figure 9-4** indicates that there is a small percentage of householders offered a residual collection service only in CUR. There was a slight increase in the percentage of householders in CUR offered a residual collection service only in 2012 (6.8%) compared to 2010 (1.15%) and 2011 (4.98%). This increase may be due to the more accurate recording, by collectors, of apartments served. Apartment blocks are often only provided with residual bins due to the misuse of the MDR bin when provided.

Table 9-4 details the quantity of residual household waste collected in CUR between 2010 and 2012. Details of the residual household waste collected per household served are also provided.

Table 9-4: Residual Kerbside Household Waste Collected in CUR 2010 - 2012

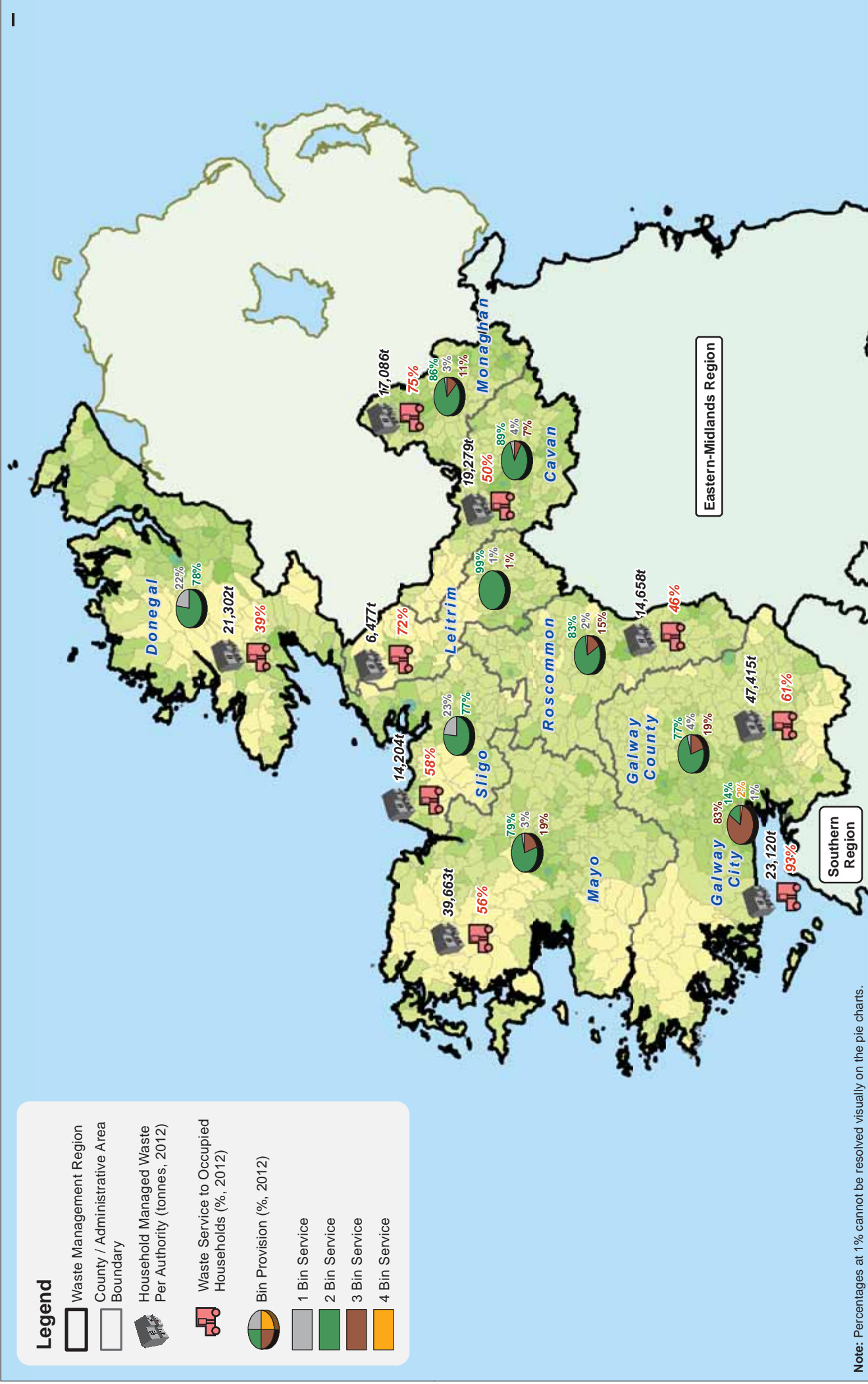
Year	Residual kerbside household waste collected (tonnes)	Residual kerbside household waste collected / household served (tonnes/household)
2010	126,658	0.75
2011	126,972	0.74
2012	119,368	0.685

The residual kerbside household waste collected in the CUR decreased by 6% in 2012 compared to 2011. The residual waste collected per household served varies across the local authorities within the region.

9.2.3 Mixed Dry Recyclables (MDR) Waste Collection Service

Almost all householders on a kerbside collection service can avail of a MDR collection and typically the following dry recyclable materials are permitted to be accepted in the MDR bin:

- Newspapers, magazines, mail-shots and office paper;
- Cardboard (i.e. cereal boxes washing powder boxes);
- Plastic bottles (i.e. drinks, shampoos);
- Tetrapaks;
- Cans and tins (i.e. drinks cans, tinned food cans); and
- Plastic film/packaging.



Note: Percentages at 1% cannot be resolved visually on the pie charts.

Regional Waste Plans, SEA and AA

File Ref: MDR0998A;c0028 F01

Figure 9-5 Waste Services in the Connacht-Ulster Region

Figure 9-4 shows the percentage of householders provided with a residual and MDR collection service in the CUR between 2010 and 2012. This percentage decreased slightly in 2012, corresponding to the increase in the percentage of householders provided with a residual collection service only.

Table 9-5 details the quantity of MDR household waste collected in CUR between 2010 and 2012. Details of the MDR household waste collected per household served are also provided

Table 9-5: MDR Kerbside Household Waste Collected in CUR 2010–2012

Year	MDR kerbside household waste collected (tonnes)	MDR kerbside household waste collected / household served (tonnes/household)
2010	39,372	0.233
2011	41,209	0.24
2012	39,869	0.228

The quantity of MDR household waste collected in CUR has remained largely stable year on year. A reduction in personal disposable income has resulted in householders spending less and generating less waste and recycling more.

9.2.4 Organic Waste

Household waste collectors must now also provide a minimum three-bin collection service, i.e. organic waste bin in addition to the MDR and residual bins, in specified areas. In accordance with the regulations brown bins will be rolled out to most towns and villages within the CUR by July 2016. Further details of the regulations are provided in **Chapter 3**.

As is evident from **Figure 9-6**, the percentage of householders provided with a brown bin collection service in the CUR has shown a steady increase since 2010, with 22% of householders on a collection service provided with a brown bin at the end of 2012. In 2012 some rural counties did not yet have this service (Donegal and Leitrim); however, since that time the service has been provided in Leitrim. It is expected that this figure will increase over the coming years in response to regulatory timelines.

Figure 9-6 shows the percentage roll-out of the household kerbside organic waste bin by local authority area within the CUR between 2010 and 2012.

Figure 9-6 shows the progress of the roll-out of the organic bin in local authority areas in the region. It also demonstrates that certain areas had very little or no roll-out of kerbside organic waste collection services by the end of 2012 (although it is noted that there was no legal requirement to provide the service until mid-2012).

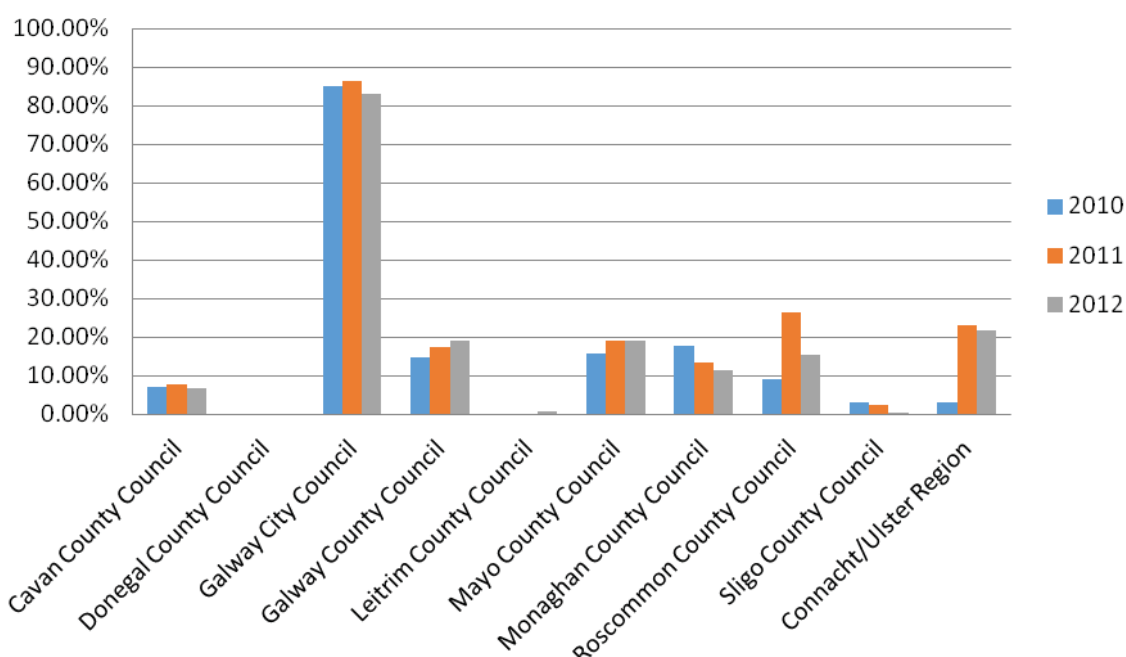


Figure 9-6 Households with a Kerbside Organic Collection Service in CUR 2010-2012

Table 9-6 details the quantity of organic household waste collected in CUR between 2010 and 2012. Details of the organic household waste collected per household served are also provided.

Table 9-6: Organic Kerbside Household Waste Collected in CUR 2010–2012

Year	Organic kerbside household waste collected (tonnes)	Organic kerbside household waste collected / household served (tonnes/household)
2010	7,847	0.046
2011	8,864	0.051
2012	10,351	0.059

The organic household waste collected in CUR has increased year on year between 2010 and 2012, corresponding to the increase in percentage of households provided with an organic bin in response to regulatory requirements.

Due to the phased rollout of the organic bin over the period 2010–2012 the quantities of organic waste collected per household are an underestimate of the total quantity of organic waste generated.

9.2.5 Glass

Some household kerbside collectors provide a fourth bin to their customers for the collection of source-segregated glass. This service is generally being offered in the larger urban areas, with most local authority areas within the CUR having no source-segregated glass collection service. In 2012 household waste collectors were required to report the number of households provided with a separate glass collection service. **Figure 9-7** shows the percentage of householders with a source-segregated glass collection service in the CUR in 2012.

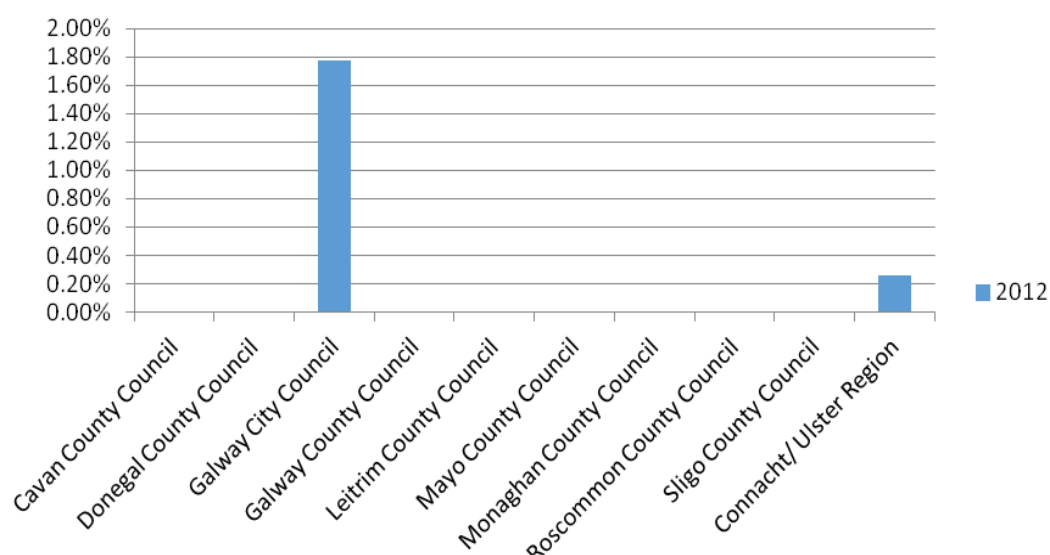


Figure 9-7 Percentage of Householders with a Segregated Glass Collection Service in 2012

At the end of 2012 0.26% of households with a collection service in the region were provided with a source-segregated glass collection service. The availability of this service is only evident in the Galway city area.

Table 9-7 details the quantity of source-segregated glass collected in the CUR between 2010 and 2012. Details of the source-segregated glass collected per household served are also provided.

Table 9-7: Kerbside Household Glass Collected in CUR 2010–2012

Year	Kerbside household glass collected (tonnes)	Kerbside household glass collected / household served (tonnes/household)
2010	5	0
2011	278	0.0016
2012	387	0.002

Policy

The kerbside collection service in the region captures the biggest volume of residual and recyclable waste from householders. Over the plan period the local authorities in the region will aim through regulatory measures to maintain and develop the existing systems so that the highest number of households possible are part of a reliable and cost-effective three-bin system.

Local authorities will work with householders, residents and collectors to ensure consistent compliance with the regulations in place for managing household waste. This approach will have environmental and social benefits for the region.

Policy:

- FI. Enhance the enforcement of regulations related to household waste to ensure householders, including apartment residents, and owners are managing waste in accordance with legislation and waste collectors are in compliance with regulatory requirements and collection permit conditions.

9.3 NON-KERBSIDE HOUSEHOLD WASTE

Approximately 19% of the HWM in CUR in 2012 was not collected at kerbside. This 19% consists of 3% from bulky household waste collections and 16% which was otherwise brought for treatment (bring banks, civic amenity facilities, directly to landfill, to retailers/collection days in the case of WEEE and portable batteries). **Table 9-8** details the quantity of non-kerbside HWM collected within the CUR for 2010–2012.

Table 9-8: Details of the Non-Kerbside HWM within the CUR 2010–2012

Year	Non-Kerbside Household Waste Managed (tonnes)	Non-Kerbside Household Waste Managed / inhabitant (tonnes/inhabitant)
2010	47,299	0.056
2011	49,507	0.06
2012	40,544	0.05

The non-kerbside HWM within the CUR fluctuated since 2010, increasing by 4.6% in 2011 and then decreasing by 18% in 2012. The decrease in 2012 was primarily due to a significant drop in the quantity of residual waste delivered directly to landfills due to the closure of a number of the landfills within the CUR (refer to **Chapter 12**). The reduction in the quantity of waste collected at bring banks and civic amenity sites has also contributed to a reduction in the quantity of non-kerbside HWM.

9.3.1 Civic Amenity Sites

Civic Amenity Sites (CASs) are an important element of the regional waste infrastructure, providing an outlet for householders to drop off different types of materials. These materials are generally sent off-site for recycling, recovery or disposal treatments depending on the nature of the wastes.

