



connacht-ulster  
waste region

## Connacht - Ulster Region Waste Management Plan 2015 - 2021



*the next challenge*

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## LIST OF TERMS (ABBREVIATIONS AND GLOSSARY)

Term	Explanation
AA	Appropriate Assessment
ABP	Animal Bi-product
Annual Environmental Report (AER)	An Annual Environmental Report (AER) must be submitted to the EPA each year by companies with either waste or Integrated Pollution Prevention and Control licences, providing summary information on all aspects of the environmental performance of the licensed facility, e.g. data on emissions to air and water, waste management, resource consumption, objectives and targets, ambient monitoring and complaints. AERs are made publicly available on the EPA website. Waste collection permit (WCP) and waste facility permit (WFP) holders are required to submit AERs to the National Waste Collection Permit Office (NWCPO) under condition of permit.
Integrated Waste Management Facility (IWMF)	In the context of this report this is a licence that combines a landfill and other waste infrastructure such as civic amenity site, transfer station, composting or other treatment facilities.
Anaerobic digestion	The biological decomposition of biowaste in the absence of oxygen and under controlled conditions in order to produce biogas and digestate.
ATF	Authorised Treatment Facility
Backfilling	Recovery of C&D waste through the permanent placement of suitable material in land reclamation or for engineering purposes where the waste is a substitute for non-waste material.
Best Available Techniques (BAT)	The most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and impact on the environment as a whole.
Biodegradable	In the context of waste, this means waste that is capable of undergoing anaerobic or aerobic biological decomposition, such as food and garden waste, paper and cardboard.
Biodegradable municipal waste (BMW)	The biodegradable component of municipal waste; this does not include bio stabilised waste. Biodegradable municipal waste is typically composed of food and garden waste, wood, paper, cardboard and textiles.
Biological treatment	Involves composting, anaerobic digestion, mechanical/ biological treatment or any other process for stabilising and sanitising biodegradable waste.
Bio stabilised residual (solid) waste	Residual BMW that has been treated to achieve an EPA approved biodegradability stability standard prior to landfilling or alternative agreed use.
Biowaste	Under the terms of the Waste Framework Directive (2008/98/EC) biowaste means biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises and comparable waste from food processing plants.
Bring banks	These are facilities in which members of the public deposit recyclable waste materials such as glass, metals and plastics in material specific receptacles for subsequent collection and delivery to material recovery facilities.

Term	Explanation
CCMA	County and City Manager's Association
Certificate of Registration (CoR)	An authorisation issued by a local authority to a facility for the transfer, storage or treatment of waste under the Waste Management (Facility Permit and Registration) Regulations 2007, as amended.
CHP	Combined Heat and Power
Civic Amenity Sites (CAS or CA sites)	A reception facility that enables householders to deposit a wide range of household waste including recyclable and non-recyclable materials, bulky household waste and certain categories of household hazardous waste.
CO <sub>2</sub>	Carbon dioxide
Co-incineration	Involves plants where waste is used as a fuel or is disposed of at a plant along with other substances where energy generation or production may take place.
Collection system	A system of gathering, sorting or mixing of waste for the purpose of it being transported to a waste recovery or disposal facility.
Commercial waste	In the context of this report, a term used to describe the non-household fraction of municipal waste, which is produced by commercial premises such as shops, offices and restaurants, as well as municipal premises such as schools and hospitals. It also includes non-process industrial waste arising from factory canteens, offices etc. Commercial waste is broadly similar in composition to household waste, consisting of a mixture of paper and cardboard, plastics, organics, metal and glass.
Compliance Scheme	Non-profit producer responsibility scheme that takes on the obligations of its producer members for the collection, treatment and recycling of PRI waste.
Compost	The stable, sanitised and humus-like material rich in organic matter and free from offensive odours resulting from the composting process of separately collected biowaste.
Composting	The autothermic and thermophilic biological decomposition of separately collected biowaste in the presence of oxygen in order to produce compost.
Construction and demolition (C&D) waste	All waste that arises from construction and demolition activities (including excavated soil from contaminated sites). These wastes are listed in chapter 17 of the European waste catalogue (EWC).
Counterfactual	The counterfactual describes a financial scenario documenting local authority income and expenditure from waste plan and waste related activities and assumes that no new plan or activities are put in place.
CRN	Community Reuse Network
CSO	The Central Statistics Office
CSR	Corporate Social Responsibility
CUR	Connacht-Ulster Region
DCENR	The Department of Communications, Energy and Natural Resources
DECLG	The Department of the Environment, Community and Local Government
DEFRA	The Department for Environment, Food and Rural Affairs
DJEI	The Department of Jobs, Enterprise and Innovation
Digestate	The material resulting from the anaerobic digestion of separately collected

Term	Explanation
	biowaste.
Disposal	Any operation which is not recovery even where the operation has as a secondary consequence the reclamation of substances or energy. Annex I of the Waste Framework Directive (Directive 2008/98/EC) sets out a non-exhaustive list of disposal operations.
DPER	The Department of Public Enterprise and Reform.
DUMP	Disposal of Unwanted Medicines
ECJ	European Court of Justice
EEE	Electrical and Electronic Equipment
EIA	Environmental Impact Assessment
EMR	Eastern-Midlands Region
End-of-Life Vehicle (ELV)	A vehicle which is waste within the meaning of Article 1(a) of the Waste Directive (refer to Directive 2000/53/EC on end-of-life vehicles).
EoW	End of Waste
EPA	The Environmental Protection Agency (the Agency)
ERP	European Recycling Platform
ESRI	The Economic and Social Research Institute
EU	The European Union
European Waste Catalogue (EWC)	Now known as the List of Wastes (LoW), this is a list of all waste types generated in the EU. The different types of waste are fully defined by a six-digit code, with two digits each for chapter, sub-chapter and waste type.
EWC	European Waste Code
EWWR	European Week of Waste Reduction
GHCP	Green Healthcare Programme
GPP	Green Public Procurement
Gross Domestic Product (GDP) and Gross National Product (GNP)	These are closely related macroeconomic parameters. GDP measures the total output of the economy in a period, i.e. the value of work done by employees, companies and self-employed persons. This work generates incomes but not all of the incomes earned in the economy remain the property of residents (and residents may earn some income abroad). The total income remaining with Irish residents is the GNP and it differs from GDP by the net amount of incomes sent to or received from abroad.
Hazardous wastes	Wastes that have the potential to cause harm to human health or the environment. Any waste which displays one or more of the hazardous properties listed in Annex III of the Waste Framework Directive (2008/98/EC) is defined as hazardous waste.
Home composting	A process whereby biowaste is composted and used in gardens belonging to private households.
Household waste	Waste produced within the curtilage of a building/residence or self-contained part of a building/premises used for the purposes of living accommodation.

Term	Explanation
Household waste managed (HWM)	Sum of the household waste collected at kerbside and the non-kerbside household waste collected.
IAS	Invasive alien species
ICT	Information and communication technology
IED	Industrial Emissions Directive
IFI	Inland Fisheries Ireland
Incineration	A process by which heat is applied to waste in order to reduce its bulk, prior to final disposal which may or may not involve energy recovery.
Industrial waste	Waste produced by industrial process activity such as that of factories and industries involved in the manufacturing and production of goods and products. Non-process industrial waste (e.g. from site canteen, office, etc.) is similar in character to commercial waste.
Inert waste	Waste that does not undergo any significant physical, chemical or biological transformations. Inert waste will not dissolve, burn or otherwise physically or chemically react, biodegrade or adversely affect other matter with which it comes into contact in any way likely to give rise to environmental pollution or harm human health.
Integrated Pollution Control (IPC) licence	An authorisation issued and enforced by the EPA for specific industrial and agricultural activities as governed by the EPA Act 1992 (as amended). An IPC licence sets limits on air and water emissions, waste and noise and requires that an activity must use the Best Available Techniques (BAT).
IPPC	Integrated Pollution Prevention and Control
Kerbside collection	A common term for the practice of collecting household or commercial waste directly from its source, often, though not necessarily, from the pavement or front door. This service to customers generally entails waste collectors using separate bins to collect waste streams (usually dry recyclables, organic waste, and residual waste).
KPI	Key Performance Indicator
Landfill Directive	A Directive which aims, by means of stringent operational and technical requirements on the landfilling of waste, to implement measures, procedures and guidance to prevent or reduce as far as possible negative effects on the environment, in particular the pollution of surface water, ground water, soil and air, and on the global environment, including the greenhouse effect, as well as any resulting risk to human health, during the whole life cycle of the landfill.
Landfill levy	An additional environmental levy that is paid on top of normal gate fees by any private contractor or local authority that wishes to dispose of waste through a landfill site. The landfill levy is collected through landfill operators and forms part of a policy aimed at providing more incentives for reuse and recycling of waste.
Landfilling	The disposing of waste at a waste disposal facility used for the depositing of waste onto or under the land.
LAPD	Local Authority Prevention Demonstration
LAPN	Local Authority Prevention Network

Term	Explanation
Material Recovery Facilities (MRF)	Facilities where recyclables are sorted into specific categories and processed, or further transported to processors for remanufacturing.
MDR	Mixed dry recyclables
Mechanical–biological treatment (MBT)	The treatment of residual municipal waste through a combination of manual and mechanical processing and biological stabilisation, in order to stabilise and reduce the mass of waste that requires disposal.
Metric tonnes	Expressed as “t” throughout this report. Mt = million tonnes.
Municipal solid waste (MSW) or municipal waste or municipal managed waste (MMW)	Household waste as well as commercial and other waste that, because of its nature or composition, is similar to household waste. It excludes municipal sludges and effluents. In the context of this report municipal waste consists of three main elements – household, commercial (including non–process industrial waste), and street cleansing waste (street sweepings, street bins and municipal parks and cemeteries maintenance waste, litter campaign material).
N/A	Not applicable.
NACE	Nomenclature générale des activités économiques dans l’Union Européenne (general name for economic activities in the European Union).
National Climate Change Strategy	This Strategy provides a national framework for achieving greenhouse gas emission reductions by 13% above 1990 levels in-keeping with the EU target to reduce emissions by 8%, as part of the Kyoto Protocol of 1997.
NGO	Non-Government Organisation
NHA	National Heritage Area
NHWMP	National Hazardous Waste Management Plan
NIEA	Northern Ireland Environment Agency
NIECE	Network for Ireland’s Environmental Compliance and Enforcement
Non-Kerbside Household Waste Collection	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.
NPWS	National Parks and Wildlife Service
NSBW	National Strategy on Biodegradable Waste
NSS	National Spatial Strategy
NTFSO	National Transfrontier Shipment Office, Dublin City Council
NWCPO	National Waste Collection Permit Office, Offaly County Council
NWPP	National Waste Prevention Programme
NWR	National Waste Report
OECD	Organisation for Economic Cooperation and Development
OEE	Office of Environmental Enforcement, Environmental Protection Agency
Organic waste	Biodegradable food, garden and landscaping waste, and where the context permits, will also include industrial organic sludges (e.g. from the food and drink production sector).

Term	Explanation
Other Recovery	Any operation meeting the definition of recovery under the Waste Framework Directive but failing to comply with the specific requirements for preparation for reuse or for recycling.
Packaging	Used to contain, protect and present goods. Virtually all packaging eventually becomes waste. Packaging is made from such materials as cardboard, paper, glass, plastic, steel, aluminium, wood, and composite materials such as those used in milk and juice cartons.
Pay by weight schemes	Schemes where by residents pay for the exact amount of waste collected per household. This scheme is devised to offer financial incentives for residents to reduce the amount of waste to be collected and disposed of by public or private waste collectors.
Pay-to-use (PTU)	Waste compactor units that members of the public can pay to use to deposit their municipal residual waste, which are primarily located on garage forecourts and parking areas of supermarkets and other retail outlets.
PCB	Polychlorinated biphenyl
Polluter Pays Principle	The principle set out in Council Recommendation 75/436/Euratom, ECSC, EEC of 3 March 1975 1(20) regarding cost allocation and action by public authorities on environmental matters.
POPs	Persistent organic pollutants
Preparing for reuse	Checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be reused without any further pre-processing.
Pre-treatment	The processing of waste which still results in a waste that subsequently undergoes other waste recovery or disposal treatment. Pre-treatment activities include operations such as <i>“dismantling, sorting, crushing, compacting, palletising, drying, shredding, conditioning, repackaging, separating, blending or mixing if the material or substance resulting from such operations is still waste”</i> . These activities do not sit on any particular rung of the waste hierarchy and instead can be regarded as “precursors” to specific types of treatment.
Prevention	Measures taken before a substance, material or product has become waste, that reduce: (a) the quantity of waste, including through the reuse of products or the extension of the life span of products; (b) the adverse impacts of the generated waste on the environment and human health; or (c) the content of harmful substances in materials and products. Technically prevention is not a waste operation because it concerns substances or objects before they become waste.
PRO	Producer Responsibility Operator
Priority waste streams	EU priority waste streams include municipal waste, packaging waste, tyres, waste electrical and electronic equipment, construction and demolition waste, hazardous waste, end-of-life vehicles, healthcare waste, waste oil and sewage sludge.
Producer Responsibility Initiative (PRI)	A series of initiatives undertaken by the Government to facilitate better management of priority waste streams, in line with the “Polluter Pays Principal”.

Term	Explanation
Proximity Principle	The principle set out in the EU Framework Directive (91/156/EEC) whereby member states should establish a network enabling waste to be disposed of in one of the nearest appropriate installations, by means of the most appropriate methods and technologies to ensure a high level of protection for the environment and for public health.
QNHS	Quarterly National Housing Survey
Recovery	Any operation the principal result of which is waste serving a useful purpose by replacing other materials that would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy. Annex II of the waste framework directive (2008/98/EC) sets out a non-exhaustive list of recovery operations, which includes material recovery (i.e. recycling), energy recovery (i.e. use a fuel (other than in direct incineration) or other means to generate energy) and biological recovery (e.g. composting).
Recyclables	Waste materials that may be subjected to any process or treatment to make them reusable in whole or in part.
Recycling	Means any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.
Recycling Centre	See Civic Amenity Sites
REFIT	Renewable Energy Feed in Tariff
Refuse-derived fuel (RDF)	Fuel produced from waste through a number of processes such as mechanical separation, blending and compressing to increase the calorific value of the waste. Such waste-derived fuels can comprise paper, plastic and other combustible wastes and can be combusted in a waste-to-energy plant, cement kiln or industrial furnace.
Residual municipal waste	The fraction of municipal waste remaining after the source separation of municipal waste fractions, such as food and garden waste, packaging, paper and paperboard, metals and glass, which is usually unsuitable for recovery or recycling.
Residual waste	The fraction of collected waste remaining after treatment and/or diversion steps, which generally requires further treatment or disposal.
Reuse	Any operation by which products or components that are not waste are used again for the same purpose for which they were conceived.
RMCEI	Recommendation on Minimum Criteria for Environmental Inspections.
RPGs	Regional Planning Guidelines
RWMP	Regional Waste Management Plan
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
Separate collection/source segregation	Collection where a waste stream is kept separate by type and nature so as to facilitate a specific treatment.

Term	Explanation
SI (Statutory Instrument)	An order, regulation, rule, scheme or bye-law made in exercise of a power conferred by statute.
SIDs	Strategic infrastructure developments
SME	Small and medium enterprises
Solid recovered fuel (SRF)	High-quality fuel derived from mechanically processing residual waste, which must comply with the international standard, CEN/TC 343 (meet minimum standards for moisture content, particle size, metals, chloride, chlorine content and calorific value).
SPA	Special Protection Area
SR	Southern Region
Stabilised biowaste	See Bio stabilised residual (solid) waste
Thermal recovery	Thermal recovery as described in the plan is a thermal based operation which sits on the "other" recovery tier of the waste management hierarchy. It is a process where the principal means is to use waste as a fuel to generate energy. It is a waste management operation with energy recovery classified as R1 in Annex II of the Waste Framework Directive. Thermal recovery applications include waste-to-energy technologies such as incineration, pyrolysis and gasification and also cover certain production processes which involve the co-combustion of wastes, thus substituting fuels, in cement kilns or industrial furnaces.
tpa	Tonnes per annum
Transfrontier Shipment of Waste (TFS) Regulations 2007	Set out new notification procedures, revised waste listings and enforcement provisions in relation to the export, import and transit of waste shipments within the EU. The National TFS Office at Dublin City Council is the competent authority for the implementation and enforcement of the TFS Regulations since 12 July 2007.
Treatment facilities	Facilities where waste undergoes thermal, physical, chemical or biological processes that change its characteristics in order to reduce its volume or hazardous nature or facilitate its handling, disposal or recovery.
Treatment	Includes, in relation to waste, any manual, thermal, physical, chemical or biological processes that change the characteristics of waste in order to reduce its mass, or hazardous nature or otherwise, to facilitate its handling, disposal or recovery.
Unmanaged household waste	Estimate of the quantity of waste generated by households but not captured via one of the kerbside or non-kerbside collection systems.
Unprocessed residual waste	Residual municipal waste collected at kerbside or deposited at landfills/CA sites/transfer stations that has not undergone appropriate treatment through physical, biological, chemical or thermal processes, including sorting.
Upcycling	Upcycling is taking an item that is no longer needed or wanted and giving it new life as something that is either useful or creative.
Waste	Defined as any substance or object which the holder discards, intends to discard or is required to discard, by the Waste Framework Directive (2008/98/EC).
Waste Collection Permit System	A system whereby persons who, with a view to profit or otherwise in the course of business, collect waste are granted a permit by the NWCPO on behalf of the local authorities in whose functional area the waste is collected.

Term	Explanation
Waste electrical and electronic equipment (WEEE)	Refers to electrical and electronic equipment which is waste within the meaning of Article 3(a) of the Waste Directive 2008/98/EC, including all components, subassemblies and consumables which are part of the product at the time of discarding.
Waste Framework Directive (WFD)	Waste Directive 2008/98/EC of 19 November 2008.
Waste Hierarchy	Waste hierarchy is the cornerstone of European (and Irish) waste policies and legislation. Its primary purpose is to minimise adverse environmental effect from waste and to increase and optimise resource efficiency in waste management and policy. The hierarchy under the Waste Framework Directive is a priority order for the management of waste and prioritises the ways of dealing with waste as follows (1) prevention; (2) preparing for reuse; (3) recycling; (4) other recovery; and (5) disposal.
Waste Management	Means the collection, transport, recovery and disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including actions taken as a dealer or broker.
Waste Management Facility	A site or premises used for the recovery or disposal of waste.
Waste Management Plans	Statutory waste management plans implemented on a regional basis in Ireland since 2001.
Waste Minimisation	Any technique, process or activity that either avoids, reduces or eliminates waste at its source, or results in reuse or recycling.
Waste producer	Anyone whose activities produce waste (original waste producer) or anyone who carries out pre-processing, mixing or other operations resulting in a change in the nature or composition of this waste, under the Waste Framework Directive (2008/98/EC).
Waste to Energy Plant	A thermal recovery plant where waste undergoes thermal treatment with a recovery of energy by combustion or by synthesis gas production followed by combustion. The energy that is recovered is often used to supply electricity and/or heat.
WCP (Waste Collection Permit)	A permit granted by the NWCPO on behalf of the local authorities for the collection of waste under the Waste Management (Collection Permit) Regulations 2007, as amended.
WFP (Waste Facility Permit)	A permit issued by a local authority to a facility for the transfer, storage or treatment of waste under the Waste Management (Facility Permit and Registration) Regulations 2007, as amended.
WRAP	Waste Resource Action Programme
WtE	Waste to energy
WTP	Water treatment plant
WWTP	Wastewater treatment plant

## **EXECUTIVE SUMMARY**

## **Waste – Our Resource, Our Opportunity**

The generation and management of waste is an everyday challenge which the people, businesses, industry and institutions of the Connacht Ulster Region must recognise and address. In our daily lives we produce non-hazardous, hazardous and sometimes toxic wastes. These wastes have the potential to impact negatively on our communities, our health, our environment and future generations if not managed appropriately. Effective management systems are needed to ensure we continue to live in healthy communities and protection is afforded to our environment. In the region we have a collective responsibility to improve our behaviours in response to this on-going problem. This is necessary if we are to re-think the waste challenge and ignite the opportunities which waste as a resource offers.

### **What is the Waste Plan?**

To manage our wastes in a safe and compliant manner, a clear strategy, policies and actions are required. The Waste Management Plan for the Connacht Ulster Region is the framework for the prevention and management of wastes in a safe and sustainable manner. The scope of the waste plan is broad and ultimately it needs to provide policy direction setting out what we want to achieve and a roadmap of actions to get us there. The waste management plan is a statutory document prepared by the local authorities of the region. This waste plan covers the period from 2015 to 2021 and is required to be revised or replaced every six years.

The preparation period for the plan extended over 18 months and afforded the local authorities an opportunity to take stock and evaluate the ways in which wastes have been managed in the region. This process allowed the authorities to identify measures which are succeeding and those which are not delivering the desired result. The outcome has led to the formulation of new policies and measures to improve the way wastes are prevented and managed in the region, while also introducing new steps to help realise the full potential of our waste as a resource.

The implementation of the Connacht Ulster Region waste plan must ensure that European and national mandatory targets are achieved and, in doing so, that the health of communities in the region, its people and the environment are not compromised. To ensure that this outcome is achieved two reports have been prepared assessing the potential impact of the plan on the environment of the region, including its important European designated natural sites. These reports, namely the strategic environmental assessment and appropriate assessment, were completed alongside the formulation of the plan and have directly influenced its final policies and actions. Environmental protection criteria resulted from the assessments and will give prominence to the environment during the implementation of the plan, particularly when developing existing and future waste infrastructure.

### **Profiling the Connacht Ulster Region**

The Connacht Ulster Region is a new region in terms of managing wastes, and merges a number of smaller historical waste regions. It is one of three regional groups of authorities assembled in the State for the purpose of managing wastes. This is the first waste plan to cover the geographical area of the Connacht Ulster Region.

The new region stretches from Galway in the west, to Donegal in the north and to Monaghan in the north east and in total consists of 9 local authorities.



The region has appointed Mayo County Council, as the regional lead, to act on behalf of the other authorities with responsibility for the successful implementation of the plan.

The region covers 37% of the land mass of the country with a population of 837,350 thousand people. The settlement patterns show the region is predominantly rural with 66% of people living in these areas and communities.

Waste Region	Local Authorities
Connacht Ulster Region	<b>Mayo County Council;</b> Galway County Council; Galway City Council; Roscommon County Council; Sligo County Council; Leitrim County Council; Donegal County Council; Cavan County Council; Monaghan County Council.

### Progress in the Region

Since the introduction of waste legislation in Ireland almost 20 years ago the management of wastes in the region has progressed considerably. In 2012 the region generated over 1.1 million tonnes (Mt) of wastes (excluding agricultural wastes). The major streams managed in the region are household wastes, commercial wastes, construction wastes and industrial wastes. Some headline statistics which help to describe the current system are as follows:

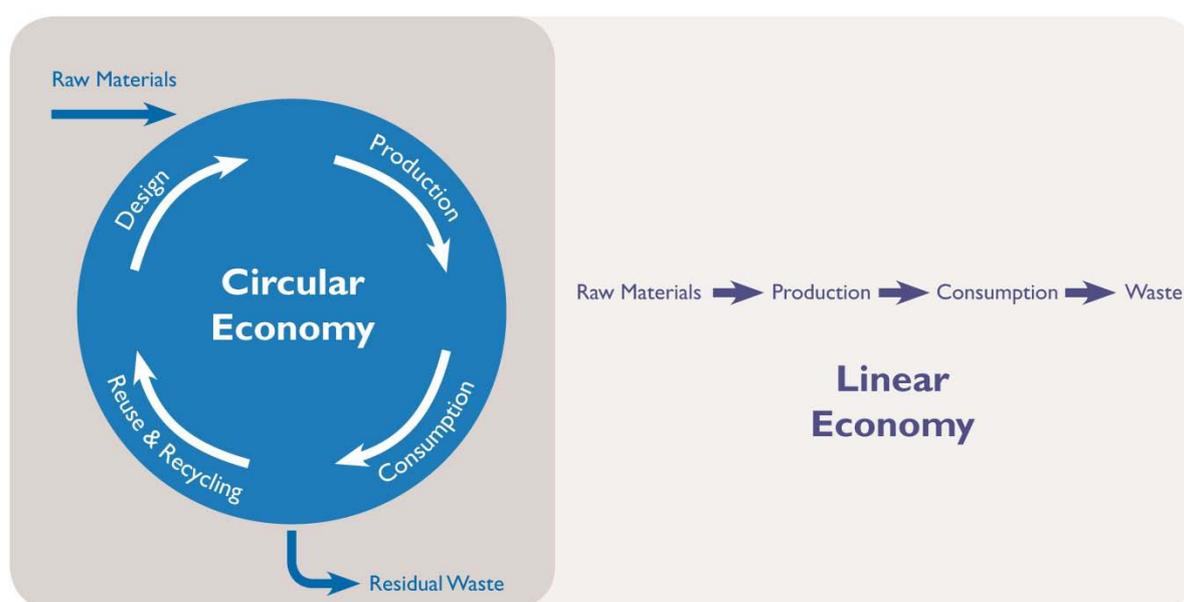
- 58% of households in the region were on a collection service in 2012 with 53% of managed household sent for recovery (includes wastes sent for recycling and energy recovery);
- 24% of household waste generated, which is over 67,800 tonnes in the region, was unmanaged i.e. not collected and possibly subject to backyard burning or illegal dumping and illegal dumping;
- 22% of householders in the region on a collection service are provided with three bins for the collection of recyclables, organics and residuals wastes. The majority of householders and businesses remain on a two bin service with the roll-out of the organic bin to be progressed by July 2016;

- 34 civic amenity facilities and 437 bring bank locations are in place in the region for the collection of wastes;
- The recovery of municipal waste, which is household and commercial waste combined, in the region is estimated to be 59%, in line with the national rate.