Civic Amenity Sites are distinct from bring banks in that they are generally located within purpose built sites, are manned by permanent full-time staff, from either the local authority or a private contractor, have restricted opening hours, and accept an extensive range of materials, including hazardous materials at some sites.

Civic Amenity Sites in the CUR are generally owned by local authorities, and are operated either by the authorities or by private operators on their behalf. A small number of sites have been developed by private waste operators, usually on or adjacent to licensed facilities.

Table 9-9 details the total number of Civic Amenity Sites in the CUR and the waste quantities collected, for the years 2010–2012. Excluding the WEEE and batteries collected, the tonnage of household waste collected at Civic Amenity Sites accounted for approximately 8% of the HWM in 2012 and this has contributed significantly to the household recycling rate.

Table 9-9: Details of the Civic Amenity Facilities in the CUR 2010–2012

Year	Number of civic amenity sites	Number of civic amenity sites per 50,000 inhabitants	Waste collected (t)	Waste collected (t) per inhabitant
2010	31	1.85	24,600	0.304
2011	31	1.85	23,099	0.027
2012	34	2.03	17,643	0.021

In 2012 there were 34 Civic Amenity Sites in operation in the CUR, which equates to an average of 2.03 sites per 50,000 inhabitants. The number of Civic Amenity Sites had increased slightly year on year since 2010. However, the number of facilities per 50,000 inhabitants varies considerably across the region.

Despite the increase in the number of Civic Amenity Sites within the region, the quantity of waste collected decreased year-on-year since 2010. The reduction in the quantity of residual waste collected at the Civic Amenity Sites is the main contributing factor. There was also a significant reduction in paper, card and metal recyclables presented.

9.3.2 Bring Banks

Bring Banks are unmanned, fixed receptacles used for the collection of non-hazardous, dry recyclables such as segregated glass (clear, brown and green) and ferrous and non-ferrous metals. These facilities are classified as “recovery” facilities. Bring Banks have been established with capital funding from DECLG and Repak. For the most part the bottle banks are self-financing, with the operational costs offset by income from textiles and the Repak rebate for recycling materials.

Table 9-10 gives the number of bring banks, the quantity of waste collected at bring banks and the total number of bring banks per 50,000 inhabitants in CUR, for the years 2010–2012. The total number of bring banks in the region per 50,000 population is 79. The tonnage of household waste collected at bring banks accounted for approximately 7.4% of the HWM in 2012 and this has contributed significantly to the overall household recycling rate in recent years.

Table 9-10: Details of the Bring Banks in the CUR 2010–2012

Year	Number of bring banks	Number of bring banks per 50,000 inhabitants	Waste collected (t)	Waste collected (t) per inhabitant
2010	441	2.63	15,380	0.02
2011	443	2.65	16,305	0.02
2012	437	3	15,687	0.02

9.3.3 PTUs

Pay-to-Use (PTU) waste compactor units entered the national household collection market recently, providing a popular outlet for the disposal of household residual waste, and are primarily located on garage forecourts. There is currently one PTU located in the CUR. The DECLG has indicated that the future activity of PTUs in the household waste market will be regulated in line with all other waste service providers.

9.3.4 Non-Kerbside Organic Waste

In addition to the collection of household source-segregated organic waste at the kerbside, this waste type is also collected at a number of civic amenity sites within the region. **Table 9-11** details the total quantities of organic waste (food and green waste) collected at civic amenity sites, in the CUR, in years 2010–2012.

Table 9-11: Household Organic Waste collected at Civic Amenity Facilities 2010–2012

Year	Green and Food Waste (tonnes)
2010	1,729
2011	1,215
2012	929

The organic waste collected at civic amenity sites consists mainly of green waste (food waste accounted for 8.9% of total organic waste collected in 2012) and accounts for approximately 5.2% of the total waste collected at civic amenity sites. The quantity collected has decreased year on year between 2010 and 2012, with a 23% decrease in 2012 compared to 2011.

9.3.5 Bulky Waste

Bulky waste is a term used to describe items that are generally too large to be accommodated in a standard 240 litre wheeled bin, i.e. furniture, large garden waste, garage clear-outs, etc. This waste is generally collected by authorised waste collectors in skips and details of the quantities collected are reported annually by collectors. A number of the civic amenity sites within the region also accept bulky waste materials.

Table 9-12: Quantities of Household Bulky Waste Collected 2010–2012

Collection System	2010	2011	2012
Household bulky waste collected at civic amenity facilities (t)	216	520	598
Household bulky waste collected by authorised collectors (t)	5,094	8,740	5,424
Total Household bulky waste collected (t)	5,310	9,260	6,022

Table 9-12 details the quantities of household bulky waste collected by authorised collectors and collected at civic amenity sites, within the CUR, for the years 2010–2012. The quantity of household

bulky waste collected appears to fluctuate year on year: this may be a data recording issue with the way bulky waste is classified or reported.

9.3.6 Household WEEE

WEEE includes both hazardous and non-hazardous fractions. Hazardous WEEE includes large domestic items such as fridges and freezers and items such as cathode ray tubes

Ireland has a well-established regulatory system for the collection and management of household WEEE. Householders can bring their old and unwanted WEEE for deposit free of charge at:

- Retailer premises where a similar item is being purchased;
- Retail premises with EEE sales area greater than 400 sq m², where the WEEE item is small (less than 25 cm) and where similar item is not being purchased;
- Civic amenity facility; and
- Pre-organised one-off collection events.

Table 9-13 details the quantity of household WEEE collected, through the compliance schemes (WEEE Ireland & ERP Ireland), in the CUR for the period 2010–2012³⁹. This data does not include an estimate of WEEE segregated from skips and similar sources, therefore the data cannot be compared to the National Waste Reports (Environmental Protection Agency, 2010–2012).

Table 9-13: Quantity of Household WEEE Collected by the Compliance Schemes 2010–2012

	2010	2011	2012
Total household WEEE collected for recovery (t)	5,691	5,059	5,076
Total household WEEE collected for recovery per inhabitant (kg)	7	6	6

The quantity of WEEE collected in the CUR decreased between 2010 and 2012. In 2012 6 kg of household WEEE was collected per inhabitant in the CUR; this correlates favourably with the 2012 national figure of 7.5 kg per inhabitant reported⁴⁰ by the EPA. Despite these decreases the quantity of WEEE collected per inhabitant far exceeds the target of 4 kg per inhabitant specified in the 2014 regulations.⁴¹ This target applies until 2015.

Table 9-14 details the WEEE compliance scheme collection points and the quantities of waste collected at each of the collection points from 2010 to 2012. The data shows that although the retail collection points account for the majority of the WEEE collection points in the region, 55% of the total WEEE collected is collected at Civic Amenity Sites.

In addition to the fixed WEEE collection points, a large number of one-off collection events are held each year within the CUR. These events are organised by the WEEE compliance scheme operators in

³⁹ This data does not include an estimate of WEEE segregated from skips and similar sources so it cannot be compared to NWR data, which does include an estimate of these.

⁴⁰ EPA National Waste Report 2012.

⁴¹ European Union (Waste Electrical and Electronic Equipment) Regulations, 2014 (S.I. No. 149).

conjunction with the relevant local authority and account for a significant proportion of the WEEE collected within the region each year, i.e. 14% in 2012.

Table 9-14: Quantity of WEEE collected at Compliance Scheme Collection Points

	2010	2011	2012
Number of retailer collection points	121	126	123
Quantity of household WEEE collected at retailers (t)	1,707	1,417	1,561
Number of civic amenity facility collection points	31	32	32
Quantity of household WEEE collected at civic amenity facilities (t)	5,166	3,027	2,797
Number of one-off collection days	39	74	99
Quantity of household WEEE collected at one-off collection events (t)	433	615	717

9.3.7 Batteries

Since September 2008, all shops that sell batteries must take back similar waste battery types for free, regardless of whether the customer purchases anything in their store. Batteries can also be deposited at agreed collection points such as schools, public buildings and civic amenity facilities. Batteries are collected by the compliance scheme operators namely WEEE Ireland and ERP Ireland.

Table 9-15 details the quantity of portable and non-portable batteries collected in the CUR. Nationally there is 140 tonnes of portable lead acid batteries collected by the compliance schemes which cannot be broken down per region and hence is not included in the portable battery tonnage for the CUR. The total quantity of batteries collected decreased significantly in 2011 compared to 2010, with a slight recovery in 2012. Although Ireland has met the 25% collection target it is at risk of failing to meet the 45% collection target by September 2016.

Table 9-15: Quantity of Waste Batteries Collected in the CUR 2010–2012

	2010	2011	2012
Portable batteries collected (t)	31.238	64.5	56.766
Portable batteries collected per inhabitant (g)	37.31	77.05	67.79
Non-portable batteries collected (t)	3,349	1,925	2,423

9.3.8 Household Hazardous Waste

Common household hazardous wastes include the following:

- WEEE including hazardous WEEE;
- Batteries including hazardous batteries;
- Paints, thinners, wood preservatives & adhesives;
- Aerosol cans;
- Out-of-date medicines;

- Fluorescent tubes, lamps and light bulbs; and
- Waste mineral oils.

With the exception of out-of-date medicines, most of the civic amenity facilities within the CUR accept the above household hazardous wastes; these may be subject to some charges, apart from the WEEE and batteries which must be accepted free of charge.

Table 9-16 details the total quantities of household hazardous waste collected at civic amenity facilities, in the CUR, in 2010–2012.

Table 9-16: Household Hazardous Waste Collected at Civic Amenity Sites in CUR in 2010–2012

Year	Batteries (t) ⁴²	Waste mineral oils & filters (t)	Paint & varnish (t)	WEEE (t)	Household hazardous waste (t)	Other (t) ⁴³	Total (exc batteries)
2010	127	72	126	3,541	4	4	3,747
2011	56	59.7	235.4	3,023	42.9	40.8	3,402
2012	171	26	184	3,037	7	42	3,296

The quantity of household hazardous waste collected at Civic Amenity Sites decreased slightly year on year between 2010 and 2012; nevertheless it accounted for approximately 18.6% of the total waste collected at civic amenity facilities each year, with WEEE by far the largest component.

Out-of-date medicines are accepted at some Civic Amenity Facilities. The “Dispose of Unused Medicines Properly” (DUMP) campaign has been organised by a number of HSE areas but not within the CUR. Community pharmacists supported by local authorities allow members of the public to return unused or out-of-date medicines to participating pharmacies free of charge for specific periods each year. The campaign serves to prevent accidental poisoning, overdose, inappropriate sharing of medicines and inappropriate disposal of medicines.

9.4 UNMANAGED HOUSEHOLD WASTE

The figure for unmanaged household waste is an estimate of the quantity of waste generated by households but not captured via one of the kerbside or non-kerbside collection systems. The EPA’s calculation method was used to estimate the quantity of unmanaged household waste presented in this plan. Details of this calculation are provided in Appendix M of the *National Waste Report 2012*.

Table 9-17 details the estimated quantity of unmanaged household waste generated in the region for 2012. The 2012 figure is an accurate estimation and the quantity reported, over 67,800 tonnes, accounts for approximately 24% of the household waste generated. The challenge of addressing the quantity of unmanaged waste is not confined to the CUR, with similar levels of unmanaged waste recorded in other regions.

⁴² 80% of which (in t) are lead acid.

⁴³ Other = tyres, aerosols, gas cylinders, books, miscellaneous recyclables, etc.

Table 9-17: Estimate of Unmanaged Household Waste 2012

Year	Unmanaged Household Waste (estimate) (tonnes)	Unmanaged Household Waste (estimate) / inhabitant (tonnes/inhabitant)
2012	67,847	0.08

The accuracy of the estimated quantity of unmanaged household waste generated will improve when results from the newly incorporated green module in the Central Statistics Office's Quarterly National Household Survey (QNHS) become available. The green module will provide information on the waste management options availed of by households. **Figure 9-8** illustrates the extent of one-off housing in the region, which is part of the difficulty in relation to unmanaged waste due to the dispersion of dwellings.

Policy

Unmanaged waste remains a problem in the region which the local authorities intend to tackle over the plan period. Unmanaged waste leads to backyard burning and illegal waste activities. The extent of these polluting activities in the region is unknown but the potential is significant considering the numbers of households currently not on a collection service. The environmental consequences of unmanaged waste were documented in the evaluation reports, with backyard burning leading to uncontrolled emissions to the air impacting on local air quality and the climate while discharges from illegal dumping can impact on receiving waters and the landscape. The consequences and costs of these acts to local authorities and Irish society needs to be addressed and over the plan the local authorities will implement progressive actions.

Policy:

G4. Implement a co-ordinated approach to address unmanaged waste and the potential impact to the environment and human health.

9.5 COLLECTION CHARGES

In relation to the charging mechanism for household customers the waste collection permits require the collector to implement a "pay-by-use" charging system, i.e. pay-by-weight, pay-by-lift or pay-by-tag. A number of household waste collectors within the region, utilise microchip technology to identify and weigh bins.

The following are examples of typical charging mechanisms used by household waste collectors within the CUR:

- The customer is charged a standard six monthly service fee and subsequently charged per lift each time the bin is emptied. The charge per bin depends on the type of bin, i.e. the residual bin incurs the highest charge;

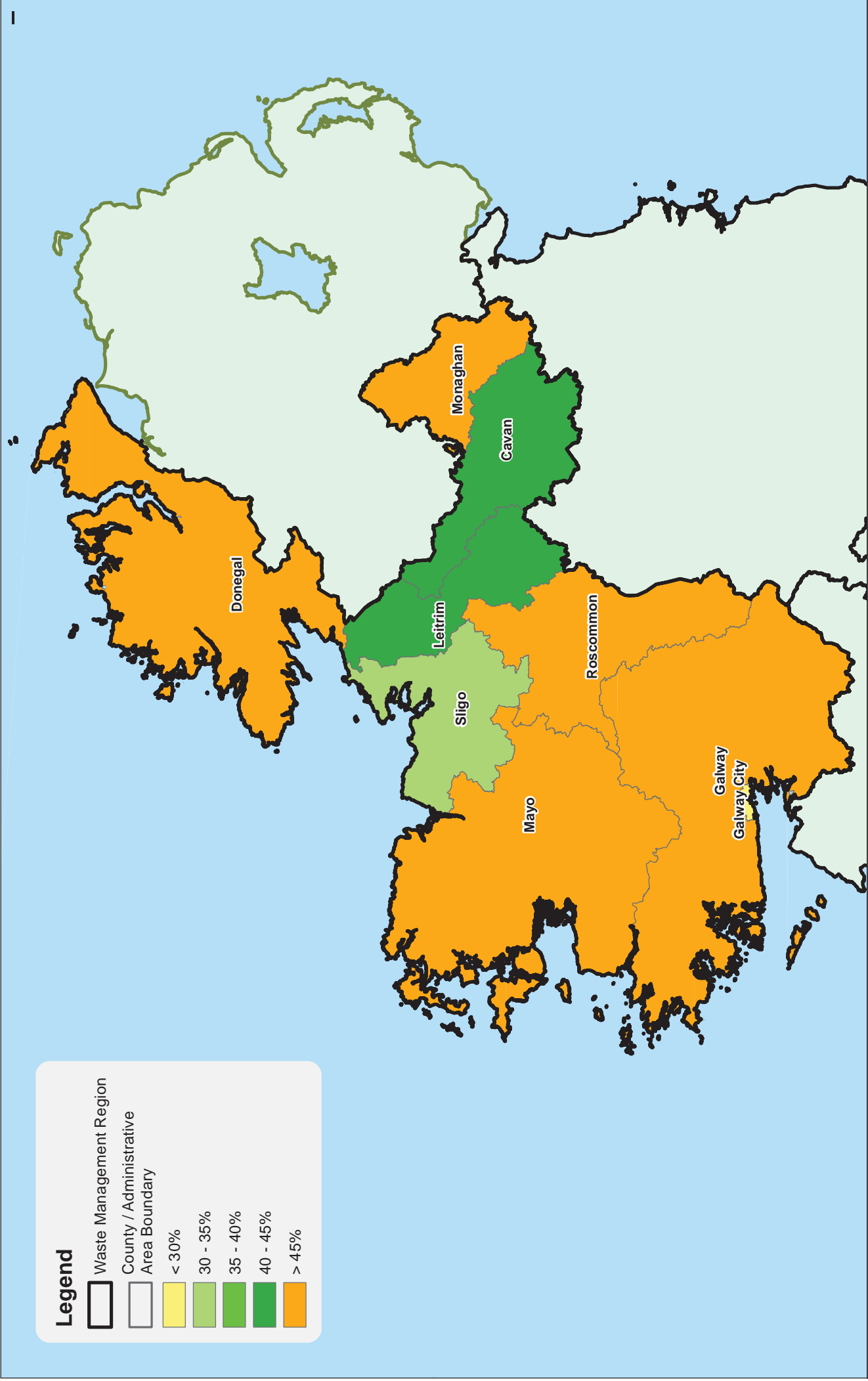


Figure 9-8 One-off Housing as a Share of All Households Built Since 2006 by County

- The customer is charged according to weight of their residual bin, i.e. different lift bands (assessed on the customer's previous billing period) or actual weight of residual bin (price/kg) or a specific weight allowance with excess weight charged per kg. Dry recyclable and organic bins are collected for free;
- The customer is charged a standard six monthly fee which includes a number of tags that are placed on the residual bin each time it is presented for collection. Unused tags can be redeemed as part of the next six monthly fee. Dry recyclable and organic bins are collected for free; or
- Flat rate charging where the customer is charged a set fee for a defined period, with no pay-by-use conditions.

It should be noted that in recent times the pay-by-use condition has proved very difficult to enforce, with a number of collectors operating a flat rate charging mechanism. The average yearly household charge within the CUR is approximately €300 where a 240 litre residual bin is provided.

The DECLG is currently preparing a package of legislative measures related to the household waste collection market. One of the proposed changes will be the mandatory implementation of the pay-by-weight (per kilogram) system of charging for household waste collection. This will result in significant changes to the current collection charges mechanisms, ensuring a level playing field for all operators and full implementation of the polluter pays principle.

There are no charges to householders for the use of bring banks, and charges at civic amenity facilities and landfills vary depending on the waste types presented. In most sites within the region segregated recyclables are accepted free of charge or for a nominal fee. Residual waste is accepted at some recycling centres and is generally charged on the basis of volume (by bag or specific rates for cars, vans, trailers, etc.). A number of the recycling centres also accept bulky waste items and the charge generally depends on the item being disposed.

10 MUNICIPAL SOLID WASTE & BIODEGRADABLE MUNICIPAL WASTE

This chapter provides an overview of the management of municipal waste in the region, including biodegradable municipal waste.

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; however, it excludes municipal sludges and effluents. In the context of this plan 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** illustrates that municipal waste managed includes household waste managed, municipal non-household waste and litter and street sweepings.

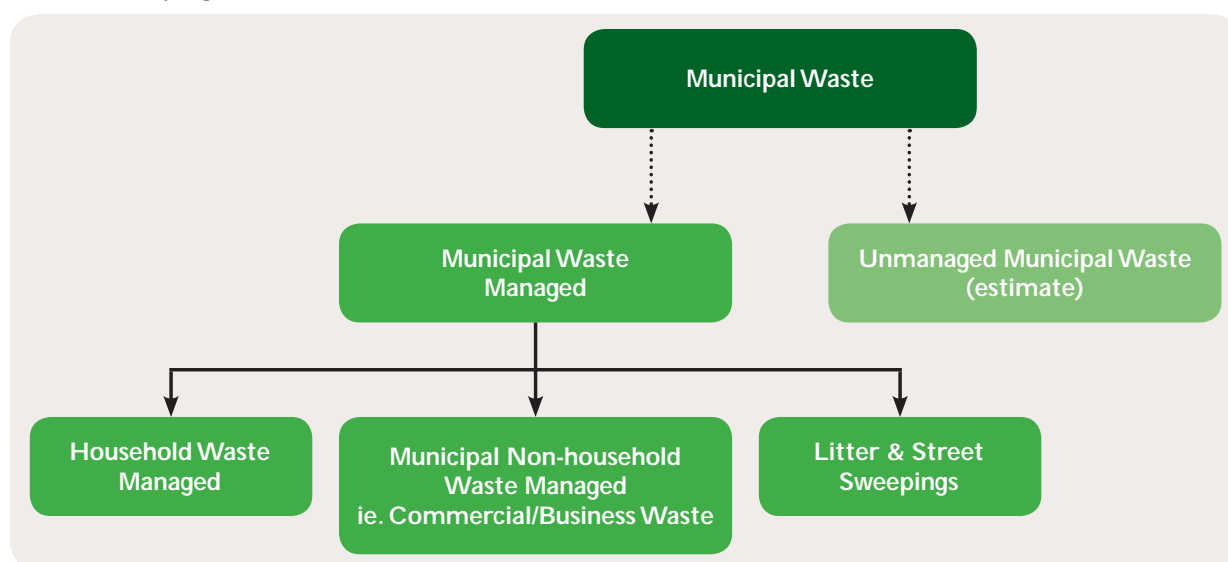


Figure 10-1 Municipal Waste Flow Diagram

Table 10-1 provides details of the municipal waste managed in the CUR in 2012. The national municipal waste managed per inhabitant, reported in the EPA's *National Waste Report, 2012* (EPA, 2014) is also presented. In 2012 the quantity of municipal waste managed in the CUR was 374,496 tonnes.

Table 10-1: Municipal Waste Managed, CUR, 2012

	2012
Municipal waste managed (tonnes)	374,496
Municipal waste managed / inhabitant (tonnes)	0.45
National – Municipal waste managed / inhabitant (tonnes)	0.54

10.2 MUNICIPAL WASTE RECOVERED

The quantity of municipal waste recovered in the CUR 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 CUR in 2012.

Table 10-2: Municipal Waste Recovered in CUR 2012

CUR	2012
Estimate municipal waste recovered (tonnes)	221,535
Estimate municipal waste recovered / inhabitant (tonnes)	0.26
Municipal waste managed – recovered	59%

According to the EPA's National Waste Reports, in recent years there has been a significant increase in the percentage of municipal waste recovered nationally. 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 significant increase in the export of unprocessed municipal waste for incineration abroad.

10.3 MUNICIPAL WASTE DISPOSED

The quantity of municipal waste disposed in the CUR has been estimated using the national disposal rate as reported by the EPA. **Table 10-3** details the municipal waste disposed in the CUR in 2012. It should be noted that not all municipal waste disposed may be disposed within the CUR.

Table 10-3: Municipal Waste Disposed in CUR 2012

CUR	2012
Estimated municipal waste disposed (tonnes)	153,453
Estimated municipal waste disposed / inhabitant (tonnes)	0.18
% Municipal waste managed – disposed	41%

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

- Requirements to divert biodegradable municipal waste (BMW) away 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;
- Increasing mechanical treatment of residual waste at waste facilities, leading to the production of refuse-derived fuel/solid-derived fuel which is used as a fuel in Ireland and abroad; and

- The increased export of unprocessed municipal waste for incineration with energy recovery abroad.

In relation to the diversion of BMW from landfill disposal, 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 in municipal waste accepted. **Table 10-4** details the percentage of BMW in the municipal waste delivered to landfills in the CUR during the period 2011 to 2013 and the national reported percentage of BMW in the municipal waste delivered to landfills (*National Waste Report*).

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

	2011	2012	2013
CUR – % BMW in municipal waste	58%	61.40%	55.8%
National – % BMW in municipal waste	57%	54%	49.48%

The percentage of BMW landfilled in the CUR has decreased year on year since first quantified in 2010. There has been a significant drop in the past two years, with an estimated 55.8% BMW landfilled in the CUR in 2013 (EPA Preliminary Data 2013). While the national trend has shown a decline year on year, the rate of decline has not been as significant within the CUR.

The reduction in the percentage of BMW in the municipal waste landfilled is due to the roll-out of source-segregated commercial and household organic waste systems, the increase in the government landfill levy, which makes pre-treatment more cost-effective, and the economic downturn.

10.4 MUNICIPAL NON-HOUSEHOLD WASTE MANAGEMENT

Municipal non-household 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**.

10.4.1 Collection Practices

At the time of publishing this report, there are approximately 23 companies engaged in the collection of non-household municipal wastes operating across the CUR. 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, whether this is pay by lift or pay by weight or volume or a combination of these charges.

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.

10.4.2 Municipal Non-Household Waste Quantities

The EPA, in its annual National Waste Report (NWR), publishes details of the total quantity of municipal non-household 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 approach facilitates a better classification of municipal and non-municipal waste types, particularly for packaging wastes.

For the purposes of this plan an estimate of the quantity of municipal non-household waste managed within the CUR has been produced and is contained in **Table 10-5**. This was calculated using details from the NWCPO data system and EPA National Waste Report. Estimated figures for municipal non-household 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 tonnages.

Table 10-5: Municipal Non-Household Waste Collected in CUR, 2012

	2012
CUR - Non-household municipal waste managed (t)	156,161
CUR - Non-household municipal waste managed per inhabitant (t)	0.186
National - Non-household municipal waste managed per inhabitant (t)	0.243
CUR - Non-household municipal waste recovered (t)	94,881
CUR - Non-household municipal waste recovered per inhabitant (t)	0.113
National - Recovery rate for non-household municipal waste managed	61%
CUR - Non-household municipal waste disposed (t)	61,280
CUR - Non-household municipal waste disposed per inhabitant (t)	0.073
National - Disposal rate for non-household municipal waste managed	39%

The non-household municipal waste managed in the CUR reached slightly over 156,000 tonnes in 2012. Applying the national rates for recovery and disposal, the estimated tonnages of recovered and disposed of non-household municipal waste for the CUR are 94,881 tonnes and 61,280 tonnes respectively. An increasing quantity of 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 non-household municipal source-segregated organic waste collected in CUR between 2010 and 2012.

Table 10-6: Non-Household Source-Segregated Organic and Residual Waste Collected 2010–2012

	2010	2011	2012
Non-household source-segregated organic waste collected (t)	9,760	9,554	8,156
Non-household source-segregated organic waste collected per inhabitant (t)	0.012	0.01	0.01
Kitchen and Canteen waste (EWC 20 01 08) collected (t) (of Non-household source-segregated above)	5,622	5,685	5,316
Kitchen and Canteen waste (EWC 20 01 08) collected per inhabitant (t)	0.01	0.01	0.01
Non-household municipal residual waste collected (t)	76,271	67,817	63,998

The source-segregated organic waste collected at kerbside is brought either to 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 services, EPA waste characterisation surveys have found significant quantities of BMW in residual bins even where a three-bin service is provided.⁴⁴ This BMW fraction in the residual waste bin is either disposed or recovered.

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 CUR 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 comprises 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 in the region between 2010 and 2012.

Table 10-7: Litter and Street Sweepings Waste Collected within the CUR 2010–2012

	2010	2011*	2012
Total for CUR	9,742	6,774	8,802

*Not all local authorities recorded this data for 2011; for these authorities an average of 2010 and 2012 was used to determine their figure.

The local authority areas of Galway City and Mayo County account for the largest percentage of litter and street sweeping waste.

⁴⁴ <http://www.epa.ie/waste/municipal/>

11 PACKAGING WASTE AND OTHER PRIORITY WASTE STREAMS

This chapter provides an overview of the management of packaging waste and other priority waste streams in the region.

11.1 PACKAGING WASTE

Table 11-1 provides an estimate of the packaging waste managed in the CUR 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 from landfill to energy recovery, which contains a significant element of packaging waste. 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 CUR

Year	Managed (tonnes)	Managed (tonnes/inhabitant)
2010	112,283	0.134
2011	94,996	0.113
2012	97,140	0.116

11.1.1 Packaging Waste Collection & Recovery System

Packaging wastes are 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.⁴⁵ Packaging waste from the processing of municipal residual waste and contaminated packaging from the MDR fraction is being processed into RDF and going for energy recovery.

Packaging waste from the processing of municipal residual waste and contaminated packaging from the MDR waste stream is being processed into refuse-derived fuels (RDFs) and going for energy recovery. 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,

⁴⁵ National Waste Report 2012, EPA (2014).

- 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 that 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 reported⁴⁶ 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: this 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 abandoned the scheme to reduce cost and due to less packaging placed on the market, and some became exempt under the “de minimis” rule.



Figure 11-1 Evolution of Repak Membership 1997–2012⁴⁷

Repak operates the Repak Payment Scheme (RPS) of subsidy payments to fund the recovery of waste packaging 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).

⁴⁶ Forward Together, Annual Report 2013–2014, Repak (2014).

⁴⁷ Review of Producer Responsibility Initiative Model in Ireland, DECLG (2014).

The 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. Subsidies for over 87,000 tonnes of RDF were funded by Repak for contaminated paper and plastic, which would have traditionally gone to landfill, representing an increase of 56% in 2012 versus the previous year.⁴⁷

11.1.3 Self-Compliance

Producers of packaging have the option to self-comply directly with the requirements in the Regulations and 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 there were a total of 136 self-compliers registered with the local authorities (representing 186 unique producers). Twenty-four of these self-compliers were located in the CUR, representing 45 unique producers (refer to **Table 11-2**). From 2011 to 2012 the number of self-compliers reduced slightly from 25 to 24. In 2012 the self-compliers in the CUR put 18,818 tonnes of packaging on the market and subsequently recovered 3,804 tonnes of packaging waste (20%) (EPA, 2014⁴⁸). However, the EPA noted that local authorities reported that a small number 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 those 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 underperforming.

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

Year	No. of self-compliers	No. of premises
2010	24	43
2011	25	43
2012	24	45
CUR 2012 Data	No. of self-compliers	No. of premises
Cavan	4	4
Galway City	3	11
Galway County	4	15
Mayo	3	3

⁴⁸ EPA emailed data 14th August 2014.

Year	No. of self-compliers	No. of premises
Roscommon	5	7
Sligo	1	1
Monaghan	4	4
Leitrim	0	0
Donegal	0	0

Source: EPA NWR 2012.

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 packaging waste (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, and **Table 11-3** shows that inspections have reduced significantly since 2007.

Table 11-3: Packaging Inspection Activities by Local Authorities 2007–2011⁴⁷

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

*Not validated by the EPA.

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



Figure 11-2 Progress Towards EU Packaging Waste Targets

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.⁴⁷ More detail on enforcement is included **Chapter 14**.

11.1.6 Future Activities

The DECLG has undertaken a Review of the Producer Responsibility Initiative 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 report⁴⁷ published as an outcome of the review included 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 and 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; and

- 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 increasing enforcement activities on non-compliant packaging producers.

11.2 CONSTRUCTION AND DEMOLITION (C&D) WASTES

Construction and Demolition (C&D) waste is described in the EPA National Waste Reports 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 16% (517 tonnes) of total C&D waste collected in the CUR in 2012). **Table 11-4** details the quantity of C&D waste collected in the CUR during the period 2010 – 2012.