The economic recession impacted on the generation of wastes in the region, specifically wastes from the building sector, with annual records showing a steady decline in quantities for major waste streams. Since the beginning of 2014 the economy has shown signs of sustained recovery, and this is expected to continue, which will likely lead to growth in waste generation over the period of the plan. The continued management of wastes in a safe and sustainable manner will be a real challenge into the future.

### **An Evolving Waste Strategy with Progressive Targets**

The strategic vision of the regional waste plan is to rethink our approach to managing waste, by viewing our waste streams as valuable material resources. Making better use of our resources and reducing the leakage of materials, as wastes, from our economies will deliver benefits economically and environmentally to the region.



The move to a circular economy, replacing out-dated industrial take make consume and dispose models, is essential if we are to make better use of our resources and become more resource efficient. The waste sector has the potential to play a leading role in the development of the circular economy in the region, and the policies and actions of the waste plan are focused on delivering this outcome.

The strategic approach of the plan places a stronger emphasis on preventing wastes and material reuse activities. The plan will also focus on enhancing the collection of quality materials from discarded waste to build on the positive progress made in recycling. The plan will strive to improve the recovery and generation of energy by maximising the resource value of the materials and energy embodied in residual wastes. Finally, the plan will seek to further reduce the role of landfilling in favour of higher value recovery options.

Three strategic targets have been set in the plan providing a clear focus and a transparent measure of success for the region. The targets cover the areas of prevention, recycling and landfilling, and their delivery will require the local authorities and industry to work together. The plan has also looked forward to 2030, demonstrating a long term commitment to the strategic vision, with further goals set down including reaching a recycling rate of over 60%.

### Plan Target

1% Reduction Per Annum in the Quantity of Household Waste Generated per capita over the period of the Plan

### Plan Target

Achieve a Recycling Rate of 50% of Managed Municipal Waste by 2020

### Plan Target

Reduce to 0% the direct disposal of unprocessed\* residual Municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices

\* Unprocessed residual waste means residual municipal waste collected at kerbside or deposited at landfills/ CA sites/ transfer stations that has not undergone appropriate treatment through physical, biological, chemical or thermal processes, including sorting.

The realisation of the strategic vision and targets requires investment in the waste sector by public authorities and industry. It has been estimated that public authority expenditure of over €60 million will be required each year of the plan period, at a minimum, and any shortfall will impact on the delivery of plan policies. In addition, up to €300 million of potential investment by the private sector in new waste treatment infrastructure has been identified for the region. Improving our waste infrastructure is a clear policy ambition of the waste plan. The policy aim is for the region and the State to become more self-sufficient, in terms of treating the wastes we generate and are currently exporting.

### **How Are We Going to Achieve These Goals?**

The waste plan contains a comprehensive list of policies to achieve the overarching strategy and targets of the plan. Some of the key measures for local authorities and industry contained in the plan can be summarised as follows:

- Commit to a minimum expenditure on waste prevention activities each year;
- Encourage more reuse and repair activities in the region particularly at civic amenity facilities;
- Ensure sufficient staff and financial resources are in place to implement prevention, resource efficiency and enforcement programmes;
- Deliver communication, awareness and on the ground activities which lead to a lasting change in the behaviours of citizens and businesses towards their wastes;
- Increase the level of source-segregated kerbside collections in the region with a strong focus on ensuring that a three bin system becomes commonplace at household and commercial levels;
- Implement and regulate the new national pay-by-weight charging system which is due to come into force;

- Enforce the regulations related to household and commercial waste to tackle the problem of unmanaged waste and other issues;
- Plan and develop higher quality waste treatment infrastructure including new reprocessing, biological treatment, thermal recovery and pre-treatment facilities;
- Grow the biological treatment sector, in particular composting and anaerobic digestion, by supporting the development of new facilities;
- Support the development of thermal recovery in the region which meets the needs of the region and the State in reducing the export of residual wastes for treatment abroad;
- Ensure existing and future waste facilities do not impact on environmentally sensitive sites through proper assessments and siting; and
- Grow the waste management sector into a prosperous and sustainable industry which creates and maintains healthy employment.

### **Roles and Responsibilities**

The role of the authorities in waste management changed significantly in the region during the previous plan period. Historically the authorities were involved in the delivery of waste collection and treatment infrastructure. This is no longer the case, and at presently in the region only two authorities remain in waste collection and one local authority landfill remains open. The provision of collection and treatment services over the plan period will primarily rest with the private sector.

The future role of local authorities in waste management will be focused on education, prevention, and resource efficiency activities as well as regulating householders, businesses and waste operators and enforcing waste legislation. Waste infrastructure provided by local authorities will mainly include bring banks and civic amenities. Authorities will explore potential partnership arrangements with the private sector to develop waste, energy and amenity infrastructure as new activities at closed landfills in the region.

The primary responsibility for coordinating the implementation of the waste plan in the Connacht-Ulster Region will rest with the new regional waste office, which has been established by the lead authorities. The office is responsible for delivering many of the policy actions set out in the waste plan, working with the local authorities in the region and other stakeholders.

The local authorities in the region will support the regional waste office as well as taking a lead role in the implementation of specific tasks such as tackling unmanaged household waste, remediation of historic landfills, local campaigns on waste prevention and specific waste enforcement activities in their functional areas.

To tackle enforcement in an effective and consistent manner, a new lead authority for waste enforcement will be appointed in the region. A review of waste enforcement governance in Ireland is under-way and is expected to be concluded shortly coinciding with the appointment of the new enforcement office for the Connacht Ulster Region.

The role of the waste industry, alongside the authorities, is fundamental to the delivery of the plan. Industry will be responsible for the delivery of collection and treatment infrastructure required in the region. A collaborative relationship between waste operators and the authorities is required to ensure that progress on the plan is maintained.

### **Communicating and Reporting**

The waste plan contains a comprehensive list of policy actions which are scheduled to be implemented by the local authorities over the plan period. The regional waste office will monitor progress and publish an annual report on the implementation of the plan. In tracking the provision of the plan, the authorities will engage with the public, waste operators and other stakeholders and seek views on the effectiveness of its delivery.

The annual report will be made available to download from the regional waste website (<http://www.curwmo.ie/>). The website will be an important communication tool for the authorities during the plan period, updating stakeholders on related news and events as well as hosting an accessible database of reports and information.

Direct communication with the public and businesses on waste issues will be done by the regional waste office, environmental and waste staff of local authorities and in particular by the environmental awareness officers. The network of Local Enterprise Offices (<https://www.localenterprise.ie/>) will act as points of contact for companies involved in starting or growing waste and resource business activities.

### **A Plan for Your Region**

The waste plan is an important and powerful planning document providing for the prevention, collection and treatment of wastes in the region. In terms of planning it sits alongside county and city development plans, guiding the development of regional and national waste treatment infrastructure. However, the scope of the regional plan is more than just the identification of infrastructure for the waste sector; it provides a roadmap for better coordination, prevention, resource efficiency and regulatory activities.

Finally, the waste plan is your plan. The policies and actions have been informed and shaped by the citizens and businesses of the region as well as by local authorities, stakeholders from the waste industry, the NGO sector, State Agencies and Government departments. Consultations before and after the publication of the draft waste plan have made an important contribution to the final document. The success of the plan over the period will benefit from continuing the positive interaction and cooperation which has been in evidence during the preparation of the plan. All stakeholders have a role to play.

## **PART 1 BACKGROUND**

# 1 INTRODUCTION

## 1.1 A NEW WASTE PLAN FOR A NEW WASTE REGION

In 2012, the Government’s blueprint for a Circular Waste Economy, as set out in *A Resource Opportunity – Waste Management Policy In Ireland*, established a new framework for the provision of effective and efficient waste management services through the establishment of three new Waste Management Planning Regions. The Connacht and Ulster Region (CUR), serving a population of 837,350, includes the administrative areas of the following local authorities - Mayo County Council, Donegal County Council, Cavan County Council, Monaghan County Council, Leitrim County Council, Roscommon County Council, Sligo County Council, Galway City Council and Galway County Council.

Managing waste in a “sustainable and self-sufficient manner” will be one of the key challenges for the Region, and one in which every citizen has a role to play. How we manage our waste says a lot about how highly we value our environment. There is consensus that we should minimise our impact on the environment by working collectively to minimise the amount of waste we generate, and manage the waste we do create in the best manner possible.

The EU Waste Framework Directive (WFD), published in 2008, has resulted in revisions to the waste hierarchy, the principles of proximity and self-reliance and waste treatment definitions. The Directive places a greater emphasis on optimising resource efficiency, prevention, reuse and the recovery of mixed residual wastes. These are important changes which have been addressed in the preparation of this Plan.

The region has made significant progress during the lifetime of previous plans, but challenges remain. For example, the roll-out of the organic waste collection system at household and commercial level needs further expansion. On the infrastructural side, the region is well provided for in terms of pre-treatment capacity to mechanically process recyclable wastes, and residual waste to a lesser extent. There remains a gap in end-of-chain residual waste treatment capacity, resulting in an increase in exports of waste. The plan provides a framework within which all stakeholders can make a contribution to the successful implementation of the policies it contains.

## 1.2 THE WASTE PLAN

The plan is presented in three parts beginning with **Part 1, Background**, which sets out the strategic and policy context for the plan including a detailed profile of the region. **Part 2, Present Position** sets out the existing situation with regard to waste data, prevention and reuse activities, waste collection and infrastructural arrangements and the management of priority waste streams. **Part 3, Implementation**, deals with waste projections, infrastructure planning and the roles and responsibilities of the various stakeholders in the delivery of the plan. It also provides a financial overview and detailed breakdown of policies, actions and targets to be achieved and concludes with the arrangements for monitoring and reporting on the plan strategy, objectives, policies and actions.

**Chapter 5** sets out the strategic vision for the plan, with an emphasis on the progression from a linear waste economy to a circular one. The mandatory and headline performance targets which have been developed for the plan are described in this chapter. The strategic approach incorporates well-established principles, and eight overall strategic objectives have been developed for key policy

areas over the duration of the plan. The evolution of plan policies has been prepared by the local authorities in response to key issues relating to policy, market or implementation needs. In shaping the policies the local authorities have considered potential environmental implications through the Strategic Environmental Assessment (SEA) process and incorporated protection measures into the final policies to mitigate potential impacts. The policies are presented throughout the chapters in the plan directly in response to the relevant issue. All of the plan policies, with the exception of those in infrastructure, are brought together along with the actions required for their implementation in **Chapter 19**.

**Figure 1-1** illustrates the roadmap from strategic vision to action on which the plan has been constructed.



**Figure 1-1 Strategic Vision to Actions Roadmap**

**Chapter 19** assigns responsibility to the various actions described and allocates an indicator through which the action can be measured, and a target date by which the action must be achieved.

The plan therefore is not only strategically driven but action-lead, with accountability tracked to ensure successful outcomes.

### 1.3 STRATEGIC ENVIRONMENTAL ASSESSMENT AND APPROPRIATE ASSESSMENT

Strategic Environmental Assessment (SEA) is a process by which environmental considerations are integrated into the preparation of plans and programmes prior to their final completion. The objectives of the process is to provide for a high level of protection of the environment and to promote sustainable development by contributing to the integration of environmental considerations into the preparation and adoption of specified plans and programmes. The SEA process also gives interested parties an opportunity to comment on the environmental impacts of implementation of a proposed Plan or Programme and to be kept informed during the decision making process. In accordance with Article 9 of S.I. 435 of 2004 (as amended), the lead authority for the CUR carried out an SEA which informed the plan. The SEA of the CUR is available as a separate document.

The EU Council Directive 92/43/EEC on the conservation of natural habitats and wild flora and fauna, better known as the *Habitats Directive*, provides legal protection for habitats and species of European importance through the designation of an EU-wide network of sites known as Natura 2000. These sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive (2009/147/EC). Article 6(3) of the Habitats Directive establishes the requirement for Appropriate Assessment (AA) of plans and projects likely to affect European sites. An AA of the CUR Waste Management Plan was carried out in parallel to the SEA process and is available as a separate document. **Figure 1-2** illustrates the roadmap for the SEA and AA processes.



**Figure 1-2 SEA and AA Roadmap**

All of the SEA stages illustrated in **Figure 1-2** have been completed for the plan. The final stage, the SEA Statement, was prepared following the consideration of submissions made during the consultation period on the draft plan and environmental report.

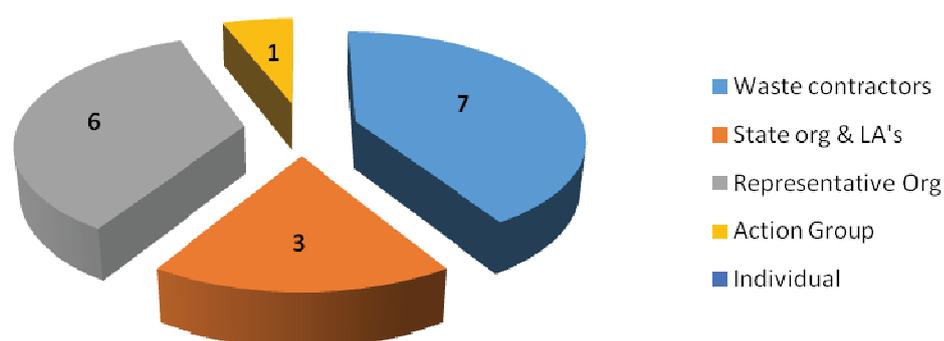
Critical to the successful application of the SEA and AA processes is the integration with the plan making. This has been achieved for this plan through close integration of all stages of the plan making, as illustrated in **Figure 1-4**.

## 1.4 CONSULTATION

Public consultation is a fundamental part of the waste planning process. In order to fulfil the statutory requirements for consultation for the making of the waste management plan, local authorities must comply with Section 23 of the Waste Management Act 1996. This provides an opportunity for all stakeholders in the region to raise issues.

### 1.4.1 Pre-Draft Consultation

An advertisement was placed in the Irish Independent, Irish Times, Irish Examiner and on Local Authority websites on 10<sup>th</sup> October 2013 indicating the intention of the lead authority to prepare a new Waste Plan for the Region and inviting written submissions for consideration. In total 17 submissions were received from a variety of sources as indicated in **Figure 1-3**.



**Figure 1-3 Sources of Submissions Received in the Connacht-Ulster Waste Region**

The submissions received related to a wide range of waste issues including waste prevention, reuse, pay –to- throw units (PTUs), uncollected wastes, level playing pitch for waste contractors, consistent enforcement and consistent waste projections. The submissions have been grouped into 13 categories and percentage of submissions received in each category is illustrated in **Figure 1-5**.

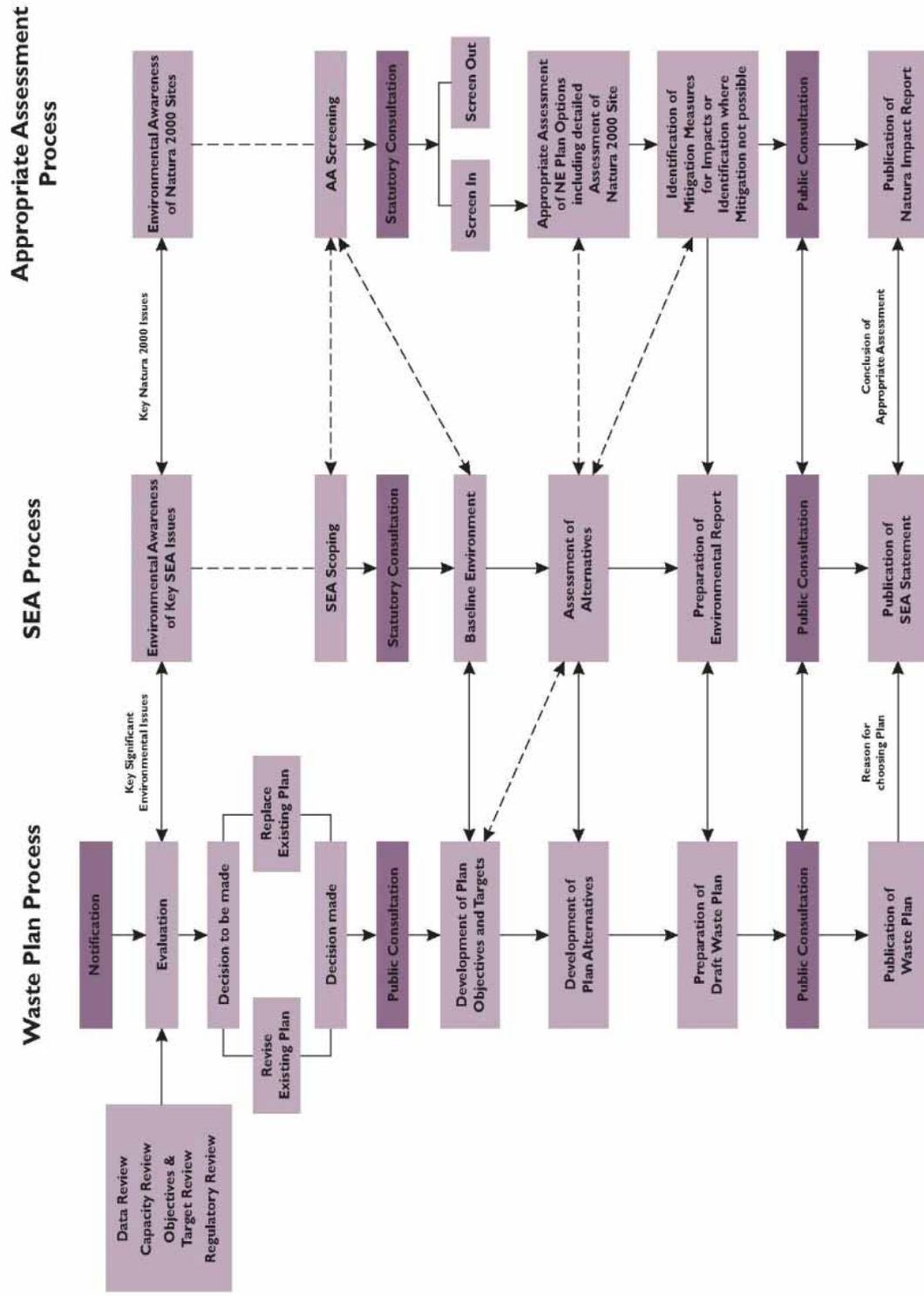
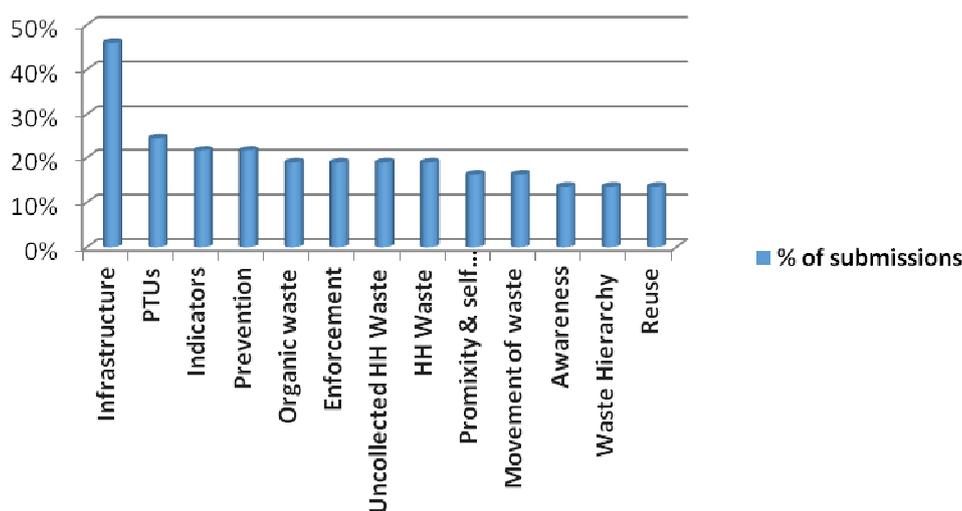


Figure 1-4 Integration of Processes

As a part of the consultative process a national briefing / consultation meeting was held with key stakeholders in Mullingar on the 9th of April 2014. Common concerns amongst stakeholders included the planning and permit process, prevention and awareness measures, waste regulation and enforcement, charging systems, movement of waste, infrastructure and facilities and projections and statistics. Submissions and meetings provided constructive suggestions, numerous ideas and initiatives for consideration in the preparation of the final CUR waste plan. A list of workshop attendees and the sources of written submissions are included in **Appendix A**.



**Figure 1-5 Percentage of issues raised per category of submission**

Article 6 of the SEA Directive states that the competent authority preparing the plan or programme is required to consult with specific “environmental authorities” (statutory consultees) on the scope and level of detail to be included in the Environmental Report. The statutory consultees for SEA as established in national legislation are the:

- Environmental Protection Agency (EPA),
- Department of the Environment, Community and Local Government (DECLG);
- Department of Arts, Heritage and the Gaeltacht;
- Department of Communications, Energy and Natural Resources (DCENR);
- Department of Agriculture, Food and the Marine; and
- Northern Ireland Environment Agency (NIEA).

A scoping workshop was subsequently held on 23 June 2014 at the Custom House, Dublin which was coordinated for all three waste management regions. Representatives from all statutory consultees were invited to attend this workshop. The following groups were represented on the day: SEA & Plan team for Southern, Eastern & Midlands and Connacht-Ulster Regions; Department of Environment, Community & Local Government, Department of Communication, Energy and Natural Resources, Inland Fisheries Ireland and the Environmental Protection Agency.

In addition a period of public consultation (4 June to 4 July 2014) was applied to the SEA Scoping Document. A total of five non-statutory submissions and five statutory submissions were received and given due consideration in advance of the environmental assessment of the plan.

## 1.4.2 Post-Draft Consultation

The Connacht Ulster Draft Regional WMP 2015–2021 was launched on 18 November 2014, in Galway City Council offices, as part of a national launch of the three draft regional WMPs. The Chief/Deputy Chief Executives of the waste management planning lead authorities formally jointly launched the draft regional WMPs along with the associated Natura Impact Report and Strategic Environmental Assessment (SEA) Environmental Report. The draft plan was the subject of public consultation between 18 November 2014 and 30 January 2015. The public consultation process consisted of the following.

### Statutory notifications

- A newspaper notice was published in the Irish Examiner, Irish Independent and Irish Times on the 18 November 2014; and
- A letter was forwarded to prescribed bodies in accordance with Section 23 of the Waste Management Act and the Waste Management (Planning) Regulations 1997.
- Non-statutory notifications – the CUR notified the following bodies:
  - EPA waste licensed facilities;
  - Local authority waste permitted facilities;
  - Authorised waste collectors (the NWCPO notified the collectors on behalf of the region); and
  - Local Authority Environment Director of Services within the CUR.

Presentations were made to the elected members of the local authorities, to local authority staff and the waste sector.