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

	2010 (tonnes)	2011 (tonnes)	2012 (tonnes)
Total C&D waste collected	383,418	205,773	319,095
Soil and stone waste collected	180,553	133,249	244,329
Contaminated soils collected	8.28	4,803	2,394

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 report⁴⁵ 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 CUR in 2010 to 2011, where the total C&D waste collected reduced by 46% and the soil and stone waste collected reduced by 26%. There were signs of recovery in the C&D sector in the region in 2012, whereby the total C&D waste collected increased by 55% and the soil and stone waste collected increased by 83% compared to 2011. There was a significant increase in the quantities of C&D waste collected in the local authority areas of Galway City and Mayo, which was primarily due to the commencement of a number of significant construction projects in these areas.

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 76% of all C&D waste collected, with the remaining 24% consisting of other C&D waste materials such as rubble, metals, timber, plastic, glass, wood, contaminated soils and mixed C&D waste.

The soil and stone waste collected within the CUR 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 predominantly in the CUR.

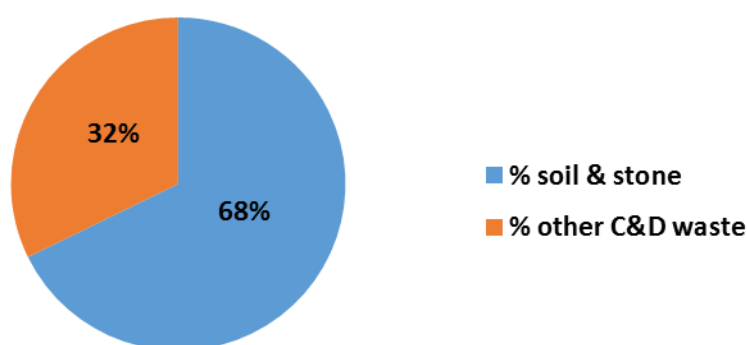


Figure 11-3 C&D Wastes Collected in the Region in 2012

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, and 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 to facilitate the recovery of C&D waste arising in future years. It needs to be considered if the placement of inert waste at many of the types of infill sites used in the past is an appropriate land use strategy or appropriate 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, 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 sets a 70% target for the reuse, recycling and recovery of man-made C&D waste in Ireland by December 2020. The EPA reported⁴⁵ 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 if 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* 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, 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.

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 construction and demolition 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.

C&D fines materials are produced from the trammelling or 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 be carried out 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.

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.

11.3 WEEE

The collection and treatment of WEEE generated in Ireland is 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 require more onerous collection and recovery targets in the period up to 2019. WEEE generated within the CUR is collected by the following means:

- 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 (tonnes) of household and non-household WEEE collected in the CUR between 2010 and 2012. This data does not include an estimate of WEEE segregated from skips and similar sources, therefore the data cannot be compared to the National Waste Reports (Environmental Protection Agency, 2010–2012).

Table 11-5: Quantity of WEEE Collected in the CUR 2010–2012

Year	Quantity of Household WEEE (t)	Quantity of Non-Household WEEE (t)
2010	5,691	1,316
2011	5,059	828
2012	5,076	3,602

Details of the quantity of household WEEE collected were obtained from the PRI compliance schemes and **Section 9.3.6** provides further details.

The industrial and commercial sector also produces WEEE. The quantities reported in **Table 11-5** are calculated by subtracting the quantity reported as collected by PRI compliance schemes from the quantity collected by the authorised collectors. In 2012 the non-household WEEE accounted for approximately 42% of the total WEEE managed in the CUR; however, this is likely to be an underestimate due to smaller non-household WEEE items being included under the household WEEE details.

Ireland has been very successful to date in the implementation of the WEEE Directive and meeting EU targets. In 2010 8.2 kg per capita was collected, which is double the target set by the EU Directive. The existing collection target of at least 4 kg per capita will remain in place until the end of 2015.

The Review of the Producer Responsibility Model in Ireland, July 2014, Report includes a range of recommendations in respect of this waste stream.

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 (tonnes) of portable and non-portable batteries and accumulators collected in the CUR between 2010 and 2012.

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

Year	Quantity of Portable Batteries (t)	Quantity of Non-Portable batteries (t)
2010	31	3,349
2011	65	1,925
2012	57	2,423

Details of the quantity of portable batteries and accumulators collected were obtained from the PRI compliance schemes and **Section 9.3.7** above provides further details.

The non-portable batteries and accumulators primarily consist of lead acid batteries and account for approximately 98% of the total weight of batteries and accumulators collected in the CUR each year. Nationally there is 140 tonnes of portable lead acid batteries collected by the compliance schemes which cannot be broken down per region and hence are not included in the portable battery tonnage for the CUR.

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%.

The Review of the Producer Responsibility Model in Ireland, July 2014, Report includes a range of recommendations aimed at increasing the collection rate for batteries and accumulators to 45% by September 2016.

11.5 WASTE TYRES

The Central Statistics Office indicated that in 2012 approximately 3 million tyres were imported for supply in Ireland in 2013, 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 can cause environmental pollution due to the potential for uncontrolled fires to occur. 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 is currently the only operating compliance scheme.

Table 11-7 details the quantity of waste tyres collected by authorised collectors within the CUR 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 in CUR 2010–2012

	2010	2011	2012
Quantity of waste tyres collected (t)	2,091	2,627	3,593

The quantity of waste tyres collected within the CUR increased by 26% 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 CUR. The quantity collected in 2012 increased by a further 36% when compared with the 2011 figure.

According to the EPA⁴⁵ 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 to Crumb Rubber (Ireland) Ltd for recycling.

The Review of the Producer Responsibility Model in Ireland, July 2014, Report concludes that due to the lack of consistent and accurate data on tyres and waste tyres it is difficult to monitor the performance of this particular initiative. The report highlights the level of illegal storage and the number of non-compliant businesses nationally. It makes a range of recommendations with regard to the improvement of the management of this waste stream.

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 forthcoming Environment Miscellaneous Provisions Bill 2015.

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 is deposited at an ATF. In addition to vehicle owners bringing ELVs to ATFs, authorised collectors also collect ELVs and report the quantity collected as part of their WCP AER return to the NWCPO.

Table 11-8 details the quantity of depolluted ELVs (EWC 16 01 04*) accepted at ATFs within the CUR during the period 2010–2012. As there are issues with the classification of ELVs within the WCP AER reported figures, the details 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 in CUR 2010–2012

	2010	2011	2012
Quantity of ELVs (EWC 16 01 04*only) Collected (t)	17,563	11,597	10,343

The quantity of ELVs accepted at ATFs within the CUR decreased by 34% in 2011 compared to 2010. However, the quantity collected in 2012 was down only 11% 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 10,343 tonnes of ELVs collected in the CUR for 2012 is the equivalent of 1 in every 29 households disposing of a car in that year.

In relation to ELVs collected in Ireland in 2012, the total reuse and recycling rate was 81.8% and total reuse and recovery rate was 87.8%.⁴⁵ These percentages achieve 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 these targets.

The Review of the Producer Responsibility Model in Ireland, July 2014, Report concludes that the Irish ELV system is not performing well, with leakage at a number of stages resulting in the reuse, recycling and recovery targets not being met. The report makes a number of recommendations to improve the management of this waste stream.

12 PRE-TREATMENT & RECOVERY INFRASTRUCTURE

This chapter provides details on pre-treatment and recovery infrastructure in place in the CUR. 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 licence, or the local authorities, under a waste facility permit (WFP) or certificate of registration (CoR). Lists of the facilities authorised by local authorities and the EPA are 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 13⁴⁹ 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 information⁵⁰ 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 in 2012. The figure shows the distribution of WFP and CoR facilities and the scale of capacity authorised in each local authority area.

Currently there are a total of 217 local authority authorised facilities in the region (94 CoR and 123 WFP) with a total market authorisation of over 4 million tonnes.

The data shows that 92% of the authorised capacity is in five local authorities (Cavan County Council, Monaghan County Council, Mayo County Council, Donegal County Council, and Galway County Council) in the region. The local authorities with the least authorised capacity are Sligo, Leitrim, Galway City and Roscommon County Councils, with capacities in these areas considerably less than for the other local authorities.

Donegal County Council has the greatest number of authorised facilities, at 72, with Leitrim County Council hosting the smallest number (3).

⁴⁹ Class 8 of the certificates of registration is a spare class, not used.

⁵⁰ Includes local authority permitting records and Annual Environmental Reports.

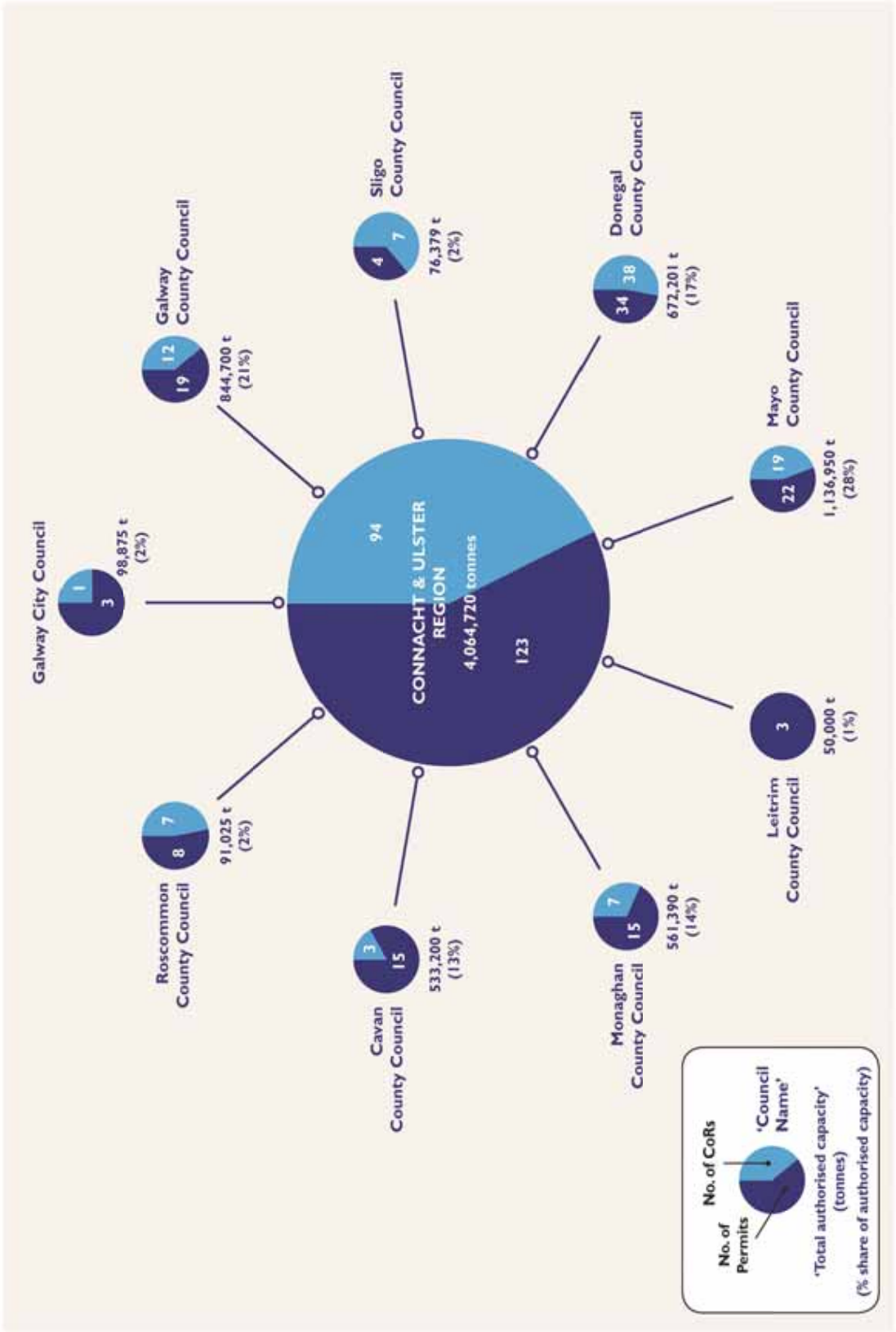


Figure 12-1 Number and Capacity of Local Authority Authorised Facilities in the CUR

In capacity terms Mayo County Council has the greatest percentage of authorised capacity in the region, at 28%, with the lowest level in Leitrim County Council at 1% of the regional total.

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 into eight 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: Details of Facilities Authorised by Type of Authorisation

Group and Description	WFP Classes ⁵¹	COR Classes ⁵²	WFP (No. of Facilities)	CoR (No. of Facilities)
G1 – Store/Processing/transfer of waste incl. MSW	1, 7, 10	1, 7, 10	53	17
G2 – Metals and ELVs	4, 12		46	10
G2a – Other waste vehicles	2	3	3	0
G3 – WEEE, Batteries	3,9	4	0	1
G4 – Land improvement	5, 6	5, 6, 9	8	48
G5 – Biological	8	11, 12	4	2
G6 – Organic landspread		13		0
G7 – Storage of Non-haz & Refrigerant Wastes	11	14	9	0
G8 – Temp. storage		2		16
Total	12 classes	13 classes	123	94

Figure 12-2 provides details of the number of facilities in each group and indicates that group 1, the storage, processing and transfer of waste activities, represents the largest group in terms of numbers of local authority authorised facilities (32%).

Scrap metal and end-of-life vehicle activities (ATF) account for 26% of the facilities authorised by local authorities in the region. The number of facilities in this group amounts to 56.

Group 4, land improvement activities, account for 26% of the facilities authorised in the region also. The activities in this group include back-filling and land improvement.

⁵¹ Third Schedule Part I of the Waste Management (Facility Permit Registration) Regulations, S.I. 821 of 2007.

⁵² Third Schedule Part II of the Waste Management (Facility Permit Registration) Regulations, S.I. 821 of 2007.