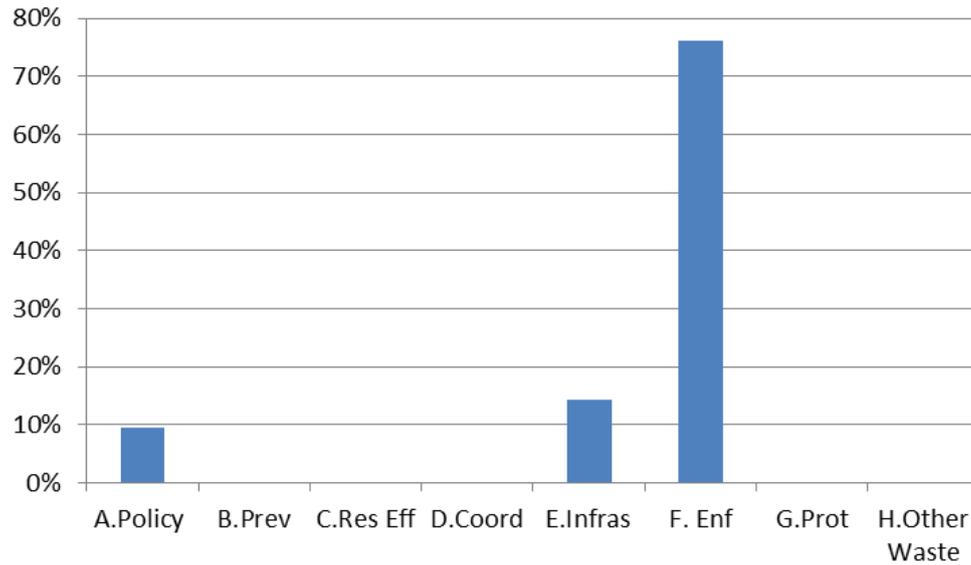
A total of 62 submissions were made in relation to the draft plan (a full list of the submissions is included in **Appendix A**).

A total of 19 written submissions were received from members of the public in relation to the draft WMP. All of the public submissions received from members of the public came from one local authority in the region, Sligo County Council.

The draft WMP sets out an overall strategic vision for the plan which is supported by headline performance targets and 8 overall strategic objectives which are subsequently supported by a number of policies and actions. The submissions received from the public have been categorised under the headings of performance targets or one of the 8 overall strategic objectives namely:

- A. Policy & Legislation;
- B. Prevention;
- C. Resource Efficiency / Circular Economy;
- D. Coordination;
- E. Infrastructure Planning;
- F. Enforcement & Regulation;
- G. Protection; or
- H. Other Waste Streams.

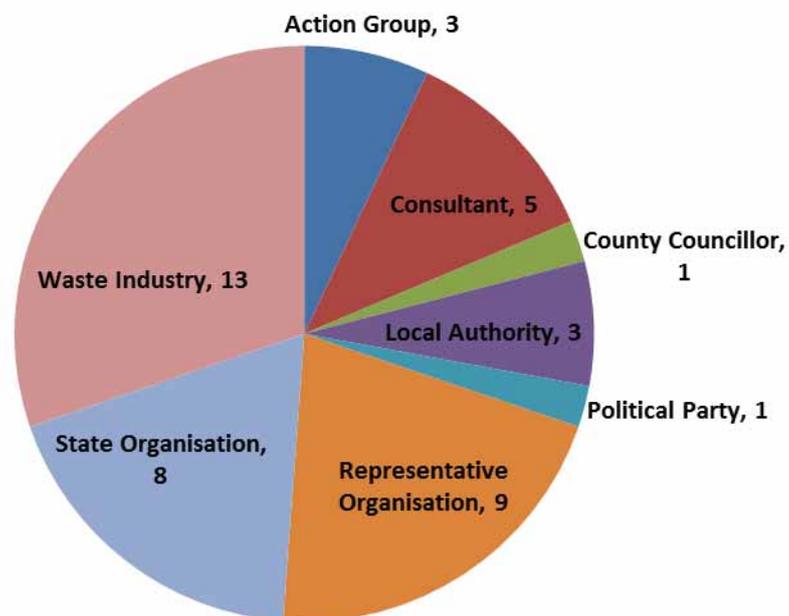
**Figure 1-6** illustrates the percentage of the public submissions received (21) which dealt with one of the categories listed above.



**Figure 1-6 Issues Raised in the Public Submissions Received**

The figure above shows that 76% of the public submissions dealt with the regulation and enforcement. A number of submissions also dealt with the infrastructure objective (14%).

A total of 43 submissions were received from various organisations and waste contractors, of which 14% were from organisations or companies based within the region. The source of the submissions has been sub-divided into a number of categories and **Figure 1-7** charts the breakdown of the source of the submissions received.

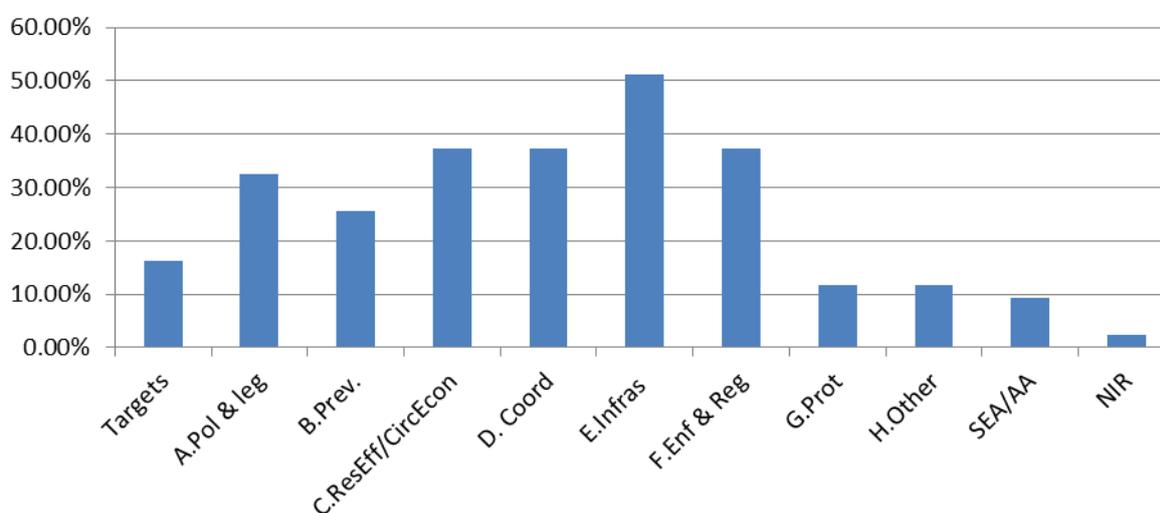


**Figure 1-7 Source of the Submissions Received From Various Organisations & Waste Contractors**

Similar to the public submission the submissions received from various organisations and waste contractors have been categorised under the headings of Natura Impact Report, SEA Environmental Report, performance targets or one of the 8 overall strategic objectives namely;

- A. Policy & Legislation;
- B. Prevention;
- C. Resource Efficiency / Circular Economy;
- D. Coordination;
- E. Infrastructure Planning;
- F. Enforcement & Regulation;
- G. Protection; or
- H. Other Waste Streams.

**Figure 1-8** illustrates the percentage of the submissions received which dealt with the categories listed above.



**Figure 1-8 Issues Raised in the Submissions Received from Various Organisations & Waste Contractors**

As evident from **Figure 1-8** the submissions received dealt with all areas however over 50% of submissions included comment on the infrastructure objectives, with a significant number of these submissions dealing with policies E15 (in relation to the plans support of up to 300,000 tonnes of additional thermal recovery capacity) and E17 (in relation to the plans support of up to 40,000 tonnes of additional biological treatment capacity).

Further details of the post-draft submissions received are provided in the *Connacht Ulster Region Waste Plan – Post-Draft Consultation Report* (CUR, 2015).

## 2 REGIONAL WASTE PLANNING FRAMEWORK

This chapter provides an overview of the regional waste management plan in the context of the statutory planning system.

### 2.1 PURPOSE OF THE REGIONAL WASTE PLAN

The waste management plans in Ireland are statutory planning documents. Their objective is to set out a framework for the prevention and management of wastes for a defined regional area. The preparation of the waste plans is the statutory responsibility of the local authorities, and two or more local authorities may jointly prepare a waste plan. Once prepared, a plan is valid for a period of up to six years and under statutory obligation must be evaluated once every six years.

Ireland's most recent waste policy statement<sup>1</sup> recommended that the number of waste management planning regions be reduced from 10 to three. This recommendation was guided by the national programme of reform of local government arrangements and the benefits identified under the programme of rationalising the regions in terms of the concentration of local authority resources. The new regional structures also better recognise the nature of the Irish waste market and the movement of waste in the State. The County and City Managers' Association (CCMA) formally adopted the new regional assembly of local authorities from a waste management perspective with the name, lead authority and make-up of the regions described in **Table 2-1** and illustrated in **Figure 2-1**.

**Table 2-1: Details of the New Waste Regions**

Waste Region (No. of Local Authorities)	Lead Authority	Local Authorities
Eastern & Midlands Region (12)	Dublin City Council	Dublin City Council; Dún Laoghaire-Rathdown County Council; Fingal County Council; South Dublin County Council; Kildare County Council; Louth County Council; Laois County Council; Longford County Council; Meath County Council; Offaly County Council; Westmeath County Council; Wicklow County Council
Southern Region (11)	Limerick City and County Council & Tipperary County Council	Limerick City and County Council; Tipperary County Council; Wexford County Council, Carlow County Council; Kilkenny County Council; Waterford City & County Council; Cork City Council; Cork County Council; Kerry County Council; Clare County Council
Connacht Ulster (9)	Mayo County Council	Mayo County Council; Donegal County Council; Cavan County Council; Monaghan County Council; Leitrim County Council; Roscommon County Council; Sligo County Council; Galway City Council; Galway County Council.

<sup>1</sup> A Resource Opportunity, Waste Management Policy in Ireland (July 2012).



**Figure 2-1** Waste Regions of Ireland

The required content of the waste management plan is described in the Waste Management Act 1996<sup>2</sup> and the Waste Management (Planning) Regulations 1997 (as amended).

In preparing this plan, the local authorities have considered their relevant statutory obligations and the European Commission's guidance document<sup>3</sup> on waste plans and have reviewed recommendations from other relevant strategic planning documents such as the:

- National Hazardous Waste Management Plan 2014-2020;
- Air Quality Management Plan for the Dublin Region 2009-2012;
- National Waste Prevention Programme; and
- Our Sustainable Future, a Framework for Sustainable Development

Following a review of the format of previous plans, the new plan is set out over three parts and is designed to be an accessible and usable document. The policy objectives and actions set out a roadmap for improved waste prevention measures and management of waste, while safeguarding the environment and health of communities in the region.

## 2.2 PLANNING FRAMEWORK

In Ireland, planning and development is governed by a hierarchy of strategic frameworks and plans. The waste plan is part of this structure and its position in the context of national and regional plans is shown in **Figure 2-2**.

The highest tier of planning is described in the National Spatial Strategy (NSS) 2002-2020, which set out to achieve balanced regional development while acknowledging the importance of Dublin as the economic centre of the country. The fundamental objectives of the strategy have not been properly implemented, and in 2013 the Government signalled that the process of replacing the existing document was to commence. A replacement framework is due to be published in 2014.

The implementation of the planning strategies outlined in the NSS is needed at regional level, in particular regional planning guideline documents, to provide the link between the national and local planning frameworks. Spatial planning at a regional level must work within the overall approach, giving effect to national objectives, as well as guiding the preparation of county and city development plans and other plans, such as the waste plans. The relevant regional planning guidelines (RPGs) currently in force in the CUR are:

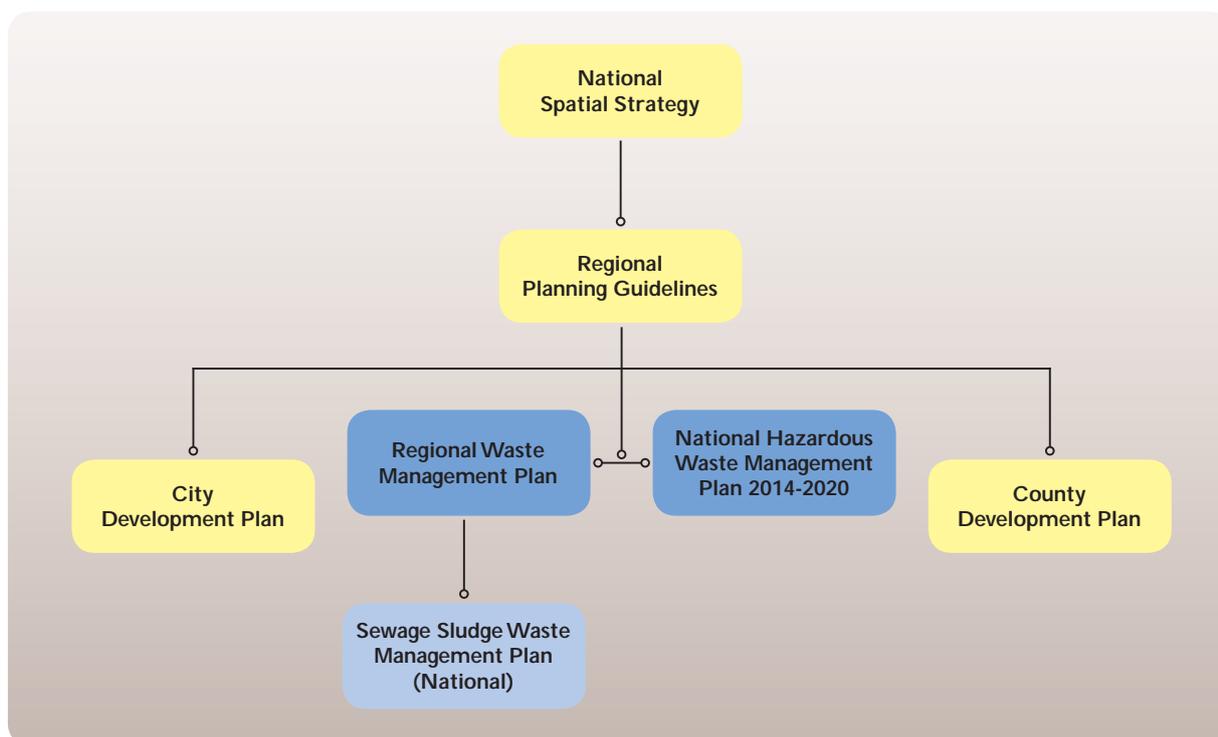
- Regional Planning Guidelines for the Western Region (includes Galway County, Galway City, Mayo and Roscommon) 2010-2022: and
- Regional Planning Guidelines for the Border Region (includes Leitrim, Donegal, Monaghan, Sligo and Cavan) 2010-2022.

In brief the recommendations focus on greater coordination of activities across the planning catchment area to provide economies of scale for the development of facilities. Key treatment infrastructure, such as energy recovery and biological treatment to help divert waste from landfill, is also highlighted.

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<sup>2</sup> Sections 6, 7 & 8 of the Waste Management Act as amended.

<sup>3</sup> Preparing a Waste Management Plan, A methodological guidance note, European Commission (2012).



**Figure 2-2 Hierarchy of Irish Planning Frameworks**

The existing organisation of regional planning authorities in Ireland is being replaced, in line with the local government programme of reform. From 2015 the number of planning authorities will be reduced from eight to three, with the new assemblies mirroring the regional arrangements for waste management.

The waste plan is a statutory planning document setting out policies for the development of waste treatment infrastructure and sits on the same planning tier as the city and county development plans. In Ireland, development plans are the blueprint for local planning and development. Each plan sets out the planning policies of a local authority over a six year period.

These local planning frameworks are deemed (under law) to contain the objectives of the relevant waste management plan in force for that particular area.<sup>4</sup>

In the event of a conflict arising between an objective in the waste plan and that of a city or county development plan, the waste plan objective takes precedence and permission may be granted.<sup>5</sup>

## 2.3 INTERACTION WITH OTHER WASTE PLANS

The waste plan interacts with other statutory and non-statutory waste planning documents including high-level strategies as follows:

- National Hazardous Waste Management Plan (NHWMP) – this plan is a statutory document prepared by the Environmental Protection Agency (EPA). Local authorities are required to

<sup>4</sup> Section 10A (a) Waste Management Act 1996.

<sup>5</sup> Section 10A (b)(i) Waste Management Act 1996.

consider the information provided in the NHWMP when preparing the objectives and actions of the waste plan and to take relevant recommendations in that plan into account.

- National Implementation Plan on POPs, 2012 - this plan is prepared by the EPA in accordance with Article 7 of the Stockholm Convention and covers waste such as electrical equipment containing polychlorinated biphenyls (PCBs), other WEEE and wastes that emit POPs when combusted.
- National Waste Prevention Programme – this statutory strategic plan sets out the framework for waste prevention and resource efficiency in Ireland. It seeks to work in partnership with the newly established waste planning regions and this integrated approach is reflected in the waste plan.
- Sludge Management Plan – sludge management plans are prepared by Irish Water and a national plan for the management of wastewater sludge is currently being written. The plan does not have a statutory basis although the sludge plan is recognised as a component of the waste plan. Key objectives of the sludge plan are incorporated into the waste plans.

## 2.4 PLANNING PROCEDURES FOR WASTE FACILITIES

Planning permission applications for waste management facilities, with the exception of those classed as Strategic Infrastructure Developments (SIDs), are processed by local authorities. Applications are considered in the context of planning development legislation, the objectives of the regional waste plan, the local development plan, and any other relevant planning document. If an application is refused the applicant can appeal the decision to the national planning authority, An Bord Pleanála.

For specific private and public strategic infrastructure developments, including certain waste treatment developments, an applicant can apply<sup>6</sup> for planning approval directly to An Bord Pleanála, bypassing the relevant Local Authorities. The Planning and Development Act 2000 (7TH Schedule), lists the classes of infrastructural development which will be considered by the Board as SIDs.

Waste projects that will be considered for strategic application status consist of the following:

- A waste disposal installation for (a) the incineration, or (b) the chemical treatment, or (c) the landfill, of hazardous waste;
- A waste disposal installation for (a) the incineration, or (b) the chemical treatment, or (c) the landfill, of non-hazardous waste with a capacity for an annual intake greater than 100,000 tonnes; and
- An installation for the disposal, treatment or recovery of waste with a capacity for an annual intake greater than 100,000 tonnes.

Prior to making an application directly to the Bord, the applicant must first receive a notice in writing from it confirming that the application meets one or more of the following conditions and qualifies as strategic infrastructure:

- The development would be of strategic economic or social importance to the State or the region in which it would be situated;

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<sup>6</sup> Under the Planning and Development (Strategic Infrastructure) Act 2006, which amends the Planning and Development Act 2000.

- The development would contribute substantially to the fulfilment of any of the objectives in the National Spatial Strategy or in any regional planning guidelines in force in respect of the area or areas in which it would be situated; and
- The development would have a significant effect on the area of more than one planning authority.

The decision as to whether or not an application qualifies for strategic status is made by the Bord at the conclusion of the pre-application consultation phase.

### 3 WASTE AND RESOURCE POLICY AND LEGISLATION

There is a significant book of statute and policy statements governing the management of waste in Ireland. European policy and legislation provides much of the basis for our national policy for managing waste. This relationship between European and Irish legislation is shown in **Figure 3-1**.

Waste and resource policy and legislation in Europe and Ireland is extensive and often complex. The European Parliament and the Council of the European Union adopts European waste Directives and each Member State is responsible for transposing the Directive into their national statute book by an agreed date.

There are also European Regulations. These are legislative instruments of general application which are binding in their entirety. Member States must apply a Regulation in its entirety, they cannot choose apply only those provisions of which it approves. Regulations are directly applicable and do not need to be transposed into national law by the respective Member States in order to take effect in national legislation.

Irish waste legislation is made up of (1) a primary Act, the Waste Management Act 1996, (2) statutory instruments or waste regulations and (3) other related legislation. A hierarchical structure governing the management of wastes exists and for the purpose of this plan, the waste legislation and policy presented in this section has been grouped under the following headings:

- Framework legislation and policy;
- Waste treatment and movement;
- Waste stream legislation including extended producer responsibility for specific wastes; and
- Other relevant waste regulations.

This chapter summarises the principal waste policy and legislation which will affect the management of waste and material resources in the region over the duration of the plan. A full list of waste legislation is given in **Appendix B** and more detail on each instrument can be found in the national statute archives.<sup>7</sup> The legislation and policy included in this section includes reference to cross-cutting statutory instruments from the energy and wildlife sectors.

#### 3.1 WASTE FRAMEWORK LEGISLATION AND POLICY

Waste framework legislation establishes the legal structure for the prevention and management of waste. Legislation also governs reporting on waste generation, waste treatment and waste capacity and sets down mandatory waste targets (whether these are targets for diversion, collection or treatment). The European Commission has prepared waste framework legislation to govern this broad approach and the principles for managing waste across all Member States. The principal European framework legislation is:

- European Directive (2008/98/EC) on Waste (Waste Framework Directive);
- Council Decision (200/532/EC) establishing a list of wastes; and
- Regulation (1013/2006) on the shipments of waste.

<sup>7</sup> [www.irishstatutebook.ie](http://www.irishstatutebook.ie)

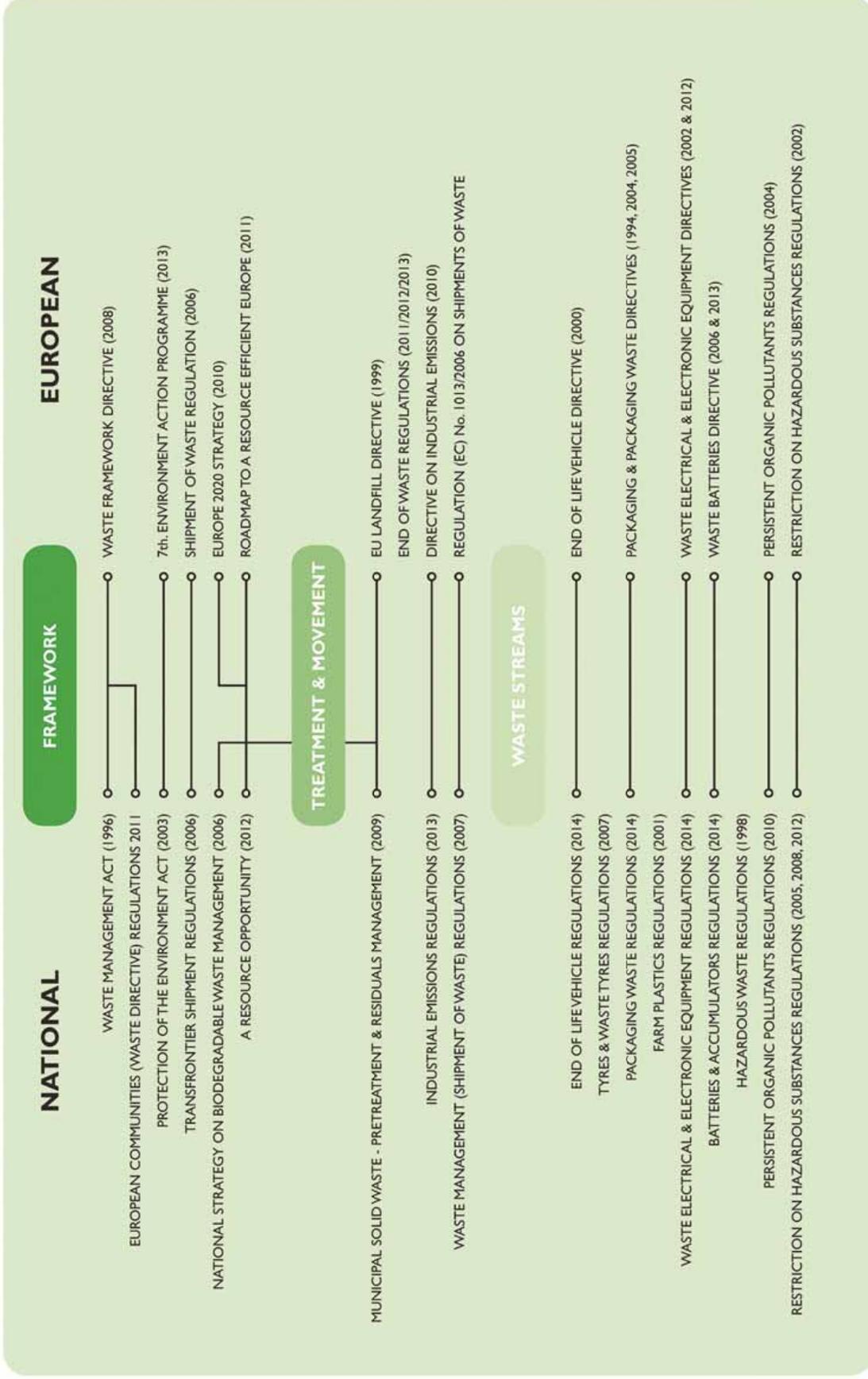
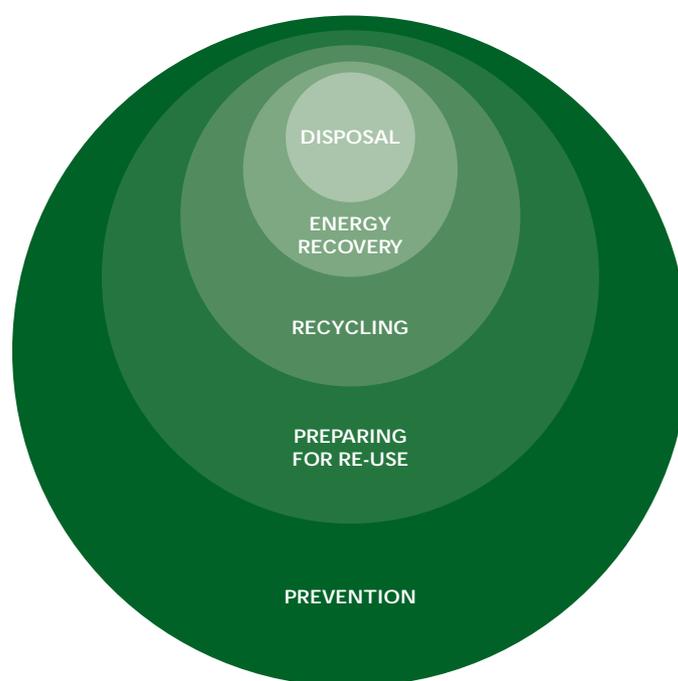


Figure 3-1 Mapping European and Irish Waste Legislation & Policy

### 3.1.1 Waste Framework Directive 2008 (2008/98/EC)

The Waste Framework Directive (WFD) incorporates the provisions of previous separate Directives on waste oils and hazardous wastes which have since been repealed. The WFD provides the overall structure for an effective and safe waste management regime in Europe and was transposed into Irish law in 2011.

The Directive describes the basic concepts and definitions related to waste management, such as the definition of waste, recycling and recovery. It gives Member States the provision to take action to encourage the prevention, recycling and processing of waste and also provides direction on important waste principles such as the polluter pays principle, extended producer responsibility, self-sufficiency and proximity. The Directive requires Member States to adopt waste management plans and waste prevention programmes. Waste management plans are to be evaluated at least every six years and revised as appropriate. An outline of the contents of the waste management plans is also set out in the Directive.



**Figure 3-2 Revised Waste Management Hierarchy**

The Directive sets out a waste hierarchy which is a priority order (**Figure 3-2**) of what constitutes the best overall environmental option in waste legislation and policy. Departing from the hierarchy may be necessary for specific waste streams, for example due to technical feasibility, economic viability or environmental protection, and may be supported through life cycle thinking.

The WFD also requires that Member States establish an integrated and effective network of installations for (1) waste disposal and (2) the recovery of mixed municipal wastes. Member States must ensure that those who store waste handle it properly, and waste treatment operations must be licensed. The WFD has set new targets for Member States to achieve by 2020, requiring:

- 50% preparing for reuse and recycling of certain household and similar waste materials; and
- 70% preparing for reuse, recycling and other recovery of construction and demolition waste.

### 3.1.2 European Council Decision on List of Wastes (2000/532/EC)

This Decision established a list of codes used to classify all waste. A distinction is made between hazardous and non-hazardous wastes and the list has been designed to provide a consistent waste classification system across the EU. The formal list of European Waste Catalogue (EWC) codes is contained in this Decision. Member States use the list of codes to record the types and quantities of wastes handled and managed.

### 3.1.3 European Community Regulation on Shipments of Waste (1013/2006)

This Regulation regulates the supervision and control of shipments of waste in a way which takes account of the need to preserve, protect and improve the quality of the environment. Its aim is to reinforce, simplify and specify the existing procedures for controlling waste shipments. It reduces the risk of waste shipments not being controlled and also seeks to include into Community legislation the amendments to the lists of waste annexed to the Basel Convention<sup>8</sup> as well as the revision adopted by the Organisation for Economic Cooperation and Development (OECD) in 2001.

This Regulation reduces the number of lists of waste authorised for shipment from three to two, corresponding to the two control procedures:-

- The procedure for prior written notification and consent: applicable to all shipments of waste intended for disposal, mixed waste, and hazardous and semi-hazardous waste intended for recovery;
- The procedure in which shipments are accompanied by certain information, applicable to non-hazardous, single stream material destined for recovery.

Wastes subject to notification and consent are set out in the Amber List (Annex IV), while wastes subject only to information requirements are set out in the Green List (Annex III). Wastes for which export is prohibited are listed separately (Annex V).

### 3.1.4 Waste Management Act

In Ireland, the primary legislative platform for waste is provided by the Waste Management Act (WMA) 1996 and the Protection of the Environment Act 2003. The WMA has been brought into effect by the making of a series of Regulations, covering a wide range of topics. For example, the format and content of waste management plans, is governed by the Waste Management (Planning) Regulations 1997. The WMA has been further amended by enacting regulations that address new EU environmental initiatives and strengthen areas where problems have arisen.

The main objectives of the Waste Management Act 1996 are to:

- Deliver a more effective organisation of public authority functions in relation to waste management involving new or redefined roles for the Minister, the EPA and local authorities by defining the roles and responsibilities of each;
- Enable measures designed to improve performance in relation to the prevention and recovery of waste; and

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<sup>8</sup> Council Decision 93/998/EEC of 1 February 1993 on the conclusion, on behalf of the Community, of the Convention on the control of transboundary movements of hazardous wastes and their disposal.

- Provide a comprehensive regulatory framework for the application of higher environmental standards, in response to EU and national requirements.

### 3.1.5 European Framework Policy

Since the release of its Europe 2020 Strategy in 2010, the European Commission has published important waste policy framework documents to move Europe and its Member States onto a more stable, sustainable economic and environmental platform. The focus is for Europe to become more resource-efficient and to embrace the transition to a green circular economy. A summary of the principal policy publications is provided below.

**7TH Environmental Action Programme:** this programme has been formally adopted by the European Parliament and Council and will be guiding the implementation of environment policy for Member States until 2020. The Programme lists three thematic priorities, one of which is to turn the Union into a resource-efficient and competitive low-carbon economy. The focus is on turning waste into a resource with more prevention, reuse and recycling initiatives, and phasing out wasteful and damaging practices such as landfilling. By 2020 the European Union and Member States are to ensure that:

- Waste is safely managed as a resource to prevent harm to health and the environment;
- Absolute waste generation and waste generated per capita are in decline;
- Landfilling is limited to residual (i.e. non-recyclable and non-recoverable) waste; and
- Energy Recovery is limited to non-recyclable materials.

**Roadmap to a Resource Efficient Europe:** the roadmap is the seventh and last of the Europe 2020 Strategy flagship initiatives which aim to shift towards a resource-efficient, low-carbon economy to achieve sustainable growth for Europe. It establishes resource efficiency as the guiding principle for EU policies in many sectors in a long-term framework. The aim is to increase certainty for investment and innovation, and to ensure that all relevant policies factor in resource efficiency in a balanced manner. The Roadmap proposes ways to increase resource productivity and decouple economic growth from resource use and its environmental impact. It illustrates how policies interrelate and build on each other. The Roadmap proposes a set of measures such as incentives to choose the most resource-efficient products, services and production methods, to turn waste into a resource, to phase out environmentally harmful subsidies, to shift away from the taxation of labour towards the taxation of environmental impacts, to give value to natural capital and ecosystem services, to stop biodiversity loss, to meet air quality standards, to progress towards no net land take by 2050, to achieve good environmental status for all EU marine waters, and to fish within maximum sustainable yields.

### 3.1.6 National Framework Policy

National waste management policy up to 2014 is outlined in a series of statements produced by the DECLG and separate publications which address waste prevention and hazardous waste. The intention of these statements is to improve how we manage our waste, which often, in the first instance, means moving away from landfill towards more environmentally sustainable options.

National policy statements have evolved since 1998, the year of their first publication, and each statement attempts to build on the objectives of the previous one to improve the waste management system. The statements published to date include:

- Waste Management: Changing our Ways (1998);
- Preventing and Recycling Waste: Delivering Change (2002);
- Taking Stock and Moving Forward (2004);
- National Strategy on Biodegradable Waste Management (2006); and
- A Resource Opportunity – Waste Management Policy in Ireland (2012).

**A Resource Opportunity** – In July 2012 the DECLG published Ireland’s latest waste management policy which sets out a number of important policy actions in the context of the waste management plans including:

- A revised five step waste hierarchy as part of national policy;
- The virtual “elimination” of landfilling municipal waste is set as a long-term goal with the introduction of landfill bans a possibility;
- The introduction of new regulations for household food waste was signalled and a four year phased roll-out is planned to improve participation and capture rates;
- Side by side collection of waste in the household market will remain with the collection permit system. The household collection market will be strengthened through the implementation of collection service standards and incentivised charging structures;
- Placing responsibility on householders to prove they manage their waste in an environmentally acceptable manner to help combat illegal fly-tipping, littering and backyard burning of waste;
- A greater level of enforcement will be required in the coming years at the household, commercial and industrial levels with better use of resources across the different authorities; and
- The principles of proximity and self-sufficiency are to be implemented to ensure that the State develops the necessary waste recovery infrastructure.

**Sustainable Framework** – This framework, published by June 2012 by the Government, sets out the range of environmental, economic and social measures required to move these agendas forward from vision to reality. Significant gaps remain across a range of economic, social and environmental public policy areas and the framework aims to address those gaps. Under the theme of sustainable consumption and production the framework recommends:

- That Ireland’s waste policy continue the established approach of moving waste management away from landfill towards a range of alternative treatments;
- The effective implementation of resource efficiency initiatives across all sectors in Ireland led by government and state agencies; and
- Implement the national action plan and policy measures on green public procurement.

**National Waste Prevention Programme** – In 2014 the EPA published the next phase in the evolution of the national waste prevention programme. Towards a Resource Efficient Ireland, a National Strategy to 2020, revitalises the framework aimed at breaking the link between economic growth and environmental impacts through resource efficiency and waste prevention. The strategy sets out a range of objectives to be implemented through programmes, partnerships, research and targeted initiatives. The framework will prioritise activities in the following four thematic areas, all of which have relevance for the waste plans:

- Promoting efficient use of resources in business (water, material, energy);
- Minimising food waste and promoting efficient water use in homes and communities;

- Maximising reuse and recovery of resources and preserving national capital; and
- Encouraging behavioural changes to ensure efficient use of resources.

**National Hazardous Waste Plan** – In 2014, the EPA published the third national hazardous waste management plan. It sets out the priorities to be pursued over the six year lifetime of the plan to improve the management of hazardous waste in Ireland. Priority actions include waste prevention; improving collection rates for certain categories of hazardous waste; steps required to improve Ireland’s self-sufficiency in hazardous waste management; and continued identification and regulation of legacy issues (e.g. the assessment and remediation of historic unregulated waste disposal sites). The key to the success of the plan is its effective implementation, and the waste regions (and local authorities within these) will have a role to play to deliver these actions.

### Policy

There are extensive European and national legislative and policy obligations on local authorities to manage waste, and the waste hierarchy is a valuable policy and decision making tool. Moving the management of waste up the hierarchy is preferable from a waste management and environmental perspective, and the hierarchy will be central to the implementation of the plan.

#### Policy:

- A1. Take measures to ensure the best overall environmental outcome by applying the waste hierarchy to the management of waste streams.

The polluter pays principle is a guiding principle at European and National levels and the local authorities recognise its importance. The waste producers and the waste holders are responsible for bearing the cost of waste management, and equitable implementation in support of the principle is required over the plan period. Ensuring this principle is complied with through regulatory and environment actions, addressing issues such as illegal waste activities, will positively affect the environment also.

#### Policy:

- A2. Implement the polluter pays principle across all waste services and regulatory activities in a manner appropriately reflecting the risk to the environment and human health.

## 3.2 WASTE TREATMENT/MOVEMENT LEGISLATION AND POLICY

EU and national legislation is in place governing the treatment and disposal of waste. This details the conditions, environmental controls and standards to be put in place at these facilities. A brief summary of the principal European and national legislation relating to the treatment and movement of waste is provided below.

### 3.2.1 Directive on Industrial Emissions (2010/75/EU)

The 2010 Directive on Industrial Emissions (IED) seeks to minimise pollution from industrial sources, and it requires affected operators to obtain an integrated authorisation. Under IED, emission levels associated with Best Available Technology (BAT) will generally become the legally binding limits in licences. Waste activities affected include some which were not previously covered under Integrated Pollution Prevention and Control (IPPC) licensing e.g. composting, anaerobic digestion, metal shredding and pre-treatment to residual derived fuel (RDF) or solid recovered fuel (SRF). These activities are being licensed according to a schedule of dates.

### 3.2.2 Implementing the EU Landfill Directive (1999/31/EC)

The objective of the Landfill Directive is to prevent or reduce as far as possible any negative effects on the environment or human health associated with the landfilling of waste. It specifies technical requirements for landfill design, operation and closure and sets deadlines for the diversion of biodegradable municipal waste (BMW) from landfill. The Landfill Directive limits the amount of BMW that can be landfilled in Member States. The limit is calculated as a percentage of the amount landfilled in 1995, and is set at 75% in 2010, 50% in 2013 and 35% in 2016. Ireland met its 2010 target, and preliminary data from the EPA indicates that Ireland is on track to meet its 2013 and 2016 targets, refer to (see **Figure 3-3**).

.Article 5 of the Landfill Directive requires each Member State to prepare a National Strategy on Biodegradable Waste (NSBW) detailing measures aimed at the separate collection, recovery and recycling of biodegradable waste. The Irish NSBW was introduced in 2006 and identifies measures to progressively divert BMW from landfill in accordance with the agreed targets of the Landfill Directive. In order to help Ireland meet its obligations, the EPA developed a protocol<sup>9</sup> in 2009 to provide guidance on the level of pre-treatment required prior to landfilling and how to determine the amount of BMW in municipal solid waste (MSW) that is sent to landfill.

### 3.2.3 End of Waste Regulations

End of waste (EOW) criteria specify when certain waste ceases to be waste and obtains the status of a product (or a secondary raw material). According to Article 6 (1) and (2) of the waste framework directive, 2008/98/EC, certain specified waste shall cease to be waste when it has undergone a recovery (including recycling) operation and complies with specific criteria to be developed in line with certain legal conditions. End of waste criteria have been developed to determine when iron, steel, aluminium scrap metal,<sup>10</sup> and glass cullet<sup>11</sup> cease to be waste.

In accordance with the EOW regulations, quality management system must be implemented and certified by an accredited independent conformity assessment body or other environmental verifier to demonstrate compliance with end of waste criteria. In 2014, nine Irish companies, authorised to accept scrap metal at twelve waste facilities currently maintain an applicable quality management system. The Commission is proposing to address other waste streams in the future including recovered paper, plastics, and biodegradable waste/compost.

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<sup>9</sup> EPA Pre-Treatment Guidelines.

<sup>10</sup> Council Regulation (EU) No. 333/2011 (Iron, Steel, Aluminium Scrap Metal).

<sup>11</sup> Council Regulation (EU) No. 1179/2012 (Glass Cullet).

### 3.2.4 Collection and Movement of Wastes

Waste collectors are required by the Waste Management (Waste Collection Permit) Regulations, 2007 as amended, to have and comply with the conditions of a permit to collect waste. The Regulations set out the procedures for making a waste collection permit (WCP) application, the conditions which can be attached and the review and revoking of such permits. Offaly County Council was appointed as the National Waste Collection Permit Office (NWCPPO) in 2012 and is responsible for administering waste collection permits in the Republic of Ireland.

Obligations for the movement of hazardous wastes are recovered in **Section 3.3**. There are some exemptions for the movement of specific waste streams, including WEEE, in certain circumstances which are covered under the Waste Management (collection permit) regulations 2007 as amended.

## 3.3 WASTE STREAM LEGISLATION AND POLICY

This section outlines the legislation in place in Ireland for the management of specific waste streams. However it is noted that there is unauthorised movement of some household waste and certain waste streams, such as ELVs into Northern Ireland and abroad. Most waste streams have binding performance targets in place. **Figure 3-3** charts national progress towards achieving these targets.

**Household waste:** In Ireland the management of the household waste stream and its fractions (residual wastes, organic wastes, and dry recyclable wastes) is governed by several Regulations and policy directions. The provision of source-separated household waste collection has been a policy recommendation since 1998<sup>12</sup> and was supported by the objectives of the first regional waste plans and obligated under statutory instruments, such as the Packaging and Waste Packaging Regulations 2007. In support of the policy, local authorities issued collection permits requiring the provision of source-segregated recyclable waste collections from the residual stream. Separate national Regulations<sup>13</sup> require householders to segregate their food waste and make it available for separate collection. Alternatively the waste can be home composted or brought directly to an authorised treatment facility. The Regulations require the provision of separate food waste collections to almost all households in the State. The future targets are to service all agglomerations with a population of greater than 1,500 persons by July 2015, with all areas with more than 500 persons to have a service by July 2016. Finally the WFD has set a target of 50% recycling by 2020 for principal fractions<sup>14</sup> of the household stream and Ireland is on track to meet this target.

**Commercial waste:** Similarly to household waste, the collection of commercial dry recyclable wastes is driven by national policy obligations and regulations requiring the separate collection of recyclables for recovery. The Waste Management (Food Waste) Regulations (S.I. No. 508 of 2009) require the segregation and recovery of food waste arising from commercial premises. The Regulations apply to “producers” who are essentially the suppliers of food, and the classes of premises affected are provided in Schedule 1 of the Regulations. The National Waste Collection Permit Office is tasked with issuing permits to waste collectors for the collection of wastes including commercial wastes.

**Packaging and waste packaging:** The Packaging Waste Directive (94/62/EC and amended) and supporting Irish legislation deal with packaging placed on the Irish market and all types of packaging waste. The legislation requires Member States to introduce systems for the return and/or collection

<sup>12</sup> Changing Our Ways (1998) Department of Environment, Community and Local Government.

<sup>13</sup> The European Union (Household Food Wastes and Bio-Waste) Regulations 2013.

<sup>14</sup> Household-derived paper, metal, plastic and glass.

of used packaging. The European Union (Packaging) Regulations 2014 (S.I. No. 282 of 2014) replaces the previous suite of regulations introduced in 2007. The Packaging Directive set a target of a minimum of 60% packaging waste recovery to be achieved by December 2011 and Ireland has exceeded this target since 2006. The recovery rate in 2012 was 87% (see **Figure 3-3**).

**Construction and Demolition Waste:** Ireland does not have a specific Regulation addressing Construction and Demolition waste (C&D). This stream is managed through policy and other measures. For example in 2007, planning guidelines<sup>15</sup> issued under the Planning and Development Acts<sup>16</sup> required planning authorities to consider the DECLG Best Practice Guidelines to ensure the proper management of C&D waste. The national policy document, *Changing Our Ways* (1998), set a target of 85% recycling of C&D waste by 2013. More recently the 2008 EU WFD set a target of 70% by weight for C&D waste, excluding natural soils and stones waste and hazardous C&D wastes. In 2012 the EPA reported that Ireland has exceeded this target by a considerable margin with a recovery rate of 97% recorded.

**Waste electrical and electronic equipment (WEEE):** The WEEE Directive requires the establishment of a producer-funded take-back scheme for WEEE to promote reuse, recycling and recovery. The 2014 Irish Regulations give producers responsibility for financing the environmentally sound management of WEEE and assign collection and recycling/recovery targets. Ireland has developed robust producer responsibility schemes for the collection of WEEE and has achieved all mandatory targets to date.

**End-of-life vehicles (ELVs):** Directive 2000/53/EC on ELVs and National legislation<sup>17</sup> aim to minimise the impact of ELVs on the environment at the design and waste phase. These Regulations facilitate the achievement of a rate of reuse and recovery of 95%, and a rate of 85% of reuse and recycling from January 2015. Owners of ELVs must deposit them at Authorised Treatment Facilities (ATFs) that may not charge for accepting an ELV. Local authorities enforce the parts of the ELV Regulations relating to ATFs and also maintain a register of producers. Ireland is making progress towards the mandatory target, but its achievement is currently at risk.

**Tyres and waste tyres:** The Waste Management (Tyres and Waste Tyres) Regulations 2007 provide a regulatory framework for tracking tyre quantities and movements from the time they are discarded until they are reused, recycled or recovered. The Regulations require those supplying and collecting tyres to report the quantities involved, and to register with their relevant local authority, pay fees and fulfil reporting requirements. Those who are members of a Producer Responsibility Operator (PRO) are exempt from the requirements to register with local authorities. Unlike other waste producer compliance schemes the tyre compliance schemes do not fund/subsidise the collection and treatment of waste. The existing tyre compliance scheme is not required to meet specified recycling/recovery targets as these are tracking schemes rather than full Producer Responsibility Initiatives (PRIs).

**Batteries and accumulators:** EU Directives 2006/66/EC and 2013/56/EU on waste batteries and the national legislation<sup>18</sup> set out the system for managing waste batteries. The national regulation provides for the free take-back of waste batteries and facilitates their collection, treatment and recycling. Mandatory minimum collection rates are required for portable batteries - 25% by 2012 and 45% by 2016. Ireland's progress towards the 2016 target has been slow and the achievement of

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<sup>15</sup> Guidelines 13 – Development Guidelines for Local Authorities, DECLG.

<sup>16</sup> Section 28 of the Planning and Development Acts.

<sup>17</sup> European Union (End of Life Vehicles) Regulations, 2014 (S.I. No. 281 of 2014).

<sup>18</sup> European Union (Batteries and Accumulators) Regulations 2014 (S.I. No. 283 of 2008).

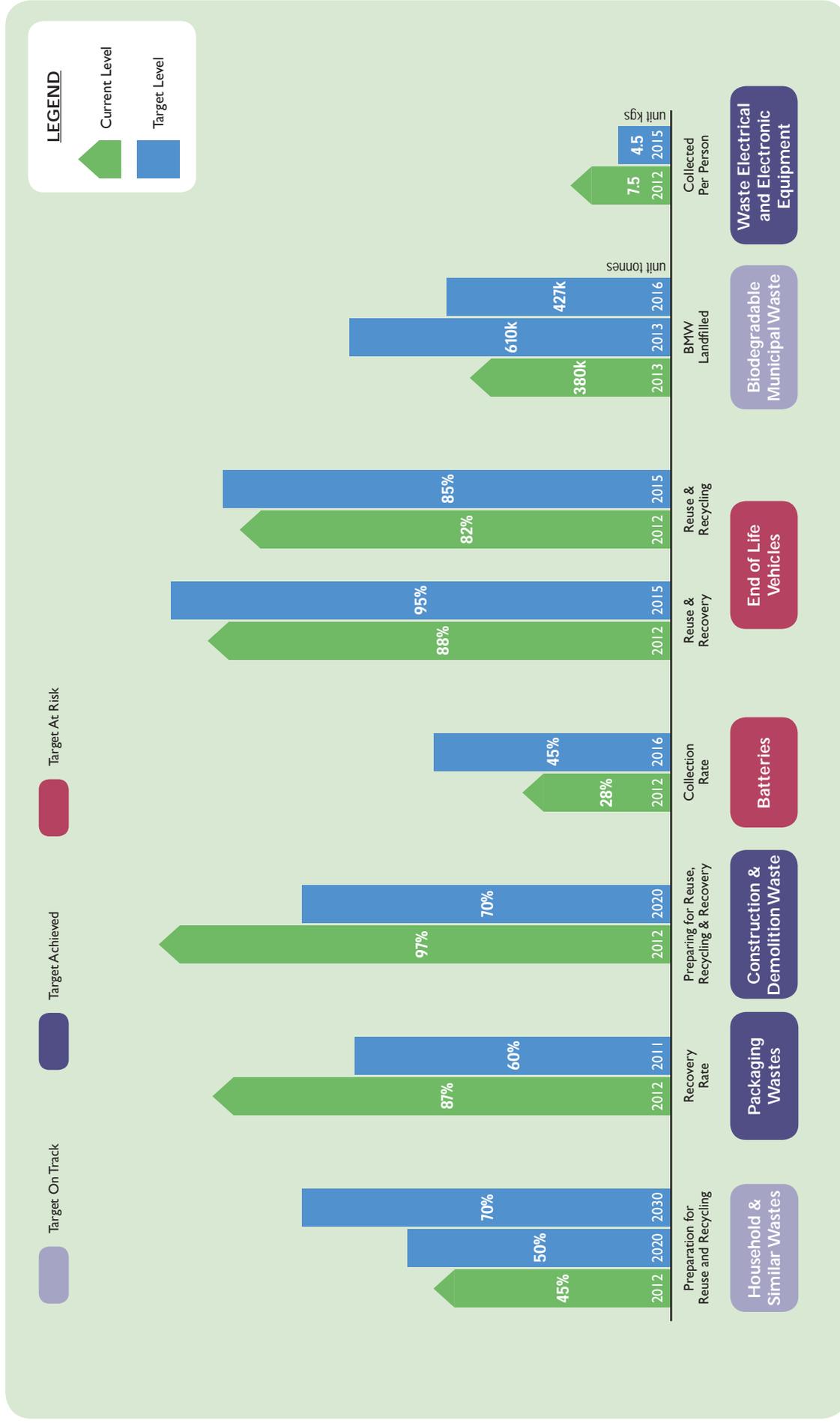


Figure 3-3 Ireland's Progress towards European and National Mandatory targets

this target is currently at risk. The 2006 Directive prohibits the landfilling or incineration of waste industrial and automotive batteries and outlines the provisions for labelling batteries and their removability from equipment. The 2013 Directive amends the previous Directive, and focuses on the hazardous content of waste batteries, prohibiting the sale of most batteries and accumulators that contain certain levels of mercury and cadmium.