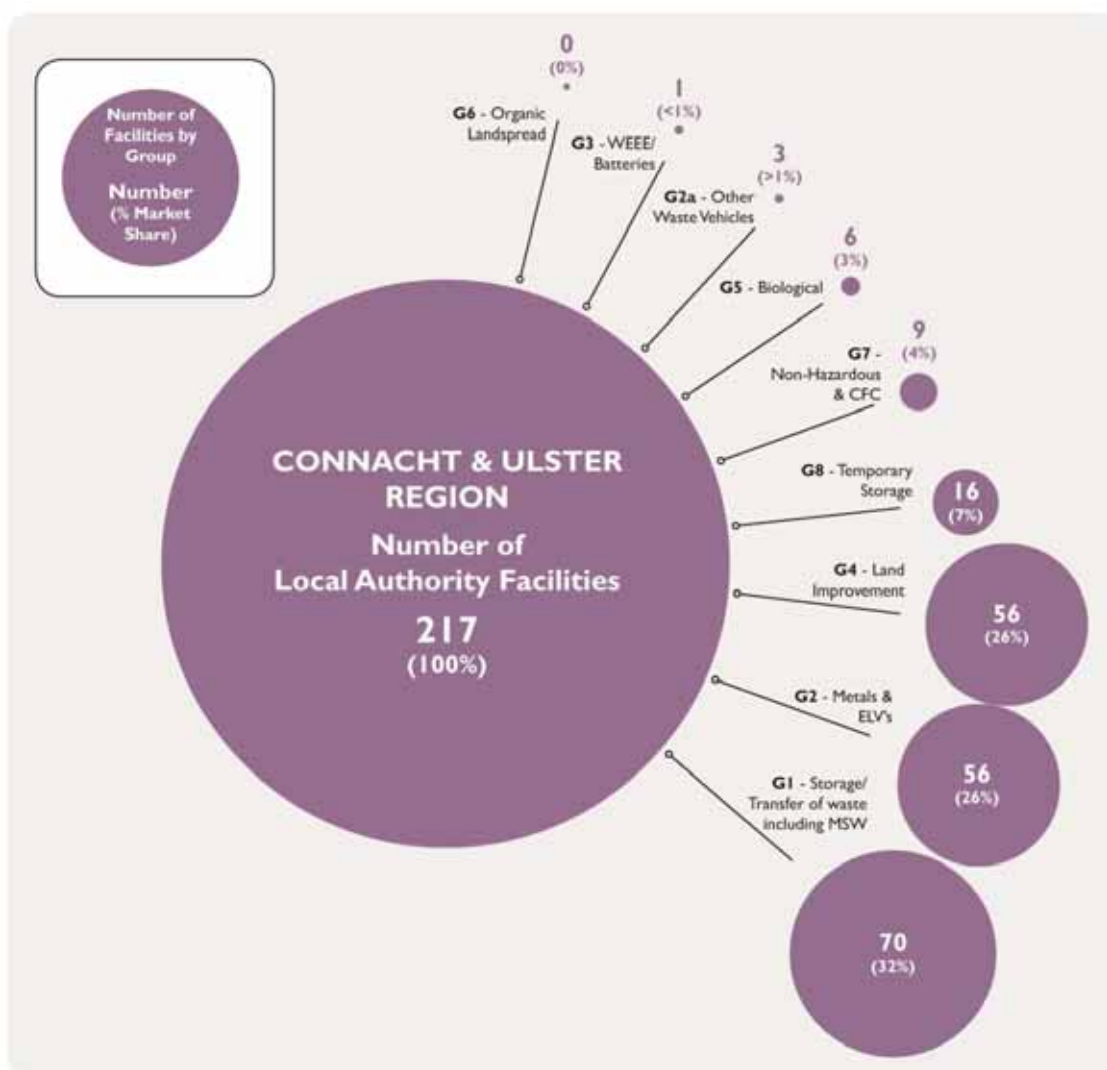


Figure 12-2 Local Authority Waste Authorisations by Group

Figures 12-3 to 12-6 map the local authority authorised waste facilities in the region by group and the supporting inventory is included in **Appendix D**.

Legend

□ Waste Management Region

□ County / Administrative Area Boundary

Local Authority COR and WFP Facilities

✕ Group 1 - Storage / Processing / Transfer of Waste

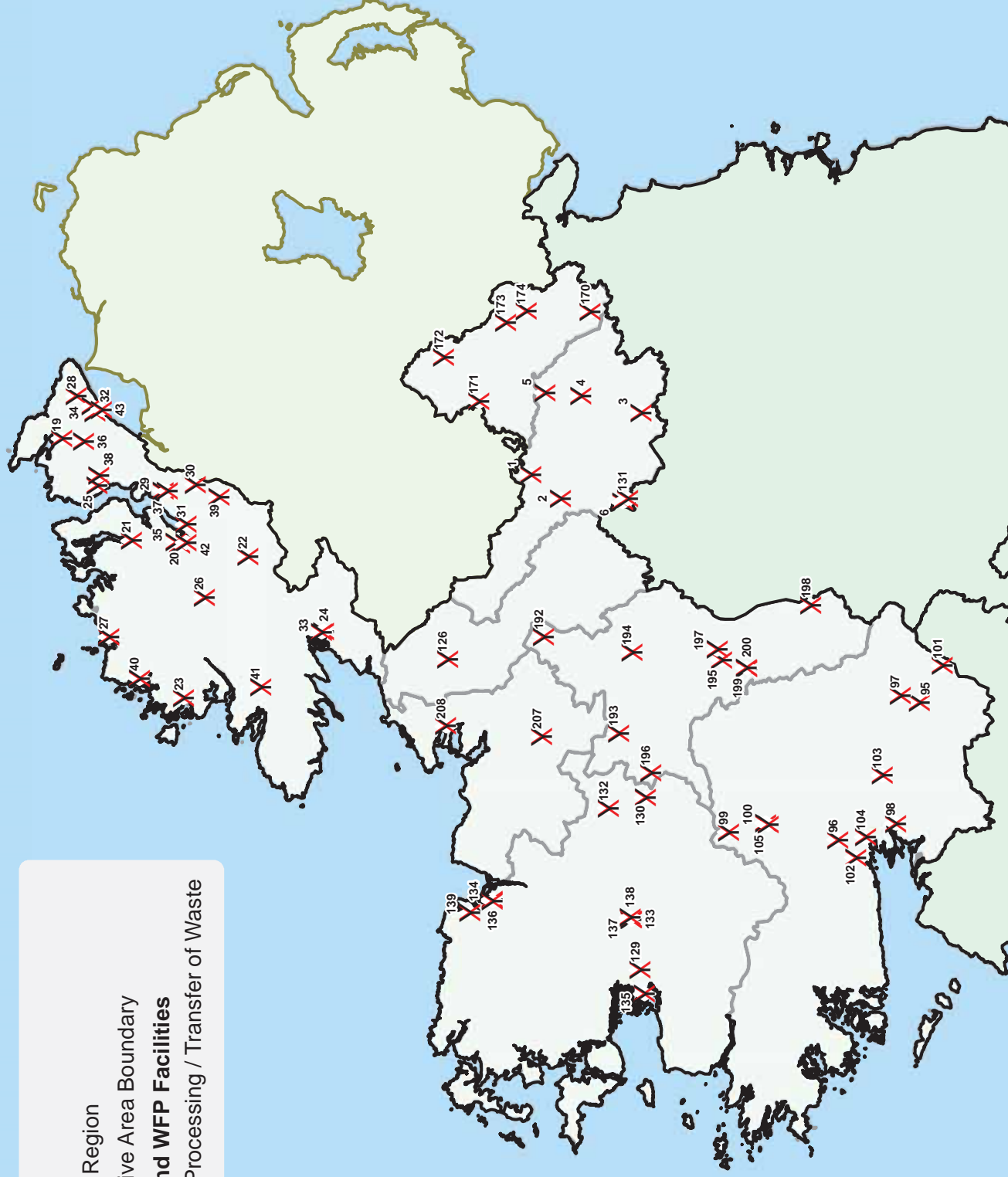


Figure 12-3 Group 1 Local Authority Authorised Waste Facilities in the Connacht-Ulster Region

Legend

- Waste Management Region
- County / Administrative Area Boundary

Local Authority COR and WFP Facilities

- X Group 2 - Metals / ELVs
- X Group 2A - Other Waste Vehicles
- X Group 3 - WEEE / Batteries

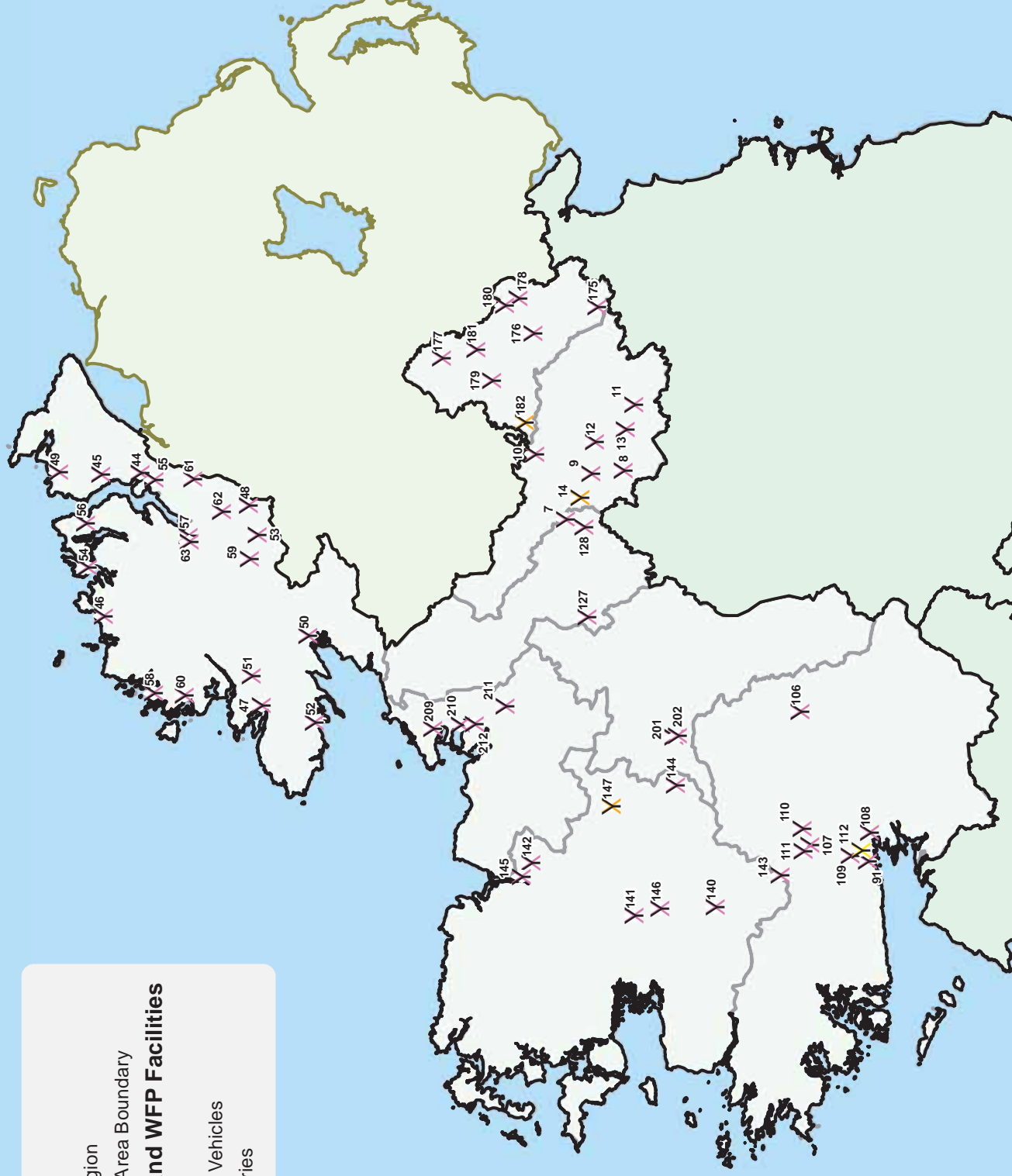


Figure 12-4 Groups 2, 2A and 3 Local Authority Authorised Waste Facilities in the Connacht-Ulster Region

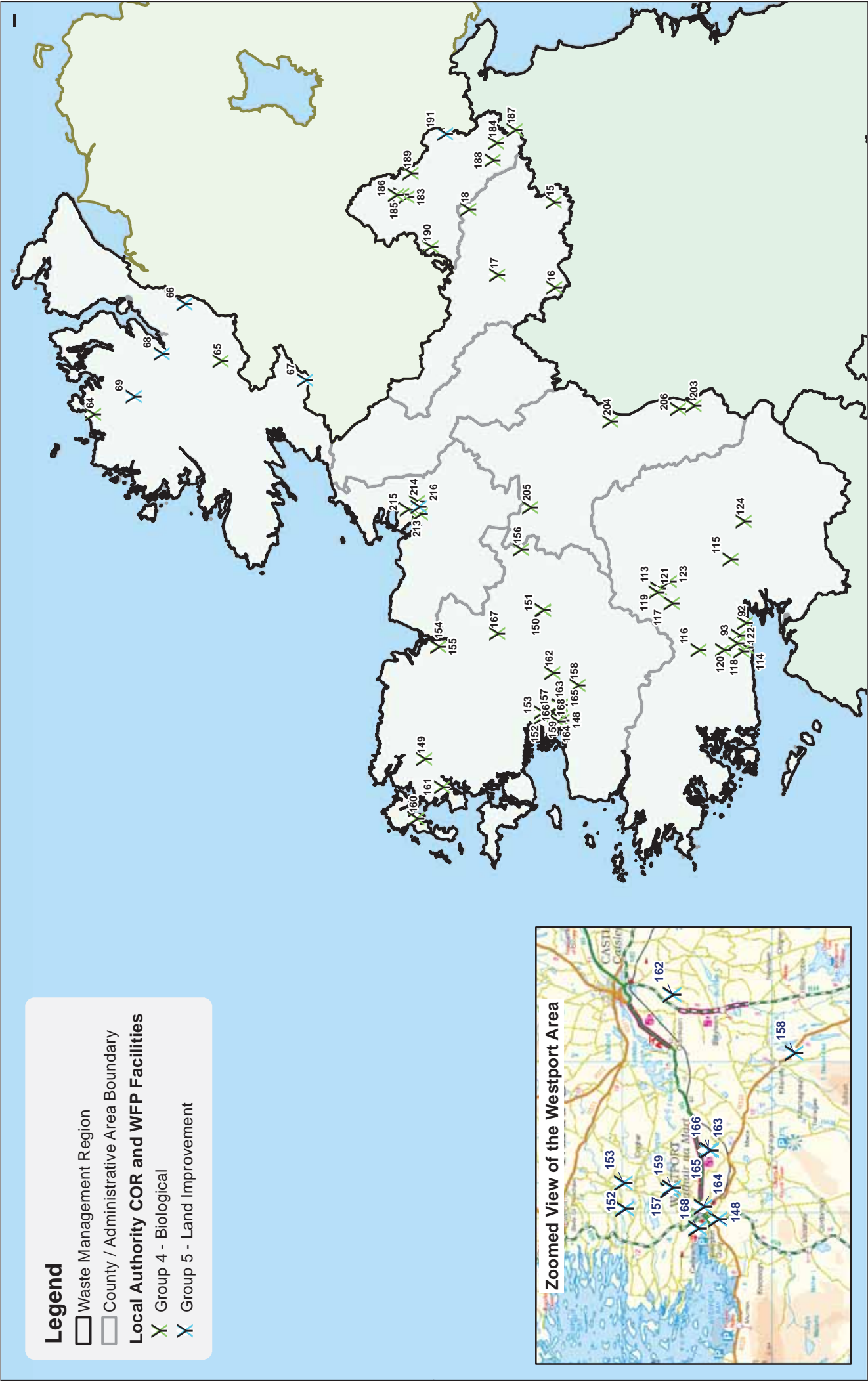


Figure 12-5 Groups 4 and 5 Local Authority Authorised Waste Facilities in the Connacht-Ulster Region