**Hazardous waste:** Hazardous waste is generated by all sectors of Irish society, from large industry, to small businesses, households, schools and farms. It is for the most part managed by a professional hazardous waste industry and is treated appropriately and in accordance with legal requirements. The Waste Management (Hazardous Waste) Regulations, 1998 (S.I. No. 163 of 1998) as amended, update and replace a number of previous Regulations. These Regulations implement the provisions of several EU Directives relating to the supply of batteries and accumulators, the management and disposal of polychlorinated biphenyls (PCBs), PCB-containing wastes, asbestos wastes, waste oils and hazardous wastes

**Farm plastics:** The Waste Management (Farm Plastic) Regulations 2001, promote the collection and recovery of farm plastic waste. They oblige manufacturers and importers of farm plastics to arrange for environmentally acceptable ways of collecting and disposing of used plastic film, including deposit and refund, or other schemes.

**Animal by-products:** The Animal By-Product (ABP) Regulations<sup>19</sup> address aspects relating to the collection, treatment, storage and use of ABPs. Household, commercial and industrial waste streams consisting wholly or in part of ABPs including, for example, meat, milk, bones or manures, fall within its remit as do their associated treatment processes, including anaerobic digestion, composting, mechanical biological treatment (MBT), “fines” stabilisation and landfill. The legislation specifies acceptable processes and standards of recovery/disposal for each category.

**Sewage sludge:** The Waste Management (Use of Sewage Sludge in Agriculture) Regulations 1998 as amended provide limits for certain metals permitted in soil and sludge, and limit their introduction into soil. The licensing or certification of waste water discharges from local authority sewer networks began in 2007, giving effect to a number of EU Directives by restricting the discharge of dangerous substances. All discharges to the aquatic environment from public sewerage systems require authorisation from the EPA. Stringent conditions on the operation of such discharges will limit and control the effects on receiving water bodies. However, the Regulations do not include waste water sludge disposal. Irish Water is proposing to introduce a national waste water sludge management plan in 2015 and a national water treatment sludge management plan at a later date.

**Mining and extractive industries wastes:** The EU Directive (2006/21/EC) on the management of waste from extractive industries and National legislation<sup>20</sup> require the establishment of a range of provisions for extractive waste facilities. The Regulation focuses on improving quality management for the most hazardous types of extractive waste facility. Many of these facilities will be already licensed by the EPA, but local authorities are required to identify any additional sites. The local authority has assigned responsibilities for planning, inspections and information gathering.

**Healthcare waste:** This is the solid or liquid waste arising from healthcare activities. There is no specific statutory instrument for healthcare waste, and the management of this waste stream and its

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<sup>19</sup> 2009 Regulation (EC No. 1069/2009).

<sup>20</sup> Waste Management (Management of Waste from Extractive Industries) Regulations 2009 (S.I. No. 566 of 2009).

fractions falls under several Regulations including the Packaging and Packaging Waste Regulations, Commercial Food Waste Regulations and Hazardous Waste Regulations.

### Policy

The local authorities recognise the extent of inert, non-hazardous and hazardous waste streams being generated in the region and nationally. The management of these streams places specific obligations on the authorities, and the policies and actions of the plan are designed to ensure that the authorities are contributing to proper management. The importance of tracking the progress of managing these streams is critical to identify areas where the existing systems are not achieving performance targets, as well as reporting on the streams which are being managed successfully.

#### Policy:

- A3. Contribute to the improvement of management performance across all waste streams through the implementation of policy actions and monitor progress towards national targets.

## 3.4 OTHER WASTE LEGISLATION

Other important Irish legislative instruments are summarised in the following sections.

### 3.4.1 Waste Management Planning Regulations

The Waste Management (Planning) Regulations 1997 specify the content to be included in a Waste Management Plan made under section 22 of the Waste Management Act, 1996:

1. Preface to the Waste Management Plan;
2. Present position regarding waste management;
3. Anticipated developments over the period of the plan;
4. Waste management policy; and
5. Implementation of waste management policy over the relevant period.

The Regulations also define the statutory authorities who are to be given a copy of the proposed or final plan.

### 3.4.2 Plastic Bag Levy

The plastic bag levy was introduced on 4 March 2002 under the Plastic Bag (Amendment) (No. 2) Regulations (S.I. 167 of 2007). Its primary purpose is to reduce the consumption of disposable plastic bags by influencing consumer behaviour. The current levy of 22 cent was introduced on 1 July 2007. Plastic shopping bags designed for re-use are exempt from the levy provided the retailer charges at least 70 cent for the bag.

### 3.4.3 Landfill Levy

A levy on each tonne of waste sent to landfill was introduced on 1 June 2002 under the Waste Management (Landfill Levy) Regulations 2002. The levy is designed to encourage diversion of waste from landfill and generate revenues that can be used to support waste minimisation and recycling initiatives. It was set at €15 per tonne in 2002 and has increased over time to the current level of €75 per tonne; see **Table 13-1** for details of the increases to the landfill levy since it was introduced.

## 3.5 ENERGY LEGISLATION

Energy policies encourage the use of waste resources as fuel. The *Energy White Paper (2007)* recognises that renewable energy has a significant role to play in meeting Ireland's objectives of security of supply, environmental sustainability and economic competitiveness. Waste-derived materials are an important source of renewable energy.

The *Strategy for Renewable Energy for Ireland (2012–2020)* set out a goal to develop a sustainable bioenergy sector which will support renewable heat and power generation, with a focus on the use of waste as an energy resource. The Electricity Regulation Act 1999 also encourages the use of electricity generated from renewable energy sources.

The *National Development Plan (NDP) 2007-2013* had a focus on the deployment of biomass and biofuels through a range of supports, including focus on integrating sustainable energy practices and structures into public policies and the development of infrastructures. A Ministerial Task Force on bio-energy produced a '*Bioenergy Action Plan for Ireland (2007)*' which set bioenergy deployment targets and identified priority areas for development and support. This has been followed by the Draft Bioenergy Plan, which was published in October 2014 by the DCENR.

The Renewable Energy Feed in Tariff (REFIT) is the primary means through which the generation of electricity from renewable sources is supported in Ireland, and some waste technologies qualify for State aid under this programme.

## 3.6 LEGISLATION TO PROTECT BIODIVERSITY AND WATER

A Waste Management Plan requires a Strategic Environmental Assessment (SEA) to be performed and a brief summary of the principal wildlife legislation relevant to the preparation of the SEA is provided below.

The EU introduced the Birds Directive in 1979 and the Habitats Directive in 1992. The aim of both is to maintain and restore the favourable conservation status of natural habitats and species. Each Member State must designate its most important natural areas as Special Areas of Conservation (SACs). The Directive specifies the scientific criteria on the basis of which SAC sites must be selected and very strictly curtails the grounds that can be used as justification for damaging a site. The network of sites is referred to as Natura 2000 and includes SACs (Special Areas of Conservation) for protected habitats and species and SPAs (Special Protection Areas) for protected bird habitats.

Article 6 of the Habitats Directive provides a strict assessment procedure for any plan or project not directly connected with or necessary to the management of a designated European site but which

has the potential to have implications for the site in view of the site's conservation objectives. The Regional Waste Management Plans, therefore, fall under the remit of Article 6.

The Wildlife Acts 1976-2012 are Ireland's primary biodiversity legislation. The 2000 Act broadened the scope of the Wildlife Acts 1976-2012, gave statutory protection to Natural Heritage Areas (NHAs) and enhanced conservation of wildlife species and their habitats.

Section 21 of the Wildlife Act 1976 -2012 provides for the protection of specific species of flora. The current list of protected plant species is set out in the Flora (Protection) Order 1999, and makes it illegal to damage the listed species, or their habitats, in any way. This protection extends to all sites where the flora may be found and is not limited to those designated for conservation.

The European Communities (Birds and Natural Habitats) Regulations 2011 apply to flora, fauna and habitats, with a particular emphasis on strengthening the protection of birds. The Regulations also complement relevant provisions of the Planning and Development (Amendment) Act 2010. Local authorities and An Bord Pleanála will now have legal responsibilities and powers under the Planning and Development Acts to ensure that the requirements of the Birds and Habitats Directives are adhered to when adopting development plans and granting of development consents. All other statutory authorities must adhere to the provisions of the new Birds and Habitats Regulations in their planning, consent and operational functions.

The Water Framework Directive (2000/60/EC) aims at improving the aquatic environment and as such it applies to rivers, lakes, groundwater, estuaries and coastal waters. Member states are required to achieve good status in all waters and must ensure that status does not deteriorate. This directive requires that water quality management be centered on river basins. The RWMP will contribute to the fulfilment of these environmental protection objectives through policy actions such as the plan for prioritising investigation and remediation of landfills. Preparation of the second cycle of River Basin Management Plans and Programme of Measures (PoM) has commenced and outputs will be available within the timeframe of this RWMP. These plans and associated PoM will be integrated into the RWMP as relevant.

## 4 EMERGING POLICY ISSUES

The following sections provide a summary of emerging policy issues which will impact on the management of household and municipal waste and the regulatory role of local authorities over the duration of the plan.

### 4.1 EUROPEAN CIRCULAR ECONOMY PACKAGE

The circular economy policy agenda is an essential part of the EU's vision for a healthier and more prosperous environment for Member States and its citizens. In the 7TH Environment Action Programme, the European Commission states that:

“our prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed sustainably, and biodiversity is protected and restored in ways that enhance society's resilience”.

In the global economy the demand and competition for finite and sometimes scarce resources will continue to increase, and pressure on resources is causing greater environmental degradation and fragility. Making better use of those resources, reducing the leakage of materials from our economies, will deliver benefits economically and environmentally. The move to a circular economy replacing out-dated industrial take make consume and dispose models, is essential to deliver the resource efficiency ambition of the Europe 2020 Strategy. The circular economy is central to the strategy of the regional waste plans and is described in full in **Chapter 5**.

Stimulating the circular economy requires extensive policy support at European, national, regional and local levels. On 2 July 2014, the European Commission adopted the Communication “Towards a circular economy: A zero waste programme for Europe” and annex to establish a common and coherent EU framework to promote the circular economy. In November 2014, following the appointment of a new President and Commissioners to the European Commission, a significant number of legislative proposals were reviewed including the circular economy package.

The European Commission officially withdrew the ambitious waste and recycling policy proposals as part of the circular economy package in February 2015. The Commission has commenced work on a new proposal to replace the package.

It is expected that the new package will be broader in scope covering product design, reuse and the creation of markets for secondary raw materials, rather than being overly focused on waste management. A large number of Member States have signalled support for better product policy to help reduce waste. The role of targets will be revisited for the new package on the circular economy with targets previously proposed, such as the 30% resource efficiency target, unlikely to be retained.

The replacement package may contain more non-legislative policies to help cut the administrative burden of implementing EU waste goals. Issues to be addressed in the new policy through non-legislative measures will include investment and business opportunities. The package will also take into account the different situations in Member States and better reflect national differences.

The Commission has stated that it will publish a roadmap setting out its first ideas for the new package for public consultation from May to July 2015. Formal proposals, including a revised waste proposal, are due at the end of this year.

## 4.2 ORGANISATION OF THE HOUSEHOLD WASTE COLLECTION MARKET

The household waste collection market in Ireland was unregulated until the State brought into force primary waste legislation in 1996. At this time most household waste collection services in Ireland were provided by local authorities. In some rural areas local private collectors were serving householders, although this activity was limited.

Following the introduction of the Waste Management Act in 1996, secondary legislation was enacted to implement the requirements of the Act and to provide legal systems for operations and activities in the waste market.

The regulatory framework introduced for household collections did not exclude private operators from the market, once the appropriate authorisation (i.e. waste collection permit) was obtained. The evolution of the market has seen increased market penetration by private operators. This led to increased competition between public and private operators for the provision of services. Local authorities have increasingly ceded the household collection market to private collectors and since 2013 the Connacht Ulster Region has been fully privatised.

The reform of the household waste collection market has been under consideration for some time. In 2011 the present Government signalled its intention to introduce competitive tendering for local household waste collection services and issued a discussion document, *Altering the Structure of Household Waste Collection Markets (2011)*, for public consultation. The consultation identified a number of areas of poor or problematic performance in the current regulatory system. Despite the need for change, the document also noted that a possible alteration in market structure has the potential to lead to economic disruption and other risks.

DECLG published a *Regulatory Impact Analysis on Household Waste Collection* in 2012. This analysis considered the introduction of competitive tendering for household waste collection. It recommended that Government preserve the current household waste collection market structure and that it strengthen the regulatory regime to address areas of weakness.

The policy document *Resource Opportunity-Waste Management Policy in Ireland (2012)* followed and proposed a revision of the existing regulatory regime to ensure that:

- Waste collected is managed in accordance with the waste hierarchy;
- Mandated service levels are delivered;
- Pricing structures incentivise household waste reduction and source segregation;
- Customer charters are put in place by all waste collection providers; and
- The existing collection permit system is strengthened to improve governance controls, permit fee structures, and address emissions and health and safety risks.

In this policy document the Government confirmed that competition oversight of the market was required so as to ensure a level playing field for both existing and potential new entrants. The Competition Authority has been tasked with monitoring the household waste collection market, with a formal review of the market to be completed by the Authority in 2016.

Household waste regulations are being prepared to strengthen the regulatory structure for the management of household waste, and are due for publication in 2015. A government circular<sup>21</sup> issued in 2015 outlines the scope of the regulations which are intended to introduce a number of new measures for household waste collectors:-

- Pay By Weight: They will have to ensure that pay-by-weight systems are in place by July 2015 and charge households on a pay-by-weight basis from July 2016;
- Customer Charter: They will be required to have customer charters in place by July 2015;
- Minimum Service Level: They will be required to collect all three household waste streams in line with the EU(Household Food Waste and Bio-Waste) Regulations 2013;
- Verify Customer Details: They will have an obligation to provide authorised officer details which confirm that a householder is using their service; and
- Enforcement Provisions: Contravention of any of the new measures listed above will trigger an automatic review of their permit and the regulations will also introduce fixed penalty notices for specified offences and a “three strike” approach to specified offences whereby an automatic review will be triggered.

Similar obligations will be in place for pay-to-use compactors and civic amenity sites accepting residual waste. From July 2016 onwards it is intended that there will be an obligation on householders to demonstrate that they are managing their waste, with the introduction of fixed penalty notices for households who cannot demonstrate this.

It is anticipated that the new regulations will deliver both an improved environmental performance and a quality service for consumers. The new regulations are also expected to enhance the regulatory and enforcement role of local authorities to address issues such as poor service provision and uncollected waste.

### 4.3 RESIDUAL AND BIOWASTE EXPORTS

The export of residual waste has become more prevalent in the Irish residual waste market in recent times. Data shows that residual waste exports, typically RDF, commenced as far back as 2004. Exporting of segregation biowaste to Northern Ireland is a trend that has developed more recently.

The amount of residual municipal waste being exported has increased each year since 2011. In 2013 over 300,000 tonnes of residual municipal waste was exported, which equates to approximately 20% of the available residual waste market in Ireland. Provisional data for 2014 indicates that the recent trend of increasing residual waste exports is set to continue, with a further rise in the tonnage recorded.

The quality of the residual waste material exported varies and is determined by the extent of pre-treatment the waste has undergone. Mechanically processing residual waste for export produces either RDF or SRF. The latter is a higher quality material which must comply with the international standard, CEN/TC 343. SRF typically has a higher calorific value and is the preferred alternative fuel feedstock for cement kilns. RDF is a lower quality material, the production of which requires less processing, and therefore it attracts a lower value. A third output in the form of baled, wrapped municipal waste is also being generated for export. This material may be exported with minimal, if

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<sup>21</sup> CircularWP01/15.

any, treatment. The EPA has introduced guidance<sup>22</sup> outlining to operators who are preparing residual waste for export the level of processing required to allow a reclassification of material from a EWC 20 03 coded waste to 19 12 type waste code.

The growth in the residual waste export market is due to a number of factors, the primary one being the landfill levy, which rose from €30 per tonne in 2010 to €75 per tonne in 2013. The quantity of residual waste sent to landfill dropped by almost a third from almost 1.5 Mt in 2010 to just over 1 Mt in 2012. Competitive, low-cost gate fees exist at incineration and waste-to-energy facilities across Europe and these have contributed to the movement of waste away from Irish landfills. The number of active disposal facilities in Ireland was reduced to five in 2014 from 28 in 2010. However, the sustainability of current market dynamics and the place of residual waste exports in the national waste strategy need to be carefully monitored.

The latest residual waste export data shows that the key destinations are facilities in Central and Northern Europe, with the Netherlands, Germany, Sweden and Denmark to the fore. **Figure 4-2** outlines residual waste exports and destination markets.<sup>23</sup>

In the short term, capacity will remain available in the Central and Northern European facilities and residual waste will continue to be imported to make up the shortfall. There is uncertainty as to the length of time capacity will remain at current levels. A report<sup>24</sup> from the Netherlands predicts that some of the Dutch Waste to Energy (WtE) plants, which are currently importing waste, face closure from 2016 onwards. Less efficient or older plants in Europe which are coming to the end of their original operating life, will require substantial re-investment if they are to continue to meet operating standards. In Germany for example, 36% of WtE facilities are over 20 years old<sup>25</sup> and it is reasonable to assume that not all of these will be able to continue to compete in the current environment.

There have been immediate short-term gains from the export of residual waste. The export of such waste is helping Ireland achieve its mandatory landfill diversion targets, and the availability of low cost gate fees from plants in Europe is also helping to keep waste disposal costs charged to householders and businesses down. Waste operators in Ireland have responded to the availability of the export market by configuring their facility operations to produce residual waste which can be recovered abroad.

The return to economic recovery and growth is expected to lead to increases in the generation of waste. Notwithstanding the continued efforts to improve rates of recycling, the quantity of residual waste requiring treatment is anticipated to grow across Member States as economies begin to emerge from the financial crisis. This may impact on the levels of over-capacity, as may closure of older, less efficient plants which are currently active in the market. Gate fee prices are likely to increase with demand for capacity. The development of such a scenario poses a potential significant risk to Irish exports in terms of securing long-term and cost-effective outlets for residual waste.

A growing dependence on the export market may lead to an over-reliance on overseas markets to manage Ireland's waste. This will have consequences for national policy ambitions to become self-

<sup>22</sup> EWC Classification of Mixed Municipal Waste Exiting Waste Management Facilities, EPA (October 2012).

<sup>23</sup> Data source: National TFS Office, 2013.

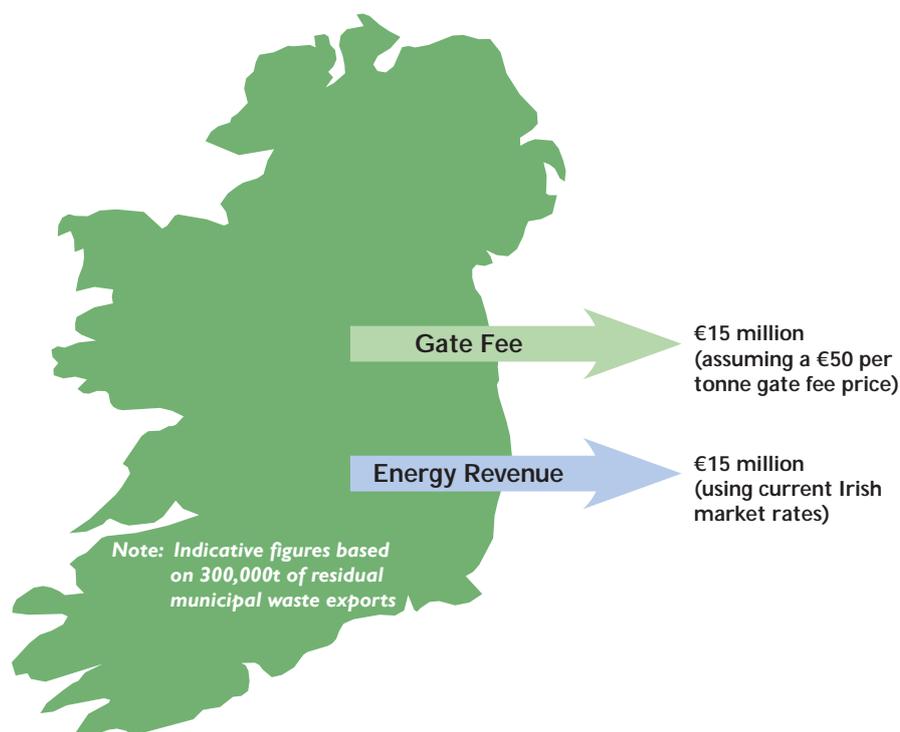
<sup>24</sup> Recycling benefits from combustible waste imports, Dutch Waste Management Association, November 2012.

<sup>25</sup> UK Waste Export: Opportunity or Threat? 2011 Briefing Report, June 2011.

sufficient in treating residual wastes. A continuous move towards waste exports may influence direct infrastructural investment into mechanical pre-treatment facilities designed to produce baled residual waste for export. Such a move is not without risks as exports are vulnerable to market shocks, price increases and potential enhanced regulatory controls.

The export of waste also results in a direct loss of revenue to the Irish economy and impact on our ability to reach self-sufficiency. This loss is compounded by a corresponding reduction in the available waste resource used to generate energy in the form of combined heat and power (CHP) at many of these overseas facilities.

The energy generated from Irish waste not only is providing a revenue, which is a further loss to the Irish economy, for these plants but, more importantly perhaps, provides electricity and heat to businesses and homes in EU Member States, (see **Figure 4-1**).

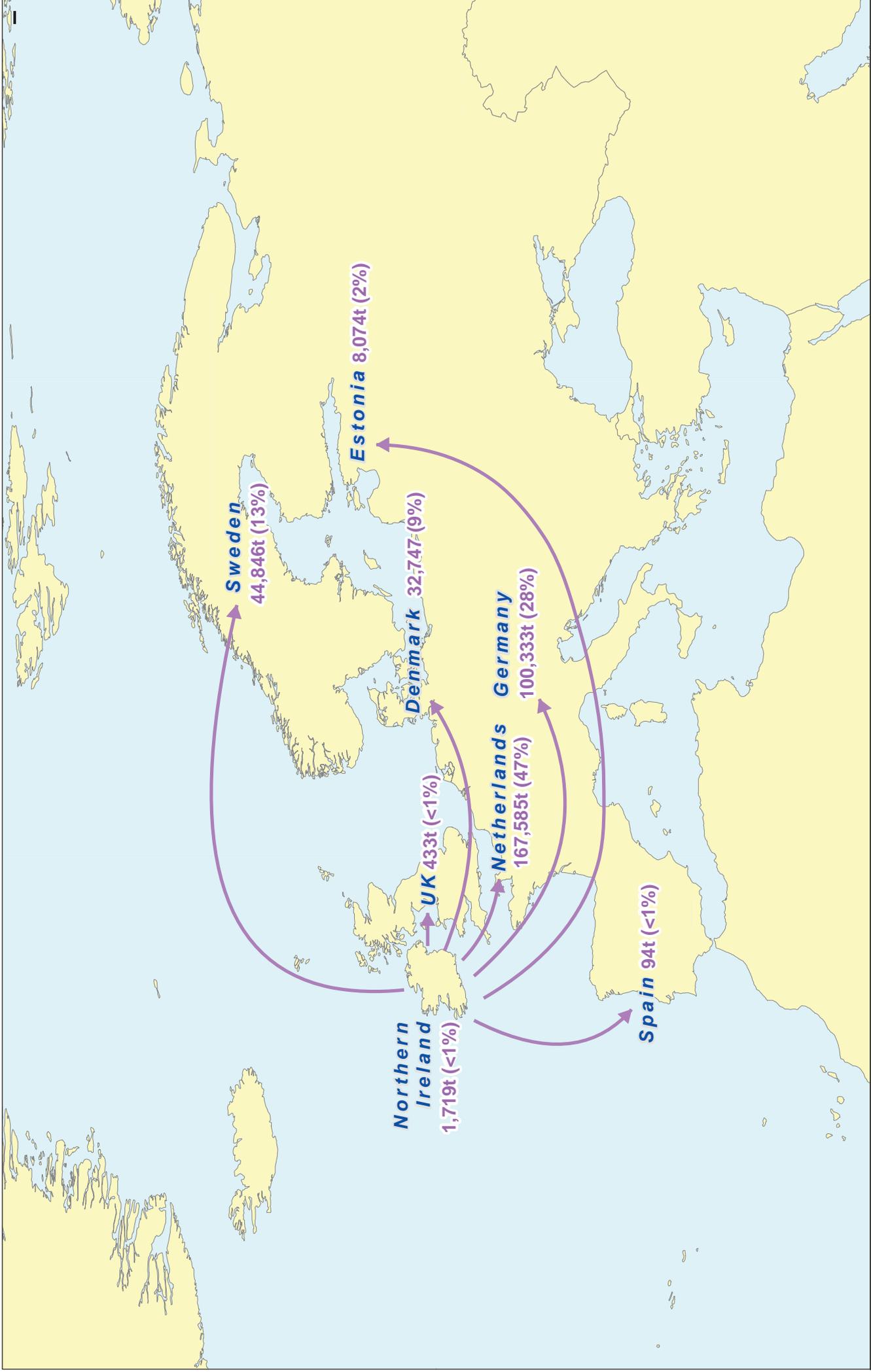


**Figure 4-1 Indicative Financial Losses from Exporting Residual Wastes**

The most recent Green Paper on Energy Policy in Ireland does not consider the potential of the waste sector to contribute to Ireland's energy future. The long-term alternative to the export of residual wastes is for Ireland to become self-sufficient in terms of managing and treating its residual waste in indigenous thermal recovery facilities.

### Policy

The local authorities of the region support self-sufficiency and the development of indigenous infrastructure for the thermal recovery of residual municipal wastes in response to legislative and policy requirements. The preference is to support the development of competitive, environmentally and energy efficient thermal recovery facilities in Ireland, including the replacement of fossil fuels by co-combustion in industrial furnaces or cement kilns, and ultimately to minimise the exporting of residual municipal waste resources over the plan period.



**Figure 4-2** Residual Municipal Waste Exports and Destination Markets (2013)

While there is the potential for local impacts on the environment from the development of indigenous infrastructure, there are overall positive effects resulting from the reduction in national and international transport of waste streams, and associated emissions, in working towards self-sufficiency.

### Policy:

- A4. Aim to improve regional and national self-sufficiency of waste management infrastructure for the reprocessing and recovery of particular waste streams, such as mixed municipal waste, in accordance with the proximity principle. The future application of any national economic or policy instrument to achieve this policy shall be supported.

## 4.4 GREEN PROCUREMENT

Green Procurement is a voluntary instrument generally associated with public policy, although it is equally applicable to the private sector. Green procurements help organisations to comply with legislation and contribute to environmental targets (e.g. CO<sub>2</sub> reduction, resource use and waste, water and energy), protect reputation, encourage new competitors, and increase market resilience by reducing exposure to commodity prices. The concept is becoming increasingly familiar and more commonly included in many organisations' Corporate Social Responsibility (CSR) policies.

Green Public Procurement (GPP) is defined in the European Commission's Communication "*Public procurement for a better environment*" as "a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured" (European Commission, 2008). At the European level, GPP is a voluntary policy. However, there are a number of areas where EU<sup>26</sup> or national<sup>27</sup> legislation creates specific environmental obligations which must be taken into account in procurement.

The importance of GPP in Ireland as a mechanism for government to deploy its purchasing power more strategically in pursuit of wider policy goals has been outlined in a number of key policy documents. The *National Climate Change Strategy 2007–2012* (DECLG, 2007) recognises the potential of GPP to "move the market" towards the competitive provision of more sustainable products and services. This is supported by Ireland's *Second National Energy Efficiency Action Plan* (DCENR, 2013), which recognises the opportunities that GPP represents for efficiency gains in the public sector.

The Governments framework document—*Building Ireland's Smart Economy* (2009) notes the potential of GPP practices to contribute to improving the capacity of Irish companies to supply high-quality, competitively priced goods and services that meet high environmental and carbon emission

<sup>26</sup> Waste Electronic and Electrical Equipment (WEEE) Directive 2012/19/EU (as implemented by S.I. No. 149 of 2014) sets requirements on producers to take back used equipment as well as registering with a designated authority and complying with hazardous substance controls.

<sup>27</sup> Waste Management (Food Waste) Regulations S.I. No. 508 of 2009 require all major producers of food waste to place it into a dedicated bin and ensure that it is not mixed with other waste.

standards. *Developing the Green Economy in Ireland* (DJEI, 2009) also emphasises the importance of GPP and its implementation in a manner that supports innovative companies. As part of the Irish Government's commitment to achieving the EU GPP target, the DECLG and Department of Public Expenditure and Reform (DPER) jointly launched Ireland's first *Green Public Procurement Action Plan, Green Tenders* in January 2012.

This action plan sets out a range of actions where green procurement can be strengthened within eight priority areas; Construction, Energy, Transport, Food and Catering Services, Cleaning Products and Services, Paper, Uniforms and Textiles, and Information and Communications Technology<sup>28</sup>. The policy document defines the legal context and provides an overview of the mandatory environmental criteria which already apply to public bodies.

*Green Tenders* adopts a target for 50% of procurement in the eight priority sectors (both by number of contracts and by value) to include at least core GPP criteria. It also defines the economic and value-for-money context in which GPP will take place. A GPP Action Plan Implementation Group, comprising relevant Government Departments and Agencies, has been established and has been tasked with:

- Reviewing implementation of GPP on an annual basis;
- Drawing up terms of reference for further on-going research; and
- Reporting on the level of GPP training for public procurers.

From a waste management perspective, the benefits from the implementation of GPP include the more efficient use of raw materials leading to a reduction in pollution and waste. Recently the EPA published an implementation guide<sup>29</sup> on green procurement aimed at the public sector which will help to establish the practice in public bodies.

## Policy

The local authorities recognise the important contribution that GPP actions can make to improving resource efficiency and delivering higher level of materials reuse and recycling in public contracts. Over the plan period the local authorities are committed to implementing activities which realise a greening of contracts related to the waste plan. This policy will improve the process whereby public and semi-public authorities in procuring goods, services, works and utilities choose solutions that reduce the impact on the environment throughout their life-cycle. GPP recognises the purchasing power of the public sector and can bring about efficiencies in resource use, cost saving and environmental benefits.

### Policy:

- C4. Contribute to the greening of public procurement in local authorities through the inclusion of resource efficient criteria in all tendering processes related to waste plan activities.

<sup>28</sup> These groups have been chosen on the basis of the following criteria: quantum of public expenditure; scope for environmental improvement; potential impact on suppliers; potential for setting an example to private or corporate consumers; political sensitivity; existence of relevant and easy-to-use criteria; market availability and economic efficiency.

<sup>29</sup> Green Procurement, Guidance for the Public Sector, EPA, September 2014.

## 5 STRATEGIC APPROACH

This chapter sets out the overarching waste strategy for the CUR, which will be implemented over the lifetime of the plan.

### 5.1 BACKGROUND

This is the third round of regional waste plans to be prepared in Ireland and provides an opportunity to review the previous approach and propose a course of action to build on progress made to date.

The footprint of the new CUR encompasses three previous regional waste plans. The strategies contained in these plans typically covered a 15 year period and different scenarios for the future management of waste were examined in each region. Some of the plans included waste plan modelling, which took a holistic approach to assessing scenarios, considering waste management, and environmental and financial factors. To paraphrase, the preferred approach for each region aimed to maximise recycling and minimise disposal in favour of thermal recovery of residual wastes. The phrase “*best practicable environmental option*” - was used to describe the preferred solution and accompanying performance targets were set. To paraphrase, the preferred approach for each region aimed to maximise recycling and minimise disposal in favour of thermal recovery of residual wastes. The fundamental objectives of these strategies continue to have relevance for Ireland, while it is recognised that the waste market has evolved since their design. The management systems in place for waste in Ireland are well established and any future strategy must seek to build on the positive progress made by the sector.

The evaluation of the waste plans was completed in 2012 and provided an opportunity for local authorities to consider the progress made by each region towards their strategic targets. A clear finding of the evaluation was the inability of local authorities to monitor their actual progress against the targets in their region. Characteristics of the Irish waste market such as (1) the open movement of waste across regional boundaries, (2) the potential for waste streams to be handled by a number of operators and (3) the export of waste make it almost impossible for authorities to accurately track and record the management outcome for waste generated in their regions. Future strategic targets need to be relevant and measurable over the lifetime of the plan. The evaluation reports also recommended that targets focus on broader waste streams such as municipal waste rather than household waste. This reflects the realities of the market and the mixing of similar waste streams that takes place at the collection and processing stages, which makes it increasingly difficult to measure individual waste streams or fractions.

The completion of the evaluations coincided with the publication of the government’s waste management policy statement, A Resource Opportunity. A guiding principle of the statement is that when waste is generated, maximum value must be extracted from it by ensuring that it is reused, recycled or recovered, including by the appropriate treatment of mixed municipal waste or residual waste.

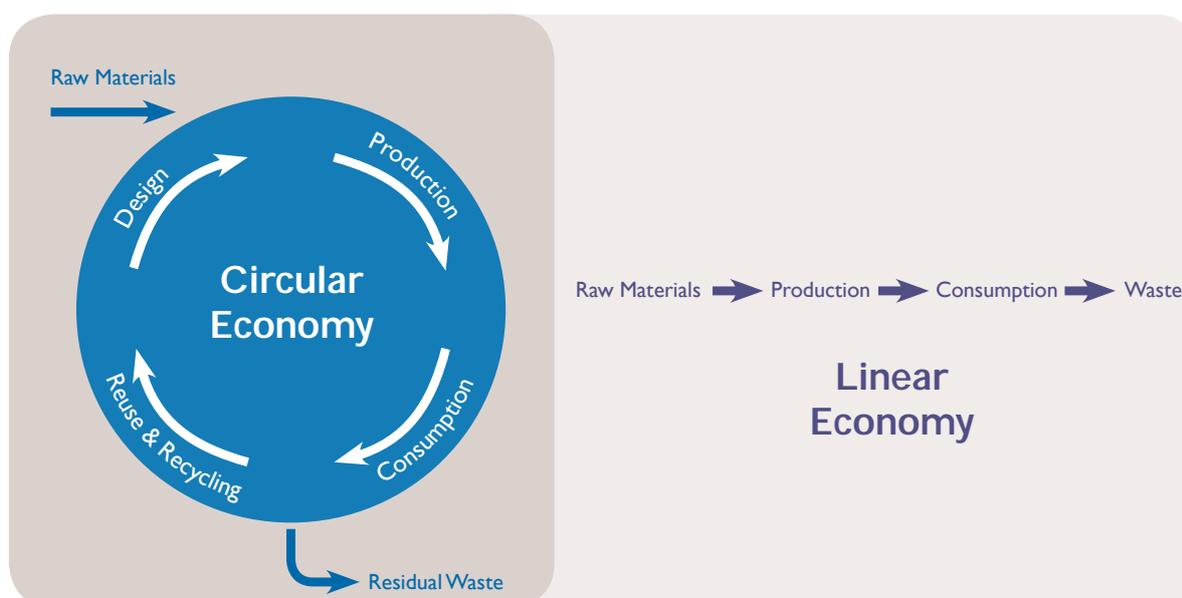
### 5.2 OUR VISION

**The strategic vision of the regional waste plan is to rethink our approach to managing waste, by viewing our waste streams as valuable material resources, leading to a healthier environment and sustainable commercial opportunities for our economy.**

This strategic approach is focused on recognising the important role the waste and resource management sector has to play in helping Ireland's households, businesses and industry in the transition towards a more resource efficient, circular economy.

The strategic approach of the Plan aims to place a stronger emphasis on waste prevention and material reuse activities. It will also focus on enhancing the collection of quality materials from discarded waste to build on the positive progress made in recycling. In line with the national sustainable policy emphasis<sup>30</sup> to reduce our reliance on fossil fuel sources, the waste industry is recognised as contributing to Ireland's move to renewable energy solutions. The strategic approach will further strive to improve the recovery and generation of energy from waste treatment infrastructure by maximising the resource value of the materials and energy embodied in residual wastes. Finally, the strategy will seek to further reduce the role of landfilling in favour of higher value recovery options.

The regions will work together and with other stakeholders to achieve greater self-sufficiency and take greater responsibility for waste generated in Ireland. The future management of waste across all regions must be managed in a manner which seeks to protect the environment and health of citizens against potential harmful impacts.



**Figure 5-1 Circular Economy and Linear Economy Models**

The circular economy model is not a new concept but rather a rethinking of similar concepts such as cradle to grave design and life cycle analysis. The circular economy model fundamentally considers waste as a resource which can be recirculated into systems that focus on maintaining, repairing, reusing, refurbishing and recycling materials and products. Being resource efficient and getting more from fewer resources is central to this model: see **Figure 5-1**. The existing make take dispose linear models, where products having reached their end of life are discarded as waste, are no longer viable. For the current linear approach to continue and thrive, resources would need to be plentiful and constantly available at low cost prices to meet demand. The economic reality is very different.

<sup>30</sup> Our Sustainable Future, A Framework for Sustainable Development, 2012.

Growing populations, increasing wealth and unsustainable levels of consumption have heightened the demand for resources, driving prices up and leading to significant pressure on resource availability. In response the European Commission is promoting and encouraging Member States to shift to a new circular economic model and is due to formally establish this policy theme across the EU with package of measures due to be released in 2015. The circular economy policy theme is discussed in **Chapter 4**.

Despite the economic downturn, Ireland is one of the highest consumers of materials per capita in the EU. A recent report<sup>31</sup> funded by the EPA indicates that Ireland's resource consumption in 2010 was 25.5 tonnes per person, compared to the EU average of 16.5 tonnes. Irish annual expenditure on materials is estimated to be in the range of €40-€50 billion, between six and eight times greater than it is on energy. Funding for energy efficiency far exceeds that of resource efficiency. This imbalance needs to be examined and adjusted so that funding of waste prevention and resource efficiency activities across all sectors is increased to reflect the policy ambition to move towards a more sustainable economy

Ireland recognises that national patterns of production and consumption must change, and government has set out an institutional framework for sustainable development and the green economy titled *Our Sustainable Future*.<sup>32</sup> This high-level, cross-sectoral document recognises the challenge and the distance Ireland has to travel in making the shift to a new economic model. The commitments are clear: Ireland's economic recovery will centre on the development of a green economy and recognising the opportunities for investment and employment in emerging sectors including waste. The principles of resource efficiency, environment and habitat protection, and sustainable consumption must be the cornerstones of our future economy.

The approach of the waste strategy is to put into place coherent policy objectives and actions which align with European and national policy and support Ireland's move to an economy defined by higher resource efficiency and productivity. This economic shift involves rethinking from all sectors, and the waste and resource management sector has the potential to play a leading role. The core principles of the strategic approach are fundamental to this development (see **Figure 5-3**), and will ensure that our wastes are managed better, in keeping with the wider vision of the circular economy.

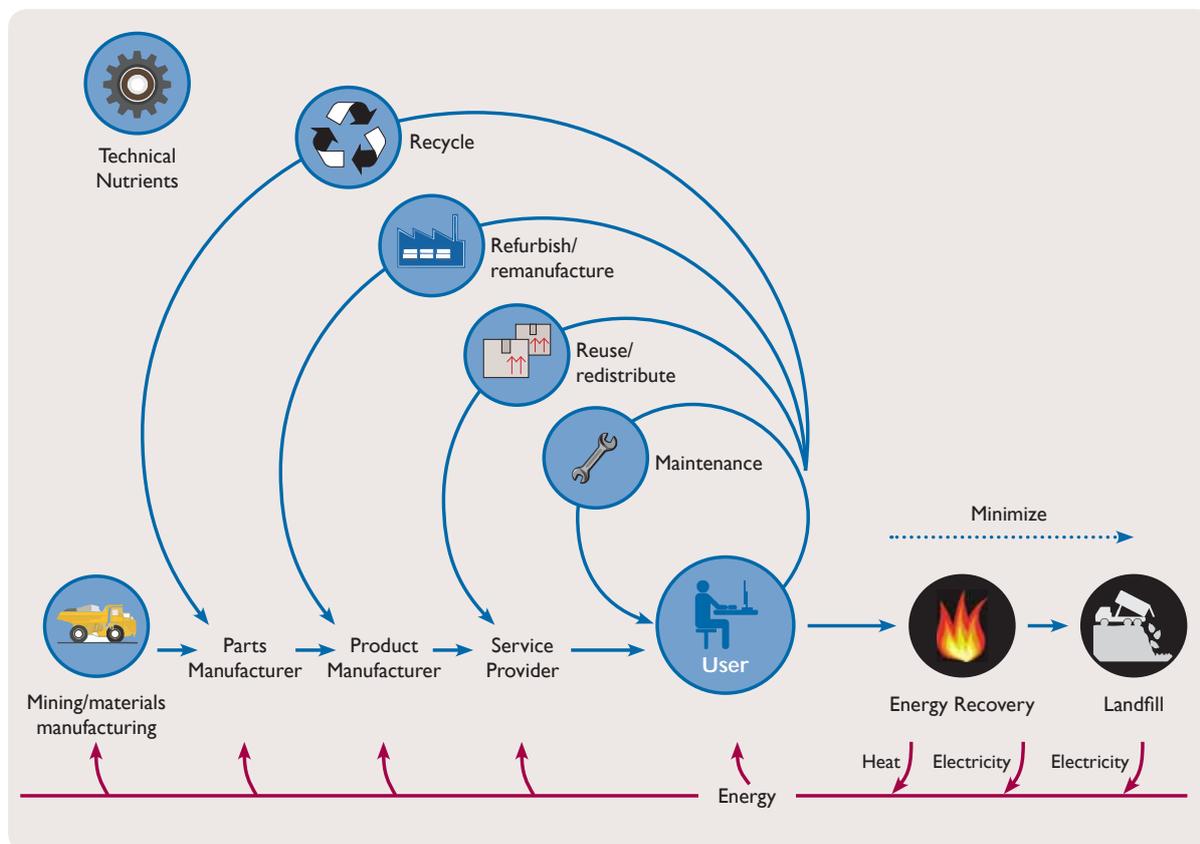
The **waste management hierarchy** will remain a core principle of the waste strategy for the region. The hierarchy embodies the wider thinking of the circular economy and provides an order of treatment allowing policy makers and regulators to make clear decisions. **Figure 5-1** shows a circular economy system for the management of material resources and wastes. The five steps of the hierarchy are identifiable within this system and the long-term focus for the region will be to shift the balance of resource management into sustainable cycles of maintenance, reuse, refurbishment and recycling. To start this journey the local authorities are setting out a strong framework for prevention, reuse and resource efficiency activities as part of this plan. Future economic and regulatory instruments must be designed to support these tiers of the hierarchy. The move away from landfill is well advanced and additional systems, infrastructure and innovative solutions are required to progress waste and material flows in keeping with the hierarchy.

For the duration of the plan, continued progress in recycling key waste streams, such as municipal waste, will be a measure of success. **Source-segregation** is a well-established practice in the waste sector and local authorities recognise its value in recapturing resources, creating new material flow

<sup>31</sup> Roadmap for a National Resource Efficiency Plan for Ireland, EPA, 2014.

<sup>32</sup> Our Sustainable Future, A Framework for Sustainable Development, DECLG, 2012.

systems and developing opportunities for enterprises in the sector. Local authorities will continue to implement actions which support this principle, and are focused on harmonising kerbside systems in the region and encouraging the segregated collection of organic wastes from householders and businesses. The full potential of the kerbside system is not being realised, and local authorities will work with industry and other stakeholders to address this.



**Figure 5-2 Material Resource and Waste Flows in a Circular Economy<sup>33</sup>**

This strategy will continue to adopt and implement actions which support the **polluter pays principle** whereby the real costs of generating waste must be borne by the waste producer and waste holder. This includes illegal activities such as fly tipping and backyard burning, the cost of which is being unfairly borne by compliant citizens and businesses. Local authorities recognise that the principle is currently not being applied in line with the waste management hierarchy with inappropriate and inequitable collection and facility authorisation cost systems in place. The incorporation of this principle into the strategy will see local authorities address these issues through regulatory and enforcement actions aimed at levelling the playing field for households, businesses and operators.

Substantial waste infrastructure development has been authorised and built in the region and across Ireland over the past 15 years. The extent of available treatment capacity has been unknown across the regions as local authorities, the EPA and An Bord Pleanála all approve facilities in the absence of a single data source which tracks the treatment capacity of each authorised facility. This uncoordinated approach is no longer satisfactory and work has commenced on a system which will record the available treatment capacity at national and regional levels. The strategic approach over the plan will be to deliver **balanced and sustainable infrastructure** for the treatment of wastes in line with the strategic vision and waste hierarchy. Local authorities will take on board both the

<sup>33</sup> This modified figure has been developed from an image prepared by the Ellen MacArthur Foundation.

appropriate scale of authorisations and the proposed location of new developments for all facilities, in particular activities which require a permit or certificate of registration. Infrastructure of a certain type and scale will be assessed on the basis of regional and national needs.

The delivery of a balanced and sustainable infrastructure in the waste sector will be critical to meeting Ireland's climate change commitments in terms of both mitigation and adaptation. The recently published Climate Action and Low Carbon Development Bill 2015 aims to transition Ireland to a low carbon, climate resilient and environmentally sustainable economy. If it is enacted the Government will be required to prepare a National Mitigation Plan which will specify the policy measures required to manage greenhouse gas emissions.

In 2013 greenhouse gas emissions from the waste sector accounted for 2.5% of total national emissions, equating to 1.466 Mt of CO<sub>2eq</sub>. Annual emissions from the waste sector are largely stable since 1990 but Ireland needs to reduce emissions by 20% by 2020 (followed by a 40% cut by 2030 and an 80% cut by 2050). In this regard the development of treatment infrastructure which contributes to ongoing mitigation activities in the sector such as the diversion of biodegradable waste from landfill and capture and energy recovery of landfill gas, should continue.



**Figure 5-3 Strategic Principles of the Plan**

The principles of **self-sufficiency and proximity** are part of the strategic approach which underpins the waste plan. For residual, non-hazardous waste the aim of government policy is to develop indigenous recovery infrastructure to replace landfill, and for the State to become self-sufficient where possible. Local authorities support this objective and will work towards this national goal by implementing practical actions. The proximity principle will be applied in the context of the scale of proposed facilities.

In terms of addressing climate change, the principles of self-sufficiency and proximity in the waste sector will aid in the reduction of transport related greenhouse gas emissions for the state. Any future national mitigation strategy for the waste sector should be developed with a view enabling not only emissions reductions in the waste sector but also potential mitigation in other sectors such as energy and transport.

A fundamental principle of the strategic approach is **opportunity and growth** for existing industry operators, social enterprises, secondary material enterprises and start-up companies. The local authorities believe the sector has the potential to grow, to design innovative services and solutions and to create lasting employment. The local authorities will work with all stakeholders in support of new opportunities and new implementation structures are proposed to make this a reality.