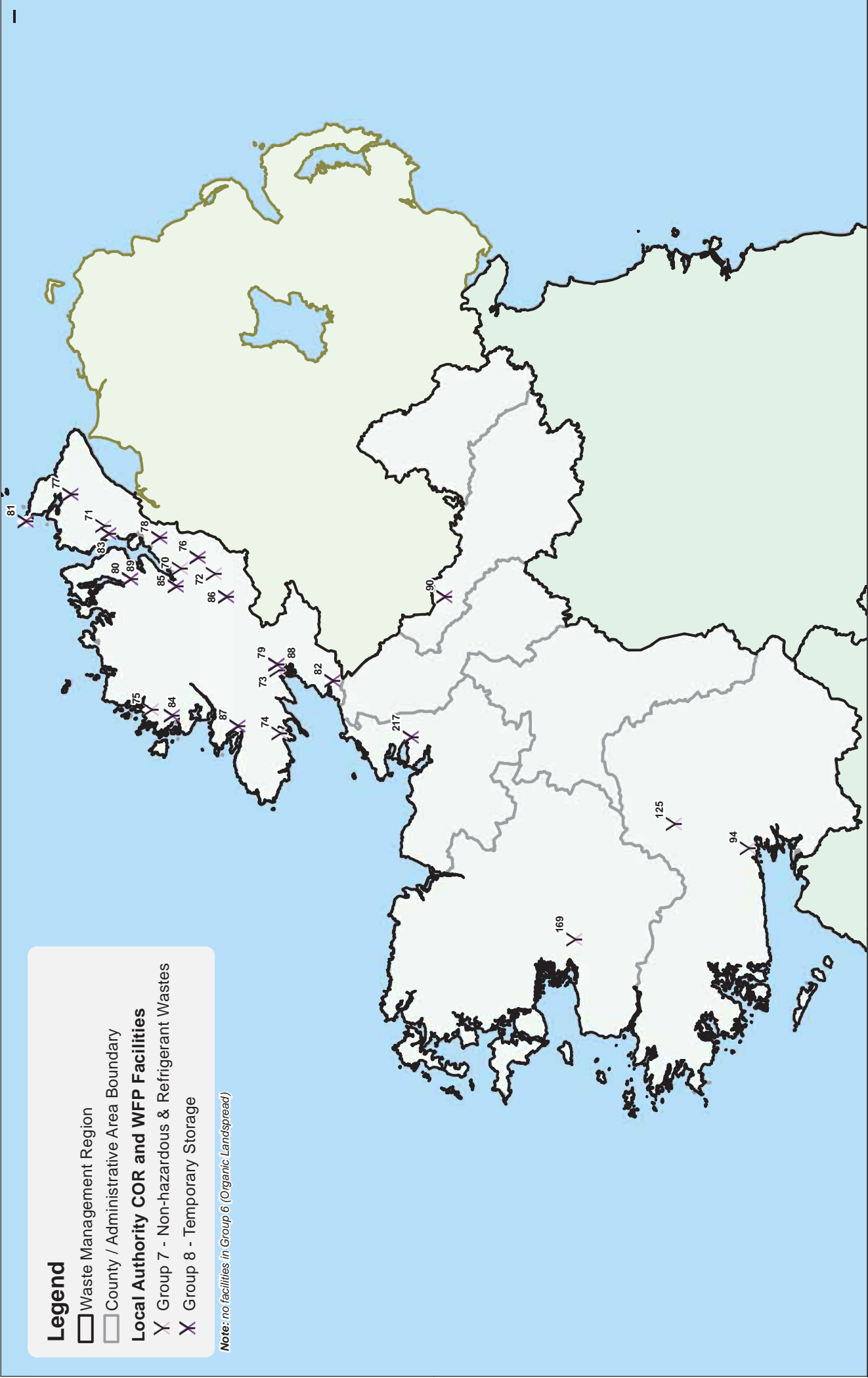


Figure 12-6 Groups 7 and 8 Local Authority Authorised Waste Facilities in the Connacht-Ulster Region

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 CoR to local authorities for smaller scale waste activities listed in the regulations⁵² that are primarily bring facilities (CA sites 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 and recovery activities in the region. **Figure 12-7** maps all the waste licensed facilities in the region as well as one cement kiln that is under construction in the CUR (IPC Licence Ref P0378-02 transferred to IED Licence). The active inert landfill has since closed and the licences for the two composting facilities in Monaghan have lapsed and are not active. An inventory of the mapped facilities is included in **Appendix E**.

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: Details of EPA Authorised Waste Facilities for Pre-Treatment and Recovery

	No. of Active Facilities	Total Capacity (tonnes)
Pre-treatment – Disposal*	6	535,690
Pre-treatment – Recovery	2	48,990
Recovery	1	90,000
Total	9	674,680

*Barna Waste is primarily operating under treatment code D15 but commenced composting in 2013 and was awarded an Animal By-products approval from Department of Agriculture, Food and Marine in December 2013.

The nine active EPA licensed facilities have a combined licensed capacity of 674,680 tonnes in the region. The majority of the EPA authorised facilities in the region are pre-treatment facilities (representing 87% of the total EPA authorised capacity presented in the table). There is one EPA authorised facility involved in recovery, with just 13% of the total capacity.

Policy

The data presented in this chapter shows that the authorised capacity for the treatment of waste is substantial, particularly the extent of local authority authorisations. To date local authorities in the region have not coordinated authorisation activities. This 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 authorities 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.

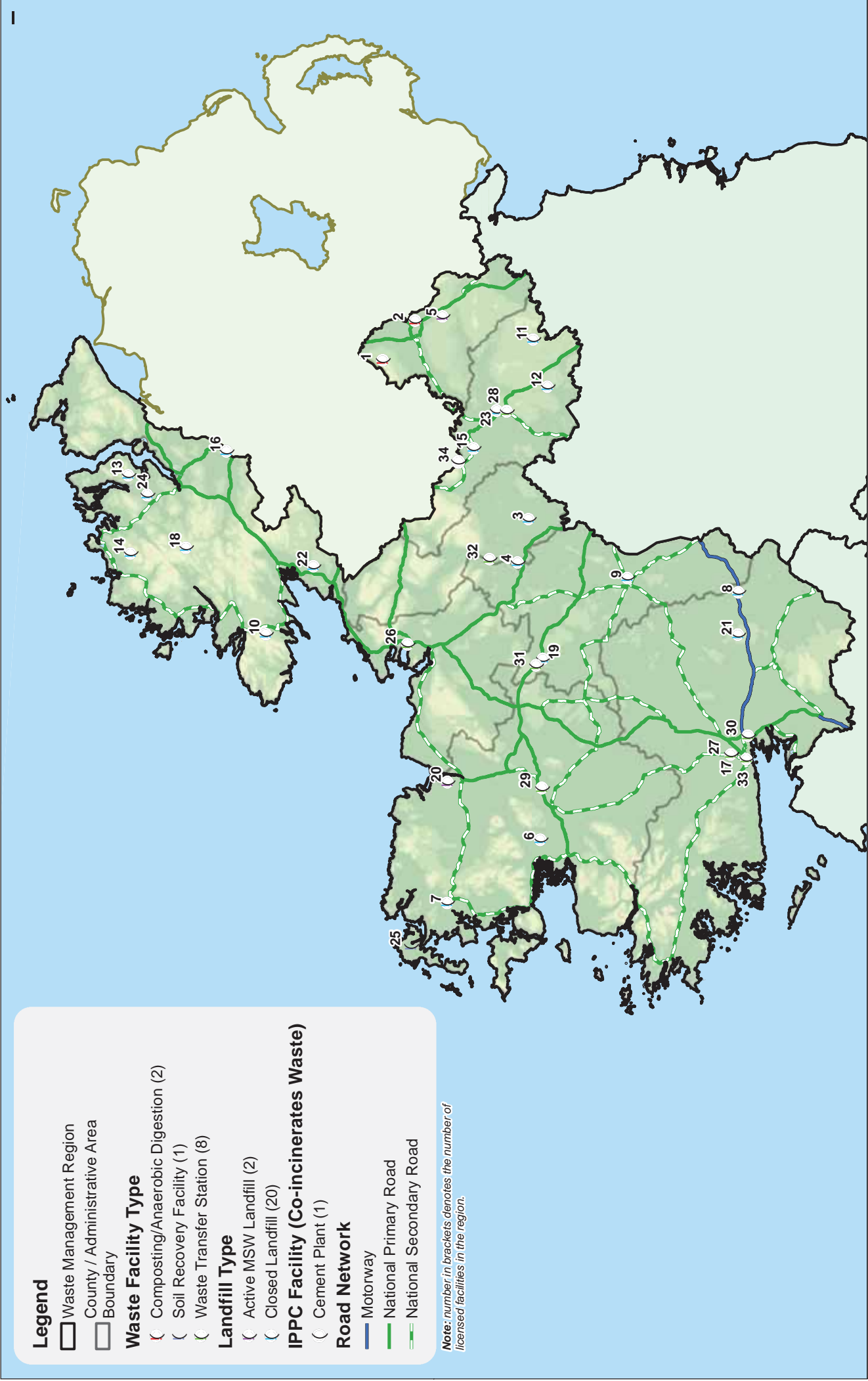
The potential for reprocessors and recyclers of secondary waste materials to establish indigenous enterprises will be supported by the local authorities over the plan period. The local authorities recognise that better interaction is needed between the waste (environment) sections and relevant departments who are working with small businesses with a focus on or need for secondary wastes as part of their operation. Growth of secondary material markets will ensure that 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 ANALYSIS

A detailed capacity analysis of the facilities outlined in this chapter has been carried out and is contained in **Chapter 16**. The analysis includes a comprehensive market assessment of treatment capacity in the CUR and an assessment of national levels of available treatment.



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 has been 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 driving waste up the hierarchy, contributing to increased recycling and recovery rates. The landfill levy increases per tonne are shown in **Table 13-1**.

Table 13-1: Cost of Landfill Levy 2001 to 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

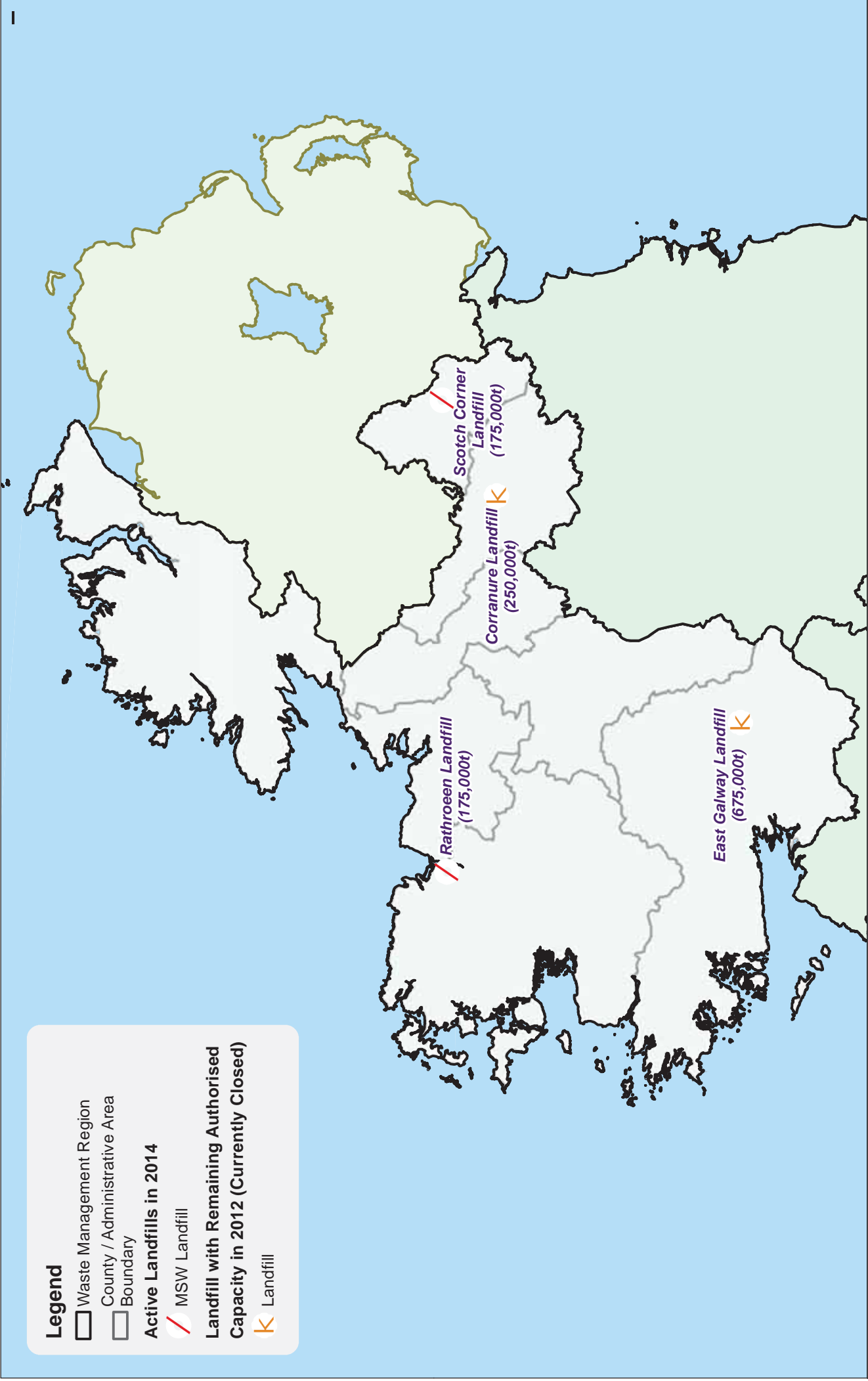
The impact of the landfill levy has been to divert waste away from landfill, primarily towards export to waste to energy facilities, with the result that many landfills have become financially unviable. Other factors that have influenced the diversion of waste from landfill include:

- Changes to landfill licences to include limits on BMW;
- The development of thermal recovery capacity;
- The availability of overseas thermal recovery capacity; and
- Increasing mechanical treatment of residual waste at waste facilities to produce RDF & SRF for export abroad and for use in cement manufacturing in Ireland.

13.1 ACTIVE LANDFILLS IN CUR

In the CUR there are two active landfills still in operation (March 2015), at Rathroeen, Ballina, Mayo operated by Mayo County Council and at Scotch Corner, Castleblayney, Monaghan operated by Monaghan County Council.

There are two other landfills in the Region that have significant remaining constructed capacity but it is not deemed financially viable to open them at this time; that is, Corranure, Cavan, owned by Cavan County Council and East Galway Residual Landfill, Ballinasloe, County Galway. **Figure 13-1** shows the active and closed landfills with remaining capacity in the region.



13.1.1 Quantities of Waste Accepted to Landfill

The total quantities of households, commercial and industrial waste accepted at landfills in the Region from 2010 to 2012 are shown in **Table 13-2**.

Table 13-2: Total Waste Accepted (Disposal and Recovery) at Landfills in the Region 2010 to 2012

Facility Name	Waste Licence Reg No.	Total waste accepted 2010 (t)	Total waste accepted 2011 (t)	Total waste accepted 2012 (t)
Corranure Landfill Cavan	W0077-03	12,231	154	0
Ballynacarrick Landfill Donegal	W0024-04	31,565	16,170	20,181
Derrinnumera Landfill Mayo	W0021-02	35,244	33,859	11,652
Rathroeen Landfill Mayo	W0067-02	649	1,354	45,238
Scotch Corner Landfill Monaghan	W0020-02	33,789	27,430	16,343
Ballaghaderreen Landfill Roscommon	W0059-03	48,779	16,800	0
East Galway Residual Landfill Galway	W0178-02	108,544	110,019	134,146
Total		270,801	205,786	227,560

There were further reductions in the total waste accepted at landfills in the region in 2013 and 2014 due to the closure of landfills in the region. The 2013 initial estimates show that less than 60,000 tonnes of waste was accepted at landfills in the region and it is estimated that this will remain steady for 2014/2015.

Figure 13-2 shows the sharp reduction in waste sent to landfill from 2010 to 2013 (note 2013 figure is an estimate).