The need for effective **cooperation** is fundamental to the success (or failure) of the strategic approach underpinning the plan. No single stakeholder can or will implement successfully the policies and actions of the plan. The local authorities have a new identity and role in the waste sector, as outlined in **Chapter 17**, and will focus on delivering the actions for which they have lead responsibility. Strong working relationships with industry operators are also needed for the sector to progress and the strategic vision to become a reality. The local authorities will adopt an open and consultative approach on all relevant matters to deliver effective and practical solutions.

The final principle of the strategic approach is to **protect** the environment of the region and its citizens from the harmful impacts of managing wastes. Environmental issues and impacts will be integrated into all decision making and assessment and will help to ensure that actions and developments are sustainable. The local authorities have been guided by the strategic environmental assessment and appropriate assessment in the preparation of the plan and will retain a focus on environmental and community protection throughout the period.

## 5.3 STRATEGIC OBJECTIVES

The strategic objectives for the plan represent the local authorities' statement of intent, embodying the strategic approach previously described. The strategic objectives are expanded further in **Chapter 19** of the document into more defined policy objectives and measurable actions.

### 5.3.1 Policy & Legislation

Implementing waste management legislation and policy measures will continue to be an important part of the local authorities' responsibilities under the waste plan. The waste plan covers a broad scope of waste streams, with the local authorities having regulatory obligations for many of these. Mandatory performance targets and policy measures are applicable during the plan period and the local authorities will play a key part in helping to deliver these. The local authorities will be committed to their legislative obligations as well as implementing other policy and guidance actions.

The region will implement EU and national waste and related environmental policy, legislation, guidance and codes of practice to improve management of material resources and wastes.

### 5.3.2 Prevention

Developing and implementing waste prevention measures will be a priority for local authorities as part of the waste plan strategy. Tackling and breaking the links between economic growth and resource use is a real challenge for households, businesses and public bodies in the region. Lasting results require significant behavioural changes. The local authorities in the region will continue to build on prevention initiatives, focusing on those which have been shown to realise an effective change in behaviour. The strategic objective for the plan is as follows:

Prioritise waste prevention through behavioural change activities to decouple economic growth and resource use.

### 5.3.3 Resource Efficiency

Ireland's resource efficiency and productivity needs, to be improved – more value needs to be extracted from the resources we use and currently discard. Over the duration of the waste plan the local authorities will be focused on adding value to waste managed in the region and propose to implement a series of actions that contribute to the sector becoming more resource efficient and less wasteful. The local authorities believe that many opportunities are available to the sector, and the strategic objective reflects this view.

The region will encourage the transition from a waste management economy to a green circular economy to enhance employment and increase the value recovery and recirculation of resources.

### 5.3.4 Coordination

The restructured waste regions will present challenges and opportunities for the local authorities and regional lead authorities. The resources available to local authorities to deliver waste plan actions are limited and coordinating activities across the region will help to get the most from the resources available. The local authorities in the region will aim to foster strong working relationships with each other, private waste operators and other key stakeholders. The strategic objective for the local authorities is to:

Coordinate the activities of the regions and work with relevant stakeholders to ensure the effective implementation of objectives.

### 5.3.5 Infrastructure Planning

Ireland and the waste regions require the right balance of waste infrastructure to manage waste in a manner which optimises the value of the material and future market opportunities. Over the duration of the plan, the local authorities will communicate with each other on the authorisation of

waste treatment facilities in the region so that a consistent approach to standards and regulations can be implemented. A similar attitude of engagement will be followed by the regional lead authorities between themselves and bodies such as An Bord Pleanála for large-scale waste treatment infrastructure.

The region will promote sustainable waste management treatment in keeping with the waste hierarchy and the move towards a circular economy and greater self sufficiency.

### 5.3.6 Enforcement & Regulation

For many of the waste streams covered in the waste plan, local authorities are tasked with enforcing and regulating the system of management. The role of local authorities in this area is expected to grow over the plan period requiring effective coordination and assignment of resources. The strategic objective set by the local authorities reflects the need for resource and knowledge sharing. This strategic objective and associated policy actions will be the responsibility of the lead authority for waste enforcement.

The region will implement a consistent and coordinated system for the regulation and enforcement of waste activities in cooperation with other environmental regulators and enforcement bodies.

### 5.3.7 Protection

Protecting the environment and health of citizens in the region from potential adverse impacts resulting from waste management activities is a key responsibility of the local authorities. The location of waste facilities can help to address many of their potential impacts, and local authorities will aim to improve guidance in this area. The strategic objective has been agreed by the local authorities to:

Apply the relevant environmental and planning legislation to waste activities in order to protect the environment, in particular European sites, and human health against adverse impacts of waste generated.

### 5.3.8 Other Wastes

The scope of the waste plan is broad and the local authorities recognise that there are many minor waste streams generated in the region whose management also needs to be taken into consideration. Many of these waste streams do not have a specific statutory instrument in place to govern their management. The local authorities propose to set out policy objectives and actions in this area to tackle certain minor streams and, where possible, to create a better system for their management. The strategic objective is as follows:

The region will establish policy measures for other waste streams not subject to EU and national waste management performance targets.

## 5.4 TARGETS OVER THE PLAN PERIOD

In considering the designation of headline targets for the plan the local authorities have examined mandatory national and European, European targets, proposed targets and policy ambitions.

### 5.4.1 Mandatory Targets

The plan will run over a six year period, with a revised or replacement plan expected to follow in 2021. During the lifetime of the plan several mandatory target deadlines will apply to Ireland. Each of these targets has been reviewed by the local authorities, who are committed to contributing to their achievement within the designated timeframe. A summary of these targets is provided in **Table 5-1**.

**Table 5-1: Mandatory Targets over the Plan Period**

Waste Stream	Preparing for Reuse and Recycling Target	Timelines
Paper, Glass, Metal and Plastics of the Household Stream and/or Similar Wastes	50%	2020
	<b>Preparing for Reuse, Recycling and Material Recovery Target</b>	
Construction & Demolition Wastes (excluding soil and stones)	70%	2020
	<b>Maximum Quantity of BMW to Landfill Target</b>	
Biodegradable municipal waste	427,000 tonnes	July 2016
	<b>Reuse and Recovery Target</b>	
End of Life Vehicles	95%	January 2015
	<b>Reuse and Recycling Target</b>	
End of Life Vehicles	85%	January 2015
	<b>Collection Rate Target</b>	
Batteries and Accumulators	45%	September 2016
	<b>Recovery and Recycling Rate Target</b>	
WEEE	% recovery and recycling target varies depending on category of WEEE <sup>34</sup>	August 2015

Ireland is well placed to achieve a number of these targets. The WFD requires Member States to achieve a preparing for reuse and recycling rate of 50% for paper, metal, plastics and glass from households and possibly from other similar origins by 2020. The latest available data shows that Ireland is on track to achieve this, with a rate of 45% recorded in 2012. The Directive also requires a 70% reuse, recycling and materials recovery rate target of non-soil and stone construction and

<sup>34</sup> European Union (Waste Electrical and Electronic Equipment) Regulations 2014, S.I. No. 149 of 2014.

demolition waste to be achieved by 2020. The State is currently exceeding this target, with a rate of 97% recorded in 2012.

The final BMW to landfill target will need to be met by July 2016. By this date the maximum quantity allowed for disposal in the State is set at 427,000 tonnes. Provisional data for 2013 indicates that this future target will be met as an estimated 381,000 tonnes of BMW was landfilled in 2013.

The mandatory targets for two other streams, ELVs and batteries and accumulators, portable batteries only are also to be reached during the plan period. The achievement of both of these targets by the statutory timelines is at risk and is not expected to be met.

In relation to ELVs there is a need to improve the level of dismantling of non-metallic components prior to shredding and the level of post-shredder processing to extract recyclable materials such as metals and plastics. The authorisation of ATFs in the region is primarily a local authority responsibility and in response to improving the reuse and recovery rates, local authorities will require operators to provide enhanced processing techniques as part of their on-going authorisation. The current rate of collection for waste batteries and accumulators is 28%. Local authorities in the region will commit to working with producer responsibility operators to increase the awareness and collection of this stream during the duration of the plan.

#### **5.4.2 Performance Targets**

The aim of the local authorities is to progress the management of materials, resources and waste in the region in line with the plan's strategic vision. Increases in material recycling, resource efficiency and prevention are goals for the region. Performance targets, in addition to mandatory national targets, are proposed for the plan to provide a benchmark that local authorities can work together to meet. The proposed targets are specific and represent a quantifiable level to be obtained. As part of their annual reporting, local authorities will monitor and quantify progress towards the meeting of these targets.

The targets are focused on the activities and waste streams in which local authorities have a strong role and as a consequence have more influence on the outcome. The performance targets have been discussed by the lead authorities in the three waste regions and have been agreed for each region. This coordinated approach will ensure there is consistency for operators in the waste market irrespective of their area of operation. It is also hoped that it will facilitate cooperation between the DECLG, the EPA and local authorities in resolving market issues which are acting as a barrier to the targets being achieved.

The prevention of waste and the decoupling of resource use from economic growth is a key component of the strategic vision and objectives of the waste plan. Promoting and implementing the challenge of preventing waste in the face of resurgent national economic activity requires continuous attention and resources. From 2007 to 2012 the amount of household waste generated per capita in Ireland declined from 0.41 to 0.34 tonnes. From a waste prevention perspective this is a welcome trend, and many factors are contributing to it. Prevention activities are playing a part, although the evidence indicates that the primary influence is a significant contraction in the national economy resulting in a significant decrease in household disposable income over the period. The concern is the potential for waste to grow as economic activity across all sectors increases.

The focus of this target is on household waste, reflecting the important role local authorities have in preventing and managing the household waste stream. Prevention targets for other sectors, such as construction and industrial sectors, are also valid but it is suggested that these be looked at as part of Ireland's overall approach to implementing a coordinated resource efficiency programme. The 1% reduction per annum aims to focus local authority activities in the area of prevention. This is the first time a waste prevention target has been formalised in Ireland and its implementation presents both an opportunity and a challenge. The proposed reduction is measurable and will be reported on annually, and if achieved will deliver a 7% drop in household waste generated over the duration of the plan. The inclusion of a prevention target demonstrates commitment in this area and is in line with prevention programmes in leading Member States.



Municipal waste is a key waste stream for Ireland and the prevention of waste arisings in this stream is an ongoing challenge. Ireland has made steady progress in terms of improving the management of this stream, with recycling rates increasing from less than 5% in the late 1990s to 40% by the end of 2012. The data shows that continued growth in this area will rely on high-quality presentation and collection of dry recyclables coupled with a significant increase in the participation and capture rates of organic waste. The progressive roll-out of the brown bin will help, although this must be supported by continuous awareness, education and enforcement activities.

The local authorities along with private waste collectors play an important role in the management of municipal waste. The proposed target mirrors that of WFD although it is broader, encompassing material recycling and composting (biological treatment) rates. The aim is to maximise the diversion and recycling potential of the household and commercial kerbside source segregated collection systems. This target also encompasses preparing for reuse activities, which have the potential to become an important part of the material resource sector. Within the timeframe of the plan the target is a realistic one, reflecting the resources and finances available to local authorities to contribute towards its achievement. The target if achieved will reflect the ambition of the sector to move towards a circular economy and will be a stepping stone for further progress.



Waste management in Ireland has moved away from landfill, and in 2012 the rate of disposal reached its lowest level to date of 41%. The landfill levy has been a key driver in this transformation, artificially inflating the disposal price in favour of environmentally preferred treatments. The number

of landfills operating in Ireland has dropped to six, with two facilities (Rathroeen, Mayo and Scotch Corner, Monaghan) operating in the CUR in early 2015. The regions are proposing to build on this treatment shift and respond to the government's policy's call for the elimination of landfill.

The target is proposed in direct response to European and national policy. The landfills in Ireland are licensed by the EPA, which sets conditions governing the treatment activities, environmental controls, aftercare and associated financial arrangements. Planning permission approvals for landfills also impose conditions addressing various other issues such as the lifespan of the site. The forced closure of a landfill is not within the remit of a local authority unless it is the operator of the site. This aside, local authorities can influence the movement of waste through the prescribed conditions of waste collection permits.

Under primary legislation the local authorities have statutory responsibilities to ensure that waste undergoes recovery operations and they must take appropriate measures to establish an integrated and adequate network of installations for the recovery of mixed municipal wastes. National policy is similarly direct, stating that a key objective of the plans is to ensure there is sufficient waste management infrastructure to manage municipal waste arising within the State. The clear preference is for the treatment of Ireland's residual waste to be undertaken at Irish facilities to the benefit of Irish businesses, citizens and the economy as a whole. In response to these requirements local authorities must act and continue to move waste to recovery outlets preferably within the State and make efforts to address the growing trend of exporting residual wastes.



\* *Unprocessed residual waste means residual municipal waste collected at kerbside or deposited at landfills/ CA sites/ transfer stations that has not undergone appropriate treatment through physical, biological, chemical or thermal processes, including sorting.*

The target proposes to eliminate the direct disposal of municipal waste to landfill by 2016. This timeline is in keeping with other related statutory commitments such as the deadline for the completion of the household brown bin collection roll-out and reduced landfilling of BMW. The implementation of this target will help to ensure that all residual municipal waste from 2016 onwards is directed to indigenous pre-treatment facilities or other recovery outlets for processing and treatment.

## 5.5 GOALS FOR 2030

The latest national waste policy has set out measures and actions to be taken and delivered up to 2020. Local authorities recognise that within the period of the current plan there is a limited amount which can be achieved. There is a need to think beyond the end of the plan and consider the long-term outcome.

In response to this, local authorities have set out long-term goals in the areas of prevention, recycling and disposal, mirroring the performance targets which have been agreed. The targets take

their lead from the European Commission’s policy agenda on circular economy and the ambition for recycling rates to increase across all Member States and an end to the practice of landfilling to be realised. A preparing for reuse and recycling target of 60-70%, equivalent to the current best practice across Europe, has been set by the authorities as the benchmark for the regions and Ireland to aim for.

<b>Future Targets to 2030</b>
Absolute decoupling of household waste from economic growth and disposable income
Preparing for reuse and recycling rate of 60-70% <sup>35</sup> of municipal waste by the end of 2030
Reduce and where possible eliminate landfilling of all major waste streams including municipal, industrial and construction and demolition wastes in favour of the recovery of residual wastes

Economic growth is the most significant driver in terms of waste generation and the absolute decoupling of this from household waste generation will be a significant challenge requiring fundamental changes in behaviour by householders across the State. The policy actions being taken over the duration of this plan are the first steps towards a much bigger goal.

In terms of disposal, the ambition of local authorities is to cease landfilling activities for all major waste streams by 2030. The preferred treatment method for non-recyclable residual waste will be recovery and the local authorities will work with other stakeholders towards this outcome. This transition reflects the ambition of the authorities to make better use of and extract the most value from products, material resources and waste.

Achieving these long-term goals will require the cooperation of central government and cross-sectoral support from public authorities and private operators in the industry.

<sup>35</sup> Discussions are on-going between the European Member States regarding the proposed mandatory recycling rate target, which is expected to be within this range.

## 6 REGIONAL PROFILE

### 6.1 GENERAL DESCRIPTION OF THE REGION

The CUR consists of the administrative areas of Galway City, and counties Galway, Mayo, Roscommon, Sligo, Leitrim, Donegal, Cavan and Monaghan. The region has a population of 837,350 based on the CSO 2011 Census figures, which represents 18.24% of the national population. The region has an overall area of 2,580,140 hectares or 37% of the total area of the country.

The region is bordered to the west by the Atlantic Ocean and to the north-east by Northern Ireland. The region is bordered to the east by the counties of Louth, Meath, Westmeath, Longford and Offaly, all of which are in the Eastern and Midlands Waste Region. The region is bordered to the south by County Clare and County Tipperary, both of which are in the Southern Waste Region. **Figure 6-1** shows the geographical area of the region.

#### 6.1.1 Galway City

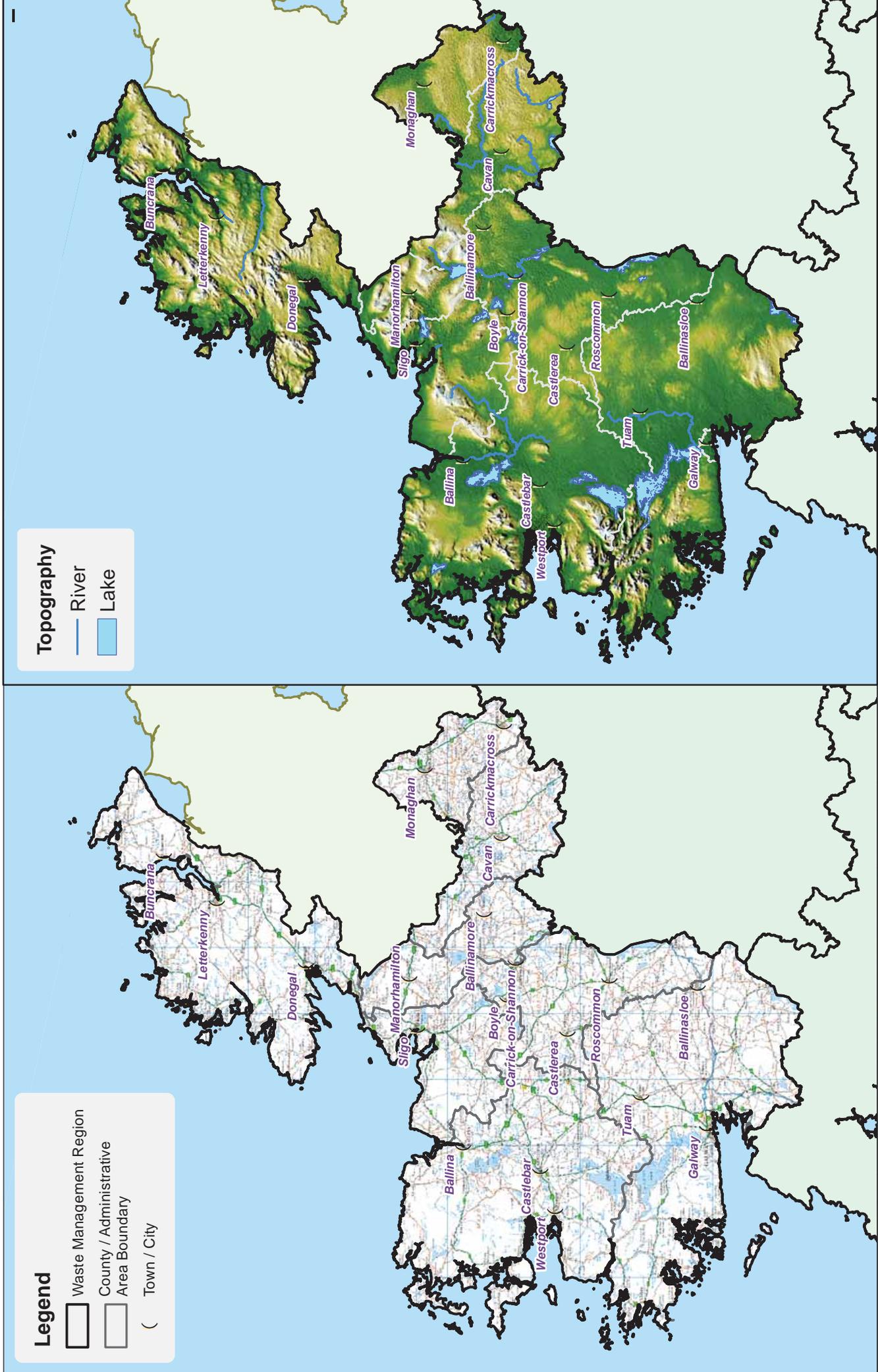
Galway City is located in the south of the region and is the largest urban centre, with a population of over 75,000. The city has grown rapidly in recent years and has a strong local economy with complementary business and manufacturing sectors. The city is a significant tourism hub and is known as Ireland's cultural heart, with numerous festivals taking place throughout the year. It is divided by the River Corrib which drains Lough Corrib, the Republic of Ireland's largest lake, into Galway Bay. Galway City is home to a significant cluster of Biomedical Industries located in a number of business and industry parks around the city. It is also home to the National University of Ireland Galway and the Galway Mayo Institute of Technology, which account for a transient student population of more than 25,000 per year.

#### 6.1.2 County Galway

County Galway is located at the southern end of the region and bordered by counties Clare and Tipperary to the south, Mayo and Roscommon to the north and Offaly to the east. The county is the second largest in the state, representing almost 9% of the national area. Lough Corrib divides the county east and west with Connemara being the dominant region in the west, representing a major tourist attraction. The county has a number of offshore islands, most notably the Aran Islands and Inish Boffin. The main urban centres are Tuam, Ballinasloe, Loughrea and Oranmore.

#### 6.1.3 County Mayo

County Mayo is located in the south-west of the region and is bordered by County Galway to the South, Roscommon to the east and Sligo to the north. County Mayo is the third largest county in the state, representing over 8% of the national area. The county is home to the state's largest offshore island, Achill, and has many other offshore islands including Clare Island and Inish Turk. The main urban centres are Castlebar, Ballina, Westport, Claremorris and Ballinrobe, with many smaller towns and villages. The county is largely rural with a distinct difference between the quality of land in the north and south, the south being somewhat better in agricultural terms.



**Legend**

-  Waste Management Region
-  County / Administrative Area Boundary
-  Town / City

**Topography**

-  River
-  Lake

**Figure 6-1** Map of the Geographical Area of the Region

#### **6.1.4 County Roscommon**

County Roscommon is located in the south-east of the region and is bordered by Galway to the south, Mayo to the north and counties Leitrim, Longford, and Westmeath to the east. Roscommon is home to the geographical centre of Ireland, located on the western shore of Lough Ree near the village of Leacarrow. The county is mainly rural with the predominant activity being agriculture. The main urban centres are Roscommon town, Boyle, Castlerea, Monksland, Cortober and Ballaghaderreen. While the county is landlocked it is the home to many fine waterways and lakes and contains the longest stretch of the River Shannon. Roscommon is one of the least densely populated counties in the country.

#### **6.1.5 County Sligo**

County Sligo is located in the centre of the region and is bordered by counties Mayo, Leitrim and Roscommon. Sligo's distinctive countryside of mountains, lakes and beaches offers a wide range of activities to visitors. Dominated by the loaf-shaped Benbulbin Mountain the main urban centres are Sligo Town, Tubbercurry and Ballymoate. Sligo is home to a number of multinational companies and also has the Sligo Institute of Technology located in the town. The county has over 5,000 archaeological sites including the megalithic grave complex at Carrowkeel.

#### **6.1.6 County Leitrim**

County Leitrim is located in the centre of the region and bordered by County Sligo to the west, County Donegal to the north, County Cavan to the east and counties Longford and Roscommon to the south. Leitrim is the least densely populated county in the country, with a population of 31,798 (CSO, 2011) or 0.7% of the total population and 2.3% of the land area of the state. Leitrim has a hilly and mountainous landscape in the north part of the county and is relatively flat in the south. The county is divided by Lough Allen. It has the shortest length of coastline at 2.5 km, located at Tullaghan. The Shannon Erne Waterway, Europe's longest inland navigable waterway, stretches through the county. The main urban centres are Carrick on Shannon and Manorhamilton.

#### **6.1.7 County Donegal**

County Donegal is located in the north-west of the region and is bordered to the south by County Leitrim and to the east by counties Derry, Tyrone and Fermanagh. County Donegal is the fourth largest county in the state and is the most mountainous of the region, with the Derryveagh Mountains in the north and the Bluestack Mountains in the south. The county is home to many Gaeltacht areas in the west around Rosses, Gweedore and Falcarragh. In the north of the county is Ireland's largest peninsula, Inishowen, which contains Ireland's most northerly point at Malinhead. The county has numerous offshore islands, the most notable being Arranmore and Tory Islands. The county has a deeply indented Atlantic coastline giving rise to numerous sea Loughs, the most significant being Lough Swilly and Lough Foyle to the west and east of Inishowen respectively.

The main urban centres are Letterkenny, Donegal Town, Carndonagh and Ballybofey, with numerous other towns and villages throughout the county. Killybegs harbour is a major sheltered deepwater facility and is Ireland's premier fishing harbour.

### 6.1.8 County Cavan

County Cavan is located in the east of the region and is bordered to the west by County Leitrim, to the south by counties Longford, Westmeath and Meath and to the north by counties Fermanagh and Monaghan. The county is characterised by drumlins, with many lakes, and is known as the Lakeland county. Cavan is the source of some of Ireland's great rivers, including the Shannon and the Erne. Agriculture is the largest industry, especially dairy milk production and pig and beef farming. Other industries include quarrying, manufacturing and energy production. The main urban centre is Cavan Town.