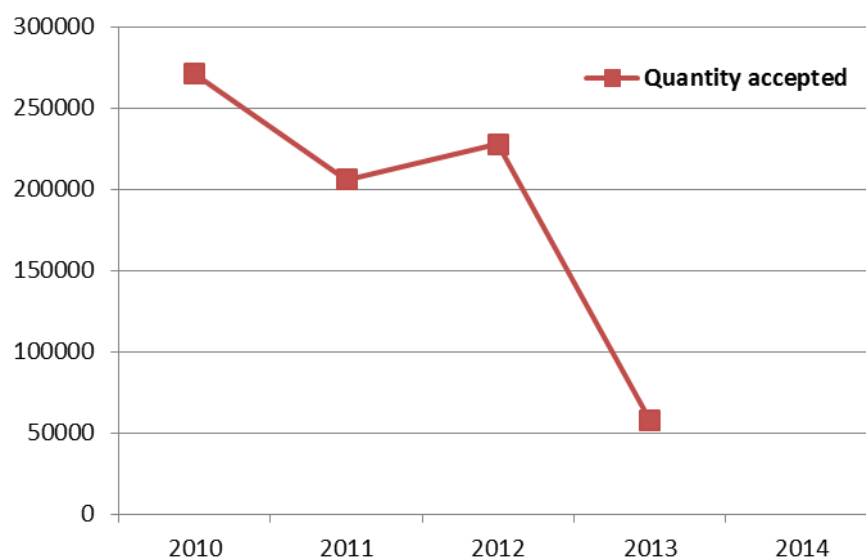


Figure 13-2 Total Quantities of Wastes Accepted to Landfill in CUR 2010–2013

13.1.2 Quantities of Municipal Waste Accepted at Landfill

In 2010 seven landfills in the Region were accepting municipal waste. The number reduced to five in 2012, with only three landfills accepting MSW in 2013. By mid-2014 only two landfills were accepting MSW.

The quantity of MSW reduced from 235,000 tonnes per annum directed to landfill in 2010 to 179,000 tonnes per annum in 2012, and in 2013 it is estimated to be less than 60,000 tonnes. **Figure 13-3** shows that MSW is the most significant element of the total waste accepted at the landfills in this region every year.

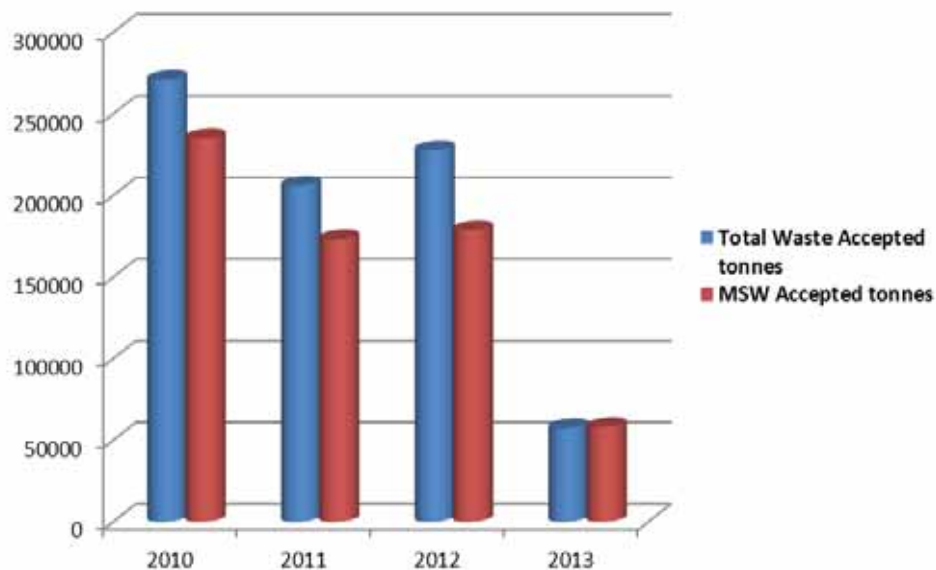


Figure 13-3 Total Waste Accepted vs Municipal Waste Accepted in CUR Landfills

13.1.3 Remaining Capacity

The remaining disposal capacity for landfills accepting municipal waste is shown in **Table 13-3**. It includes:

- Remaining Consented Disposal Capacity – includes all authorised capacity;
- Remaining Constructed Disposal Capacity – remaining built capacity that is fully developed; and
- Remaining Life Expectancy (calculated using landfill limits per annum).

The two remaining active landfills in the region at Rathroeen, Mayo and Scotch Corner, Monaghan have 100,000 tonnes of capacity for the disposal of residual type municipal waste.

Table 13-3: Approximate Remaining Disposal Capacity at Landfills Accepting MSW⁵³

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 at end 2013
Cavan County Council	Corranure landfill	W0077-03	250,000	314,825	6	6	Closed
Mayo County Council	Rathroeen Landfill	W0067-02	175,000	40,000	4	1	Open
Monaghan County Council	Scotch Corner Landfill	W0020-02	175,000	60,000	13	2	Open
Greenstar Holdings Ltd	East Galway Residual landfill	W0178-02	675,000	164,000	7	2	Closed
			1,275,000	578,825	6	3	

13.2 BIOSTABILISED SOLID WASTE ACCEPTED AT LANDFILLS

Biostabilised solid waste is generally an output from composting plants that process waste from a mechanical processing facility that 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 2016⁵⁴ onwards. These are:

“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 O₂/g DM (until 1-1-2016), and <7 mg O₂/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 13-4**.

⁵³ Source – National Waste Reports 2010 – 2012 and Annual Environmental Reports for the landfills in the region.

⁵⁴ Municipal Solid Waste – Pre-treatment & Residuals Management, An EPA Technical Guidance Document, 2009.

Table 13-4: 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.

13.3 LANDFILLS CLOSED PRIOR TO 2012

In 2008 there were eight operating licensed landfills in the CUR accepting municipal waste but by 2012 this had reduced to four as previously stated. As of July 2014 there are only two operating landfills 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 by agreement with the EPA. In most cases these costs are provided for in the aftercare costs but in some cases the aftercare fund has not been sufficient to meet the total remediation costs. Landfills that closed from 2008 to 2012 are:

- Derrinnumera Landfill (Mayo County Council);
- Ballynacarrick Landfill (Donegal County Council)
- Ballaghderreen Landfill (Roscommon County Council); and
- Carrowbrowne Landfill (Galway City Council).

13.4 LEGACY & HISTORIC LANDFILLS

Under the WMA Act 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 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 as 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; and
- Tier 3: Quantitative Risk Assessment (Detailed Site Specific).

Following on from the European Court of Justice 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 as soon as possible. When the Tier 1, 2, and 3 assessments are complete the local authority applies for a Certificate of Authorisation from the EPA. The EPA has 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 classed as:

- 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.

13.4.1 Legacy Landfills and Historic Landfills in the CUR

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 number of high-, medium- and low-risk sites is shown in **Table 13-5**. This includes the total number of historic and legacy sites and includes some post-1997 sites which were assessed as a precaution and also some private sites which were not assessed mainly due to issues in accessing the site. A list detailing the sites per local authority area and their classification as high (A), medium (B) and low (C) risk is provided in **Appendix F**.

The DECLG has provided funding for the investigation of landfills in the region over the past few years and many of these landfills now have Tier 2 and Tier 3 assessments completed. To date no Certificates of Authorisation have been granted for sites in this region (March 2015). Many local authority budgets are under pressure and they do not want to commit to the application fee for authorisations. Local authorities are also concerned about possible time limits imposed by the EPA for completion of remediation.

In August 2012 the DECLG published 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.

Table 13-5: Number of Historic/Legacy Landfills in the CUR⁵⁵

	Total No. of Sites	High Risk	Medium Risk	Low Risk	Not assessed
Illegal Sites (Historic & Legacy)	16	1	1	7	7
Local Authority Sites (Historic & Legacy)	78	14	30	34	0
Pre-1977 Sites (Legacy)	1	0	0	1	0
Private Sites (Historic & Legacy)	41	1	3	8	29
All Sites	136	16	34	50	36

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 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 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 from the DECLG being made available.

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.

⁵⁵ The Section 22 Register held by the EPA contains an additional 62 sites which were operational post-1997. These are not listed in the table.

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 judgement (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, 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.⁵⁶

14.1 ROLES AND RESPONSIBILITIES

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

14.1.1 Department of 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 Environmental Protection Agency (EPA)

The EPA carries out its waste enforcement functions through the Office of Environmental Enforcement (OEE) and the Office of Climate, Licensing, Resource 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;
- Enforce waste licences, Integrated Pollution Control (IPC) licences and Industrial Emissions Directive (IED)⁵⁷ licences;

⁵⁶ <http://www.environ.ie/en/Publications/Environment/Waste/FileDownload,30458,en.pdf>

⁵⁷ 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

- Enforce certificate of registration issues 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 conditions of waste collection permits, and enforcing producer responsibility initiatives in areas such as packaging waste;
- Take action against local authorities for failure to discharge their environmental protection functions;
- Prosecute, or assist local authorities to prosecute, for significant breaches of environmental protection legislation, in a timely manner; and
- Assist local authorities in improving 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). 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 Polychlorinated Biphenyls (PCB) Inventory;

Details of the enforcement actions undertaken by the OEE are detailed in reports published by the EPA. The most recent report published⁵⁸ provides details of Ireland's enforcement of environmental law in the period 2009 to 2012 by the EPA and local authorities.

which relate to activities listed in Annex 1 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.

⁵⁸ Focus on Environmental Enforcement in Ireland 2009–2012 (EPA, 2014).

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 CUR 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.

Table 14-1 details the Full Time Equivalent (FTE) waste enforcement officers based in each of the local authority areas within the CUR (June 2013).

Table 14-1: Details of the FTE Waste Enforcement Officers Based in CUR (June 2013)

Local Authority	Number of FTE Waste Enforcement Officers	Population of the Local Authority	Population of the Local Authority / FTE
Galway City	1.5	75,414	50,276
Galway County	9.2	175,127	19,035
Mayo	3.4	130,552	38,397
Roscommon	2	63,898	31,949
Sligo	8	65,270	8,158
Leitrim	2	31,778	15,889
Donegal	3.0	160,927	53,642
Cavan	3.6	72,874	20,242
Monaghan	4.3	60,495	14,068
CUR	37	836,335	22,603

The number of FTE waste enforcement officers and tasks undertaken vary widely across the local authority areas within the CUR. In order to compare the number of officers per local authority area **Table 14-1** details the population of the local authority area per FTE.

The average for the CUR is one FTE waste enforcement officer per 22,603 inhabitants; however, this figure varies widely across the region from a high of one FTE officer per 53,642 inhabitants in Donegal to a low of one FTE officer per 8,158 inhabitants in Sligo.

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 activities, which 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 e.g. waste facilities, waste collection, end-of-life vehicles (ELVs), waste electrical and electronic equipment (WEEE), food waste, packaging, plastic bags, batteries and accumulators, farm plastics, tyres and waste tyres and prohibition of waste disposal by burning.

It should be noted that the forthcoming household waste legislation will allow enforcement staff to issue a fixed penalty notice (FPN) 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 a five year period. From July 2016 it is intended to have FPNs for households which cannot demonstrate proper management of their waste.

Unauthorised waste activities

- Enforcement of the 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.

Litter

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

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 their functional area and take the appropriate enforcement action. Local authorities have significant powers available to them 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**.

14.2 LOCAL AUTHORITY ENFORCEMENT ACTIVITIES

Local authorities within this region have been preparing plans since 2007 in accordance with the 2001 European Parliament and 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 plans are as follows:

- 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.

14.2.1 Inspections

Local authorities undertake:

- Routine waste inspections 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 (PRI) to assess compliance with PRI regulations i.e. packaging, WEEE, batteries and ELV.
- Non-routine waste inspections which are 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 waste inspections (excluding routine litter patrols/investigations) undertaken in the CUR between 2010 and 2012 by local authorities.

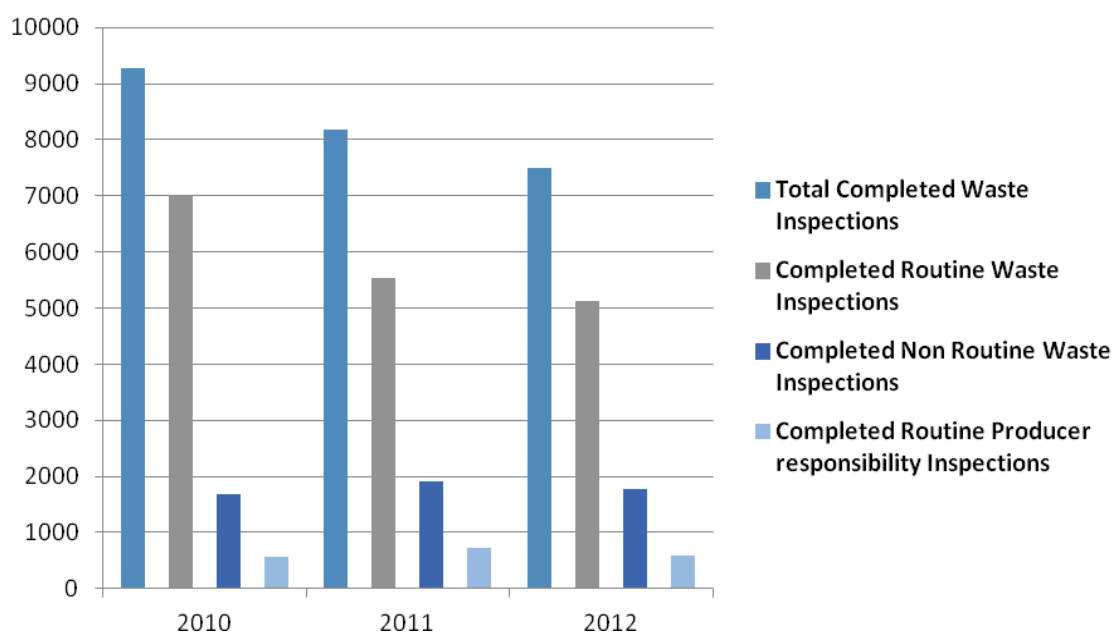


Figure 14-1 Waste Inspections Undertaken in the CUR 2010–2012⁵⁹

Almost 7,500 waste inspections (excluding routine litter patrols/investigations) were completed in the CUR in 2012. The non-routine waste inspections primarily consisting of **non-litter** waste complaint/incident investigations account for approximately 23% of inspections year on year. The investigations that may follow represent a significant function of the local authority environmental enforcement teams. It is very difficult for local authorities to factor non-routine waste inspections into their workload due to the yearly varying nature and number of the inspections.

Routine inspections in the region peaked at 7,000 in 2010 due to a particular focus by Sligo County Council on Certificate of Registration Sites. In 2012 2,155 **non-litter** waste complaint/incident investigations were carried out, with a close-out rate of 90%. Investigations may lead to the taking of an enforcement action, resolving the issue, or requiring no further action.

Details of the percentage of inspections carried out across a range of activities in the CUR for the years 2010–2012 are shown in **Figure 14-2**.

⁵⁹ Local authority RMCEI Annual Return 2010–2012.