### 6.1.9 County Monaghan

County Monaghan is located in the north-east of the region and is bordered by counties Fermanagh, Tyrone and Armagh to the north and counties Cavan, Meath and Louth to the south. The county is dominated by drumlins, with many lakes in the hollows between the hills. Agriculture and food production account for over 60% of the county's employment, with poultry production accounting for some 40% of the national output. Other agribusinesses include dairy and beef production and the production of mushrooms. The main urban centres are Monaghan Town, Carrickmacross, Clones, Ballybay and Castleblayney.

## 6.2 POPULATION

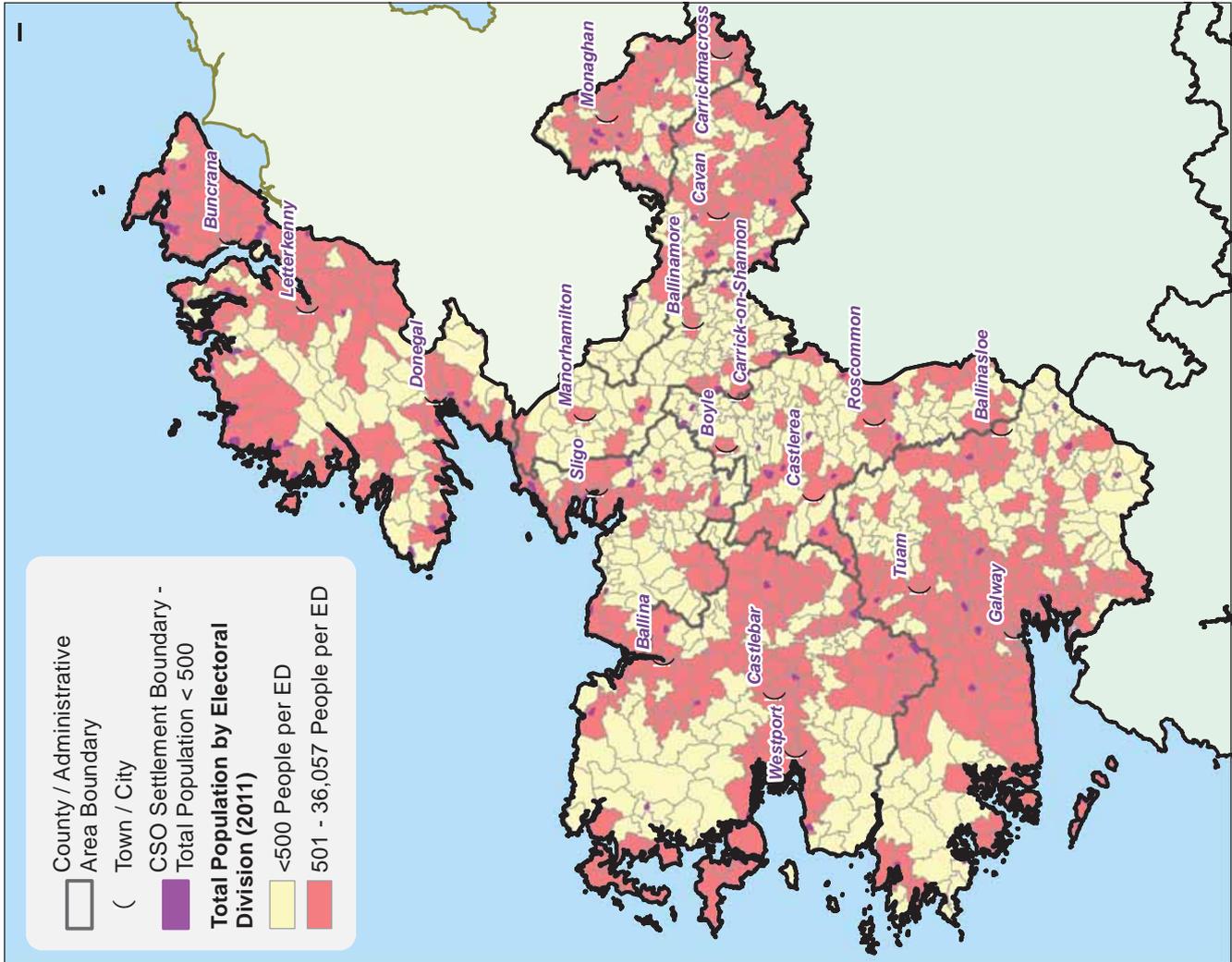
The population of the Connacht Ulster Region in 2011 was 837,350 (*CSO, 2011*), representing an increase of 65,965 or 8.5% since the previous census in 2006. The population of the Connacht Ulster Region is 18.2% of the total population while the region has 36.7% of the land area.

The total number of households in the region is 303,141 (*CSO 2011*), giving an average occupancy of 2.76 persons per household. This represents 18.2% of total households nationally. The number of households in 2011 had increased by 37,190 or 14% since the 2006 Census. The distribution of the regional population is shown in **Figure 6-2**.

A summary of population and household data is presented in **Table 6-1**.

**Table 6-1: Population and Household Figures, Census 2006–2011**

Local Authority	2006 Population	2011 Population	% Change	2006 Private Households	2011 Private Households	% Change
Galway City	72,414	75,529	4.3	25,353	27,857	9.9
Galway	159,256	175,124	10.0	53,308	61,157	14.7
Mayo	123,839	130,638	5.5	43,431	48,198	10.9
Roscommon	58,768	64,065	9.0	20,734	23,718	14.4
Sligo	60,894	65,393	7.4	21,480	24,593	14.5
Leitrim	28,950	31,798	9.8	10,646	12,334	15.9
Donegal	147,264	161,137	9.4	50,415	58,099	15.2
Cavan	64,003	73,183	14.3	21,929	25,869	18.0
Monaghan	55,997	60,483	8.0	18,655	21,316	14.3
Totals	771,385	837,350	8.5	265,951	303,141	14



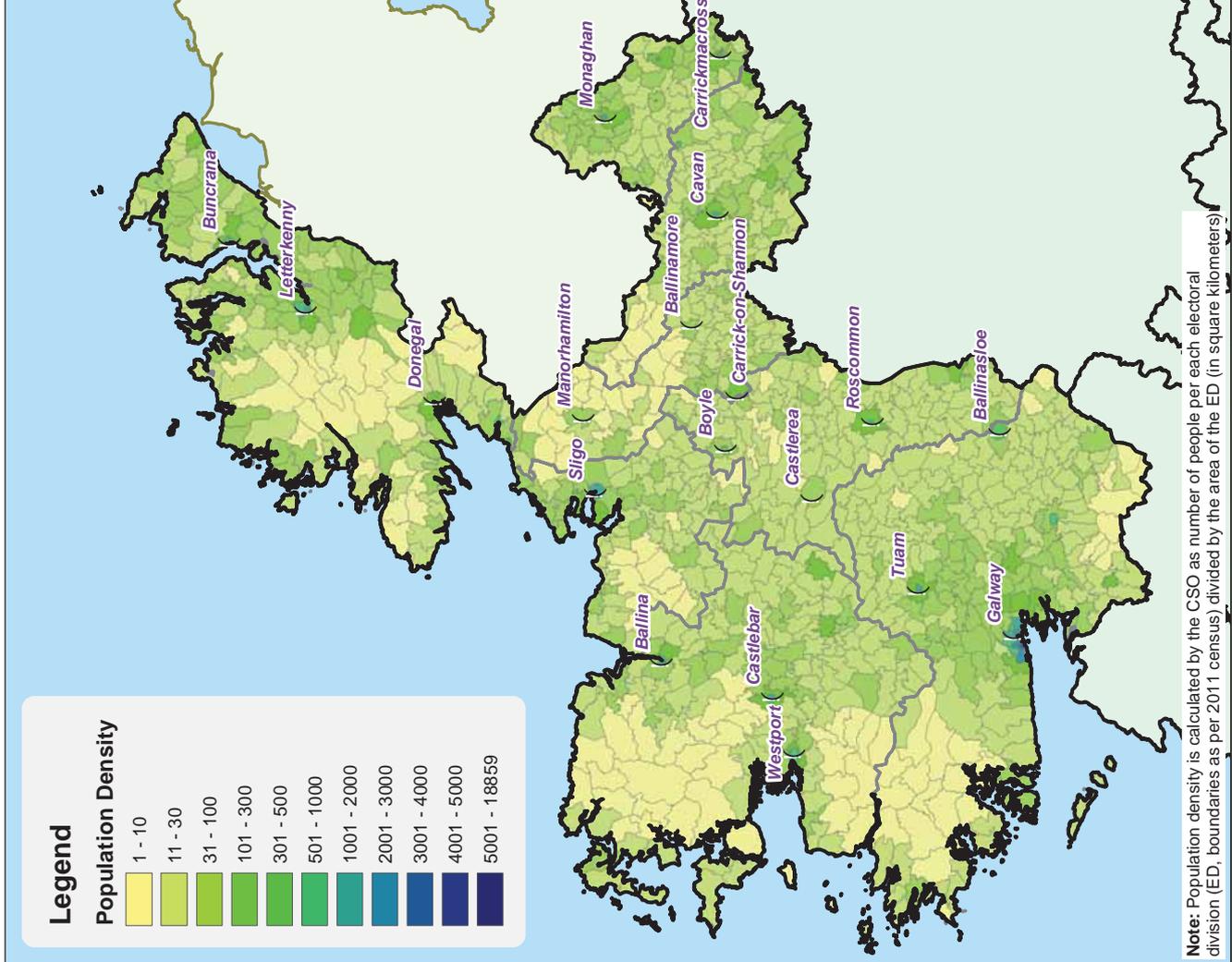
County / Administrative Area Boundary

Town / City

CSO Settlement Boundary - Total Population < 500

**Total Population by Electoral Division (2011)**

- <500 People per ED
- 501 - 36,057 People per ED



**Legend**

**Population Density**

- 1 - 10
- 11 - 30
- 31 - 100
- 101 - 300
- 301 - 500
- 501 - 1000
- 1001 - 2000
- 2001 - 3000
- 3001 - 4000
- 4001 - 5000
- 5001 - 18859

Note: Population density is calculated by the CSO as number of people per each electoral division (ED, boundaries as per 2011 census) divided by the area of the ED (in square kilometers)

Regional Waste Plans, SEA and AA

File Ref: MDR0998A-c0075 F01

Figure 6-2 Regional Population Density & Distribution

## 6.2.1 Urban Population Distribution

The distribution of the population between urban centres and rural areas has a direct impact on the provision of waste collection services, as the costs and the efficiencies associated with urban areas are better compared with rural areas. This is particularly significant for the Connacht Ulster Region, as 66% of the population resides outside of urban centres while 34% reside in urban centres. This compares with the overall national position whereby 61% of the population reside in urban centres while 38% reside in rural areas.

**Table 6-2: Urban and Rural Population Distribution**

Local Authority	2006 Urban	2006 Rural	2011 Urban	2011 Rural
Galway City	72,414	0	75,529	0
Galway	27,342	131,914	39,546	135,578
Mayo	35,678	88,161	37,895	92,743
Roscommon	14,334	44,434	16,662	47,403
Sligo	19,402	41,492	24,334	41,059
Leitrim	25,95	26,355	3,314	28,484
Donegal	36,585	110,679	44,274	116,863
Cavan	16,913	47,090	22,034	51,149
Monaghan	15,988	40,009	17,772	42,711
Totals	241,251	530,134	281,360	555,990
% Split Urban-Rural	31%	69%	34%	66%

## 6.2.2 Urban Centres

The largest urban centre in the region is Galway City, with a population of 75,529. There are 45 urban centres in the region with a population greater than 1,500. The number of people residing in urban centres in 2011 had increased by 28,859 (12%) since the Census of 2006.

There are two urban centres with a population greater than 15,000, namely Letterkenny (19,588) and Sligo (19,452). There are three urban centres with a population greater than 10,000 but less than 15,000, namely Castlebar (12,318), Ballina (11,086) and Cavan (10,205).

There are seven urban centres with a population greater than 5,000 but less than 10,000, and there are six centres with a population greater than 3,000 but less than 5,000. The remainder of the urban centres have a population greater than 1,500 but less than 3,000. The distribution of major urban centres is shown in **Figure 6-2**.

## 6.3 LANDUSE

Landuse in the CUR is predominantly agricultural outside of the main urban centres. Many areas are dominated by peat lands, which are mainly unused. The main agricultural activity in the west of the region is livestock production, with extensive areas of pasture land alongside peat land. There are also significant areas of moors and heath lands and the Atlantic coast is lined with dunes and sandy beaches alongside steep cliffs at some locations.

A large proportion of the west of the region is designated nature reserve, from the Connemara National Park in Galway to the Ballycroy National Park in Mayo to the Glenveagh National Park in Donegal. The region also has a number of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). There are coniferous and broadleaf forests throughout the region and some mixed forests can also be found. According to the National Forest Inventory Results Data 2012 there are 262,870 hectares of land in the region under forest, which represents 35.9% of total forestry in the state.

Landuse in the east of the region is also predominantly agricultural; there are however also several locations of the extractive industry. The area contains numerous sites for the quarrying of sand, gravel, stone and limestone. Food and beverage production is common in this area. The location of environmentally sensitive and protected areas is shown in **Figure 6.3**.

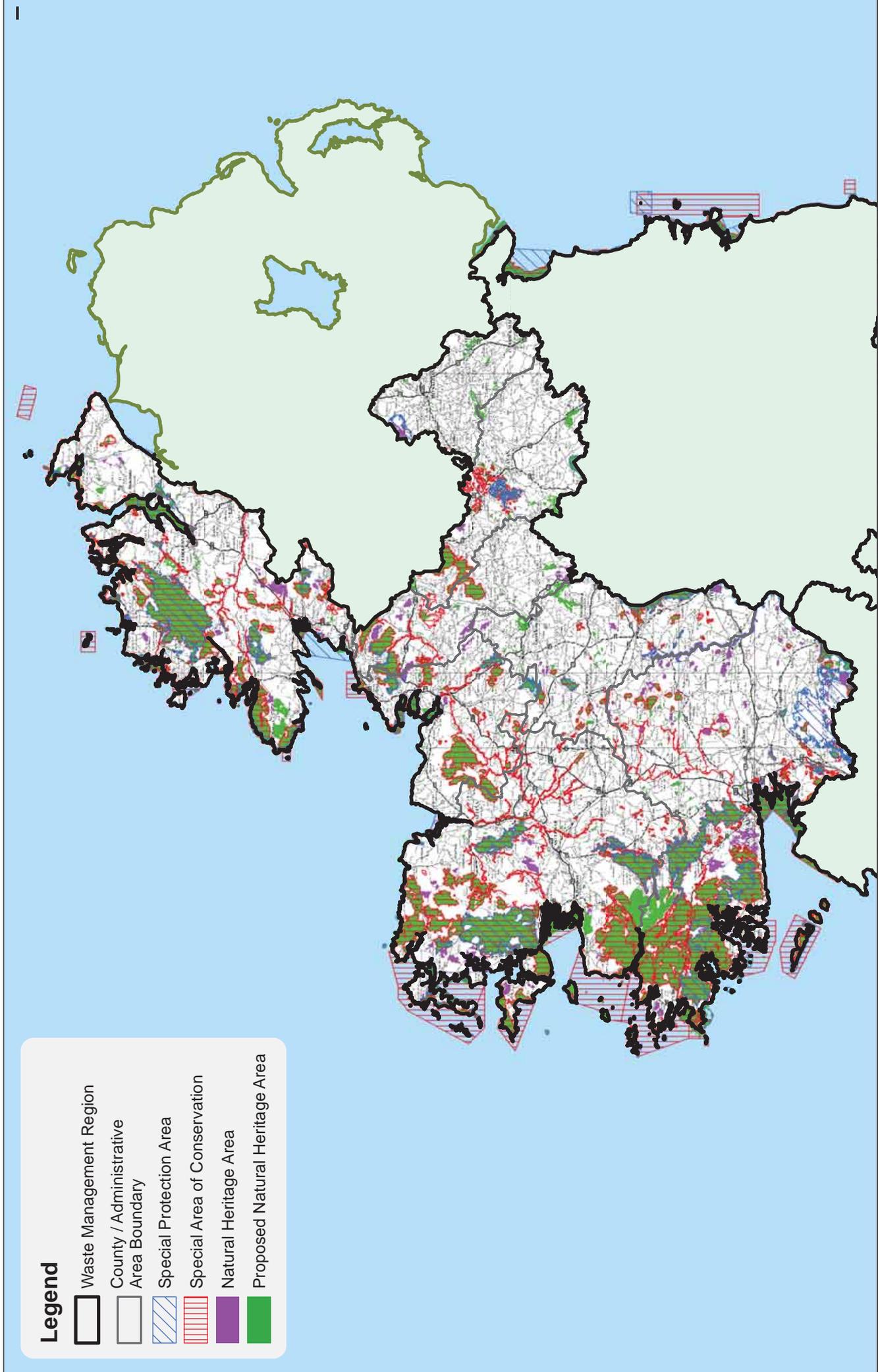
## 6.4 TOPOGRAPHY

The topography of the region is extremely varied, from the rocky landscape of Connemara in West Galway to the mountains of Donegal and the drumlins and lakes of Cavan and Monaghan. The region is home to three of the six designated National Parks, at Connemara, Ballycroy and Glenveagh.

The topography of the south-west of the region including Galway City and County and counties Mayo, Roscommon, Sligo and Leitrim is variable, containing mountains, lowland plains, rivers and inland lakes. The main mountain ranges are the Maumturk, Partry, Nephin and Ox mountains, which follow the Atlantic coastline. The highest peak in the area is Mweelrea, 817 m OD, which is situated just north of Killary Harbour in County Mayo. A drumlin belt crosses this area from north-east to west, terminating in Clew Bay in a series of islands. Lough Corrib and Lough Mask divide the mountainous areas of the west from the more fertile areas of the east. The area was heavily glaciated, with many areas stripped of soil and resulting rock surfaces featuring innumerable small lakes and bogs.

The blanket bogs and moorlands of Connemara have many unusual bog and heathland plants and the area has a significant number of Special Protection Areas. There are two National Parks at Connemara and Ballycroy. The Connemara National Park covers some 2,957 hectares while the Ballycroy National Park covers over 11,000 hectares of Atlantic blanket bog and mountains, dominated by the Nephin Beg mountain range. The coastline varies from mountainous in counties Galway and Mayo to flatter relief in counties Sligo and Leitrim, and is heavily indented with many peninsulas and small islands. The many offshore islands in this area have varied topography, from the rocky Aran Islands with steep Atlantic cliffs to Achill Island with its mountainous landscape.

The topography of the north of the region is dominated by County Donegal, which consists largely of mountainous areas which make up over 45% of the county's land type. The main mountain ranges are the Bluestack mountains in the south of the county and the Derryveagh and Glendowan mountains in the north of the county, lying either side of Glenveagh National Park which encompasses over 16,000 hectares of wilderness in the heart of the Derryveagh mountains. The highest peak in the county is Mount Errigal, 752 m OD, and the county is home to the highest sea cliffs in Europe at Slieve League in the south-west. Rolling lowland accounts for some 43% of the land type and is most common in the north-east of the county. The coastline is heavily indented and is the longest in Ireland at 1,134 km. The many inlets provide suitable locations for aquacultural activities and the county is also home to the country's premier fishing port at the Killybegs deepwater harbour. The topography of the many offshore islands is similar to that in the west of the region, varying from the rocky outcrop at Tory Island to the flatter and more fertile landscape of Arranmore Island.



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Regional Waste Plans, SEA and AA

Figure 6-3 Environmentally Sensitive and Protected Areas

The topography of the east of the region is dominated by the drumlins and lakes of counties Cavan and Monaghan. The topography of County Cavan is post-glacial; however, the western part of the county terminates in the wall of the Cuilcagh mountains, the lower western flanks of which are the source of the River Shannon. The highest peak in the county is Cuilcagh, 665 m OD. The centre of the county consists of a lowland zone which is dominated by the river Erne and its tributaries. County Cavan has over 350 lakes of which Lough Sheelin is the largest and is located in the south of the county on the border with Meath and Westmeath. County Monaghan, also known as the land of drumlins, has a physical landscape that is common throughout southern Ulster, formed as a result of unevenly spread glacial deposits at the end of the last Ice Age. The drumlins do not follow a particular alignment or pattern, with dividing valleys characterised by occasional marshlands and Loughs. The Slievebeagh mountains form a ridge of high land along the north-western end of the county on the border with Tyrone while the largest lake in the county, Lough Muckno, is the centrepiece of a 900 acre park adjacent to Castleblayney.

The general topography of the Connacht Ulster Region is presented in **Figure 6-1**.

## 6.5 GEOLOGY

The geology of the south-west of the region including Galway City and County and counties Mayo, Roscommon, Sligo and Leitrim is variable and complex, varying significantly from east to west. In the west of this area the geology is predominantly Caledonian with both igneous and metamorphic rocks. In the Connemara area the rocks range from Silurian and Ordovician to Dalradian in origin while in Galway intrusive granites predominate. In the east of this area the main origins of the solid geology are Devonian and Carboniferous in County Roscommon and East Galway. Further north in the area the Dalradian, Ox Mountain/Rosses point Inliers is the main geological feature, composed of granites and schists. Counties Sligo and Leitrim are dominated by middle and upper Carboniferous limestones.

In the south of the area the geology becomes more uniform, being predominantly lower or middle carboniferous limestone. County Roscommon is dominated by shallow water limestones with small areas of Devonian Old red Sandstone. Further west the geology becomes much more complex. Coastal Mayo is dominated by a series of metamorphic rocks with igneous intrusions.

The geology of County Galway features the Connemara mountains in the west, which merge with the central lowlands to the east. Connemara is composed of Silurian and Ordovician rock in the north. Further south the Connemara Inliers consists of Dalradian rocks similar to those found in County Mayo. The area around Galway City is predominantly Galway Granite formed during the early Devonian or late Caledonian. East Galway is similar to the Geology of Roscommon, comprising mainly carboniferous limestones with small areas of Old red sandstone and Mudstone.

The geology of the north of the region is also complex; the main geological formations to be found in County Donegal can be summarised as follows. Gneiss, a coarsely crystalline banded metamorphic rock, forms the oldest rocks to be found in the county and can only be seen on the island of Inishtrahull north-east of Malin Head. The most widespread rocks to be found in the county are Dalradian Metasedimentary Rocks which were converted to schists and quartzite during mountain forming in the Ordovician period. Quartzite is mainly quarried north-east of Letterkenny and used in road building. Granite intrusions are a feature of the west of the county and make up the largest upland massif in the region, including the Derryveagh Mountains and the low lying ground in the Rosses area. Major fractures running through the rocks have been exploited by erosional forces to produce long straight valleys, the most dramatic of which is the deep valley of Glenveagh that separates the Derryveagh and Glendowan Mountains. Devonian Sandstone is only found in small

localised areas of Donegal including an area near Portsalon on Fanad Head. Dolerite can be found as intrusions within older rocks.

The geology of the north-east of the region, comprising counties Cavan and Monaghan, is a continuation of the Southern Upland Fault in Scotland which runs from Scotland to the coast of County Down and further south-west to Carlingford and Monaghan, ending in County Longford. This section of the fault is known as the Longford-Down Inlier. The bedrock is Ordovician and Silurian sandstones and consists of siltstones and shales with small pockets of tuffs and lavas. The Carlingford mountains are granitic igneous intrusions that were formed during the tertiary period. These give way westward to the drumlin area of County Monaghan. The drumlins were formed in the Quaternary period and are glacial features. The densely packed till resulted in land that is difficult to drain, hence the numerous lakes in this part of the region. Monaghan geology consists of a series of sandstone shale and siltstone formations which are similar to those of the southern upland fault and are carried on to the north and east as far as the southern uplands of Scotland. In the northwest of Cavan the rocks are carboniferous in origin, consisting of limestones which make up the higher ground on the Cavan/Fermanagh border. Further south in the centre of Cavan the geology is predominantly Ordovician and Silurian, dominated by Greywackes and shales to the east.

## 6.6 HYDROGEOLOGY

The hydrogeology of the west of the Connacht Ulster Region is dominated by regionally important aquifers which vary in size and quality. The coarser limestones, especially in County Sligo, have a considerable yield, as do the limestones of East Galway and Roscommon. Further south in the region the water bearing rocks are few and the geology is mainly igneous and metamorphic in origin