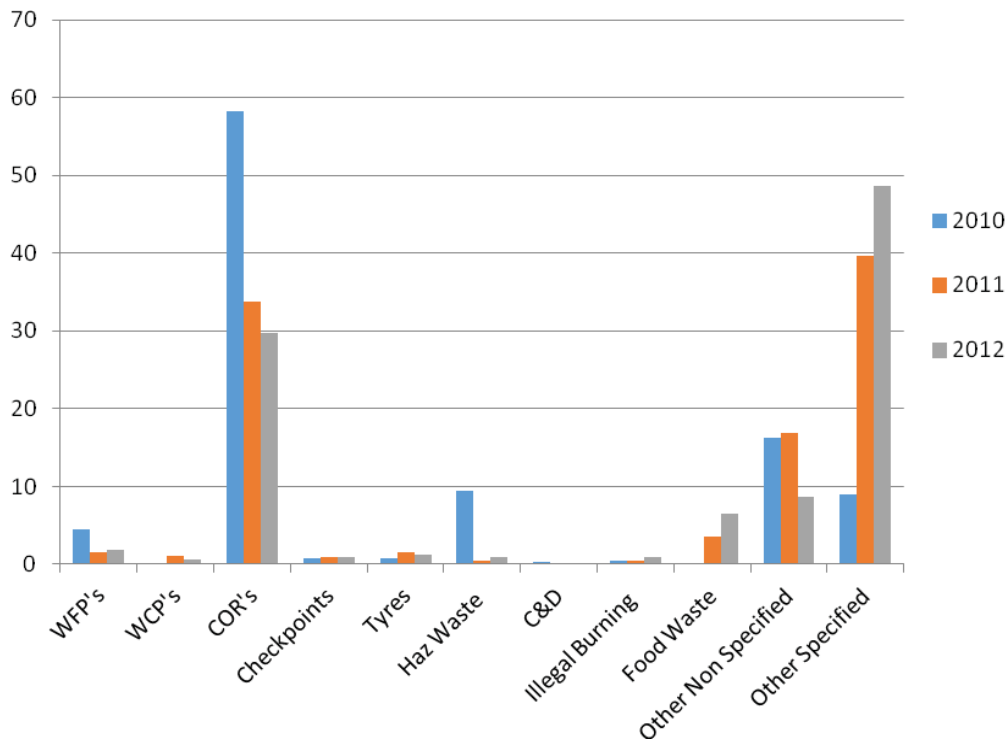


Figure 14-2 Percentage of Completed Routine Waste Inspections by Activity 2010–2012⁵⁹

The level of activity in relation to certificates of registration is influenced by the activity of those counties whose Bring Centres have certificates of registration. Most of this activity is concentrated in Monaghan and Sligo.

Other non-specified inspections include activities in relation to:

- Waste bye-laws;
- Roll-out of segregated bins;
- Waste surveys;
- Court case inspections;
- Historic Landfills; and
- Unauthorised sites.

Other specified inspection activity includes pre-shipment inspection of TFS loads; routine litter patrols and investigations and ECJ specific investigations.⁶⁰ The majority of waste inspections in the region are concentrated in the certificate of registration area, the other non-specified and the other specified areas.

The trend in relation to COR inspections and non-specified inspections is downward while the trend in relation to other specified inspections is upward, indicating a more targeted approach to inspection activity across the region.

The number of inspections of food waste producing premises has increased significantly year on year since the introduction of the commercial food waste regulations in July 2010. The number of WFPs

⁶⁰ European Court of Justice (ECJ) primarily related to unauthorised ELV site inspections & specific closed landfills.

and Hazardous Waste inspections peaked in 2010 while the number of other inspections such as WCPs and illegal burning have remained largely unchanged year on year.

Details of the percentage completed producer responsibility inspections by waste stream in the CUR for the years 2010–2012 are shown in **Figure 14-3**.

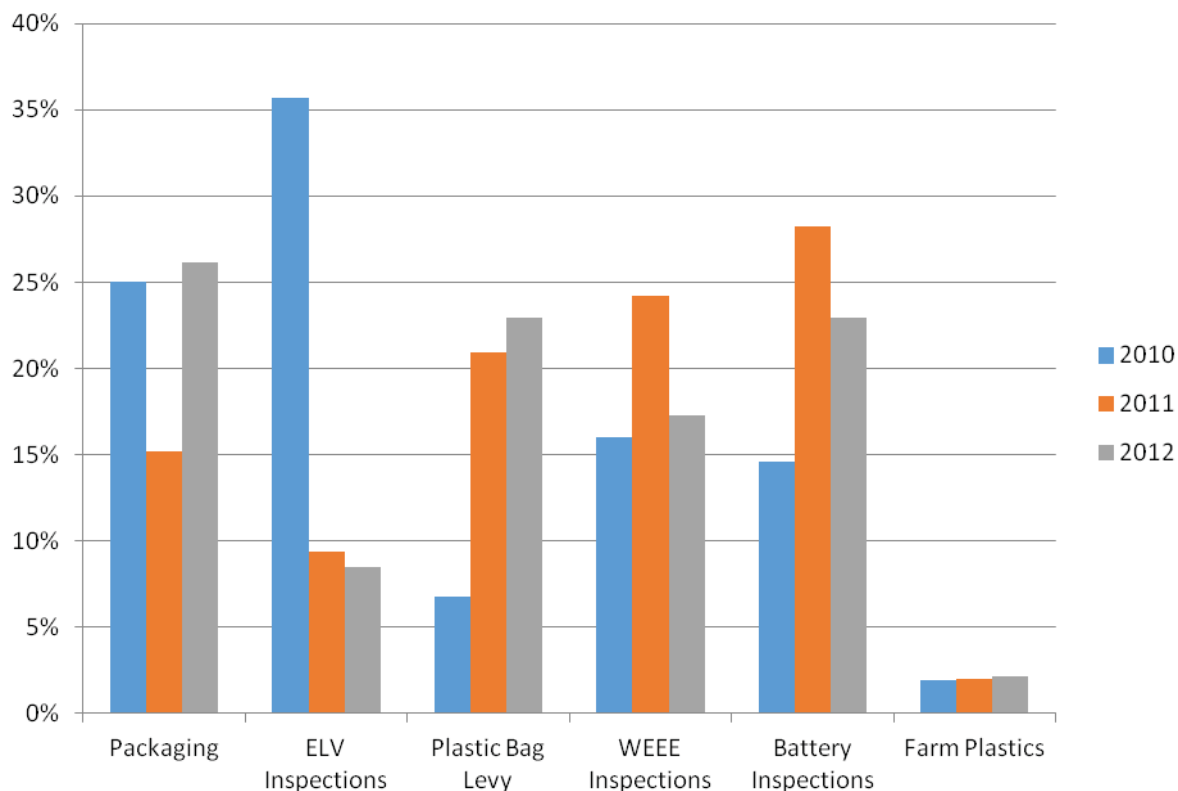


Figure 14-3 Percentage of Completed Producer Responsibility Waste Inspections, by Waste Stream in the CUR 2010–2012⁵⁹

The total completed producer responsibility inspections peaked in 2011, with 736 inspections carried out across the region. There were 601 inspections carried out in 2012. Packaging waste inspections increased significantly in 2012, while ELV inspections peaked in 2010.

Ensuring all potential major packaging producers become compliant with the regulations is an ongoing issue, especially since the threshold for determining “major producer” status reduced from 25 tonnes to 10 tonnes in the 2007 packaging regulations. The EPA’s *Focus on Environmental Enforcement in Ireland 2009–2012* (EPA, 2014) stated that it has identified over 5,000 businesses as potential major producers.

Local authorities within this region have allocated a significant amount of resources in recent years to the authorisation of ELV sites to ensure compliance with the ELV regulations and the ECJ case ruling (ECJ C494/01). Almost all identified unauthorised ELV sites within the region, from November 2010, have 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 has increased steadily since 2010, while the WEEE and battery inspections combined accounted for 41% of all producer responsibility inspections in the CUR in 2012. Farm plastics inspections account for approximately 2% of annual producer responsibility inspections in the CUR and this has remained consistent over recent years.

14.2.2 Enforcement

Enforcement includes both the issuing of notices (legal and non-legal) and follow-up prosecution actions. Enforcement notices issued by the local authorities include:

- Non-legal notice, e.g. warning letter;
- Legal notice issued under the WMA 1996, which include:
 - Section 18 notice (request for specific information);
 - Section 55 notice (requirement to undertake specific measures);
 - Section 56 notice (local authority undertake specific measures);
 - Section 71 notice (abandoned vehicles); and
- Other notices which include those served under various regulations issued under the WMA 1996 and EC Act 1972, e.g. packaging and landfill levy regulations.

Figure 14-4 shows a breakdown of the waste enforcement notices, both legal and non-legal, initiated by local authorities in the CUR between 2010 and 2012.

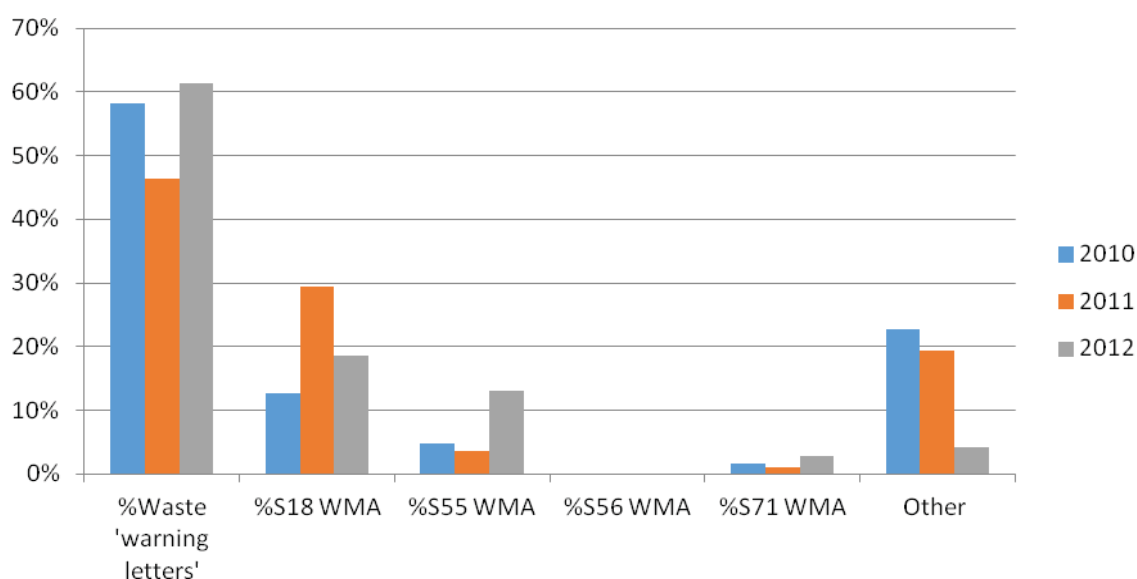


Figure 14-4 Waste Enforcement Non-Legal and Legal Notices Initiated in the CUR 2010–2012⁵⁹

In 2012 over 60% of all notices initiated in the CUR were warning letters. Over 80% of all warning letters, outstanding from previous year and initiated during the year, were closed off, indicating that warning letters are an effective enforcement tool in addressing waste issues arising.

The percentage of Section 18 notices peaked in 2011 while the percentage of Section 55 notices increased significantly in 2012. The percentage of Section 71 notices has remained steady over the years.

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 percentage classified as “other” decreased significantly in 2012 compared to the preceding years, which is due to some local authorities including notices issued in relation to littering incidents in this category.

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.

Legal prosecution actions taken in the CUR 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 (specified) – which includes legal prosecution actions taken under Section 39 (failure to hold and/or comply with a waste licence/permit), Sections 57/58 (orders to a court in relation to holding, recovery or disposal of waste) and DPP files/indictments under the WMA, 1996; and
- 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, e.g. packaging and tyre regulations.

Figure 14-5 gives a breakdown of the prosecutions initiated in the CUR between 2010 and 2012.

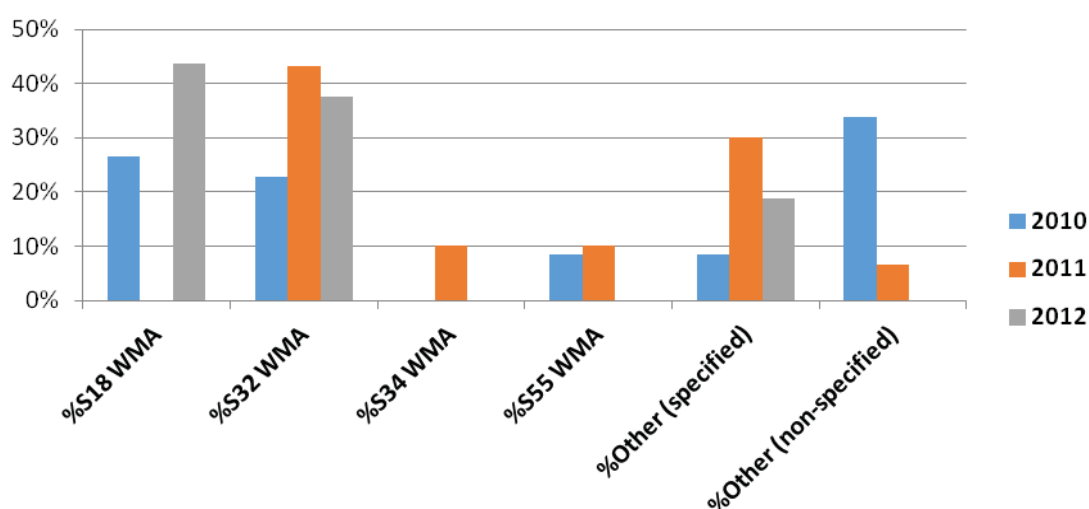


Figure 14-5 Prosecutions Initiated in the CUR 2010–2012⁵⁹

There were 16 prosecutions initiated in the region in 2012 and 27 prosecutions closed during the year. Breaches of Section 32 of the WMA 1996 account for the biggest percentage of prosecution actions during the period 2010 to 2012.

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.

14.3 MULTIAGENCY COOPERATION

Ongoing enforcement efforts in relation to monitoring the unauthorised movement of waste across counties have included regional organisation of enforcement activities. The combined efforts of local authorities and other parties including An Garda Síochána, Revenue/Customs, and the Special Investigation Unit of the Department of Social Protection have resulted in a multiagency approach to waste enforcement.

14.4 RECENT CHANGES AND FUTURE CHALLENGES

In July 2007 local authorities' role in relation to the trans-frontier 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 the NTFSO Office became the sole authority for the administration of hazardous waste movements within Ireland.

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 National Waste Collection Permit Office (NWCPO) in Offaly County Council in 2012. This office has significantly streamlined the collection permitting system from 10 authorities into a single entity. The NWCPO also now manages all WCP AER data; however, the verification of AER data is the responsibility of the local authority where the permit holder resides;
- 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 producer responsibility initiative (PRI) agreements. In 2013 four reports were published for public consultation and 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 to be implemented shortly include:

- Following on from the DECLG consultation paper *Regulation of Household Waste Collection* in November 2013, the DECLG is now preparing a package of legislative measures to give effect to a wide range of changes to the existing regulatory structure. 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 (per kilogram) system of charging for household waste collection and the introduction of fixed penalty notices.
- In 2013 a review of waste enforcement governance in Ireland was undertaken, which involved the DECLG, EPA, local authorities and An Garda Síochána. This review has now been finalised and one of the outcomes will be the introduction of new local authority enforcement structures which are due to be implemented in 2015. This should lead to a smarter waste enforcement system that is better equipped to tackle serious environmental crime, and result in a significant improvement in the remaining poor compliance rates seen in the waste sector.

The implementation of the above policies will have a significant impact on how enforcement is carried out in Ireland over the lifetime of this plan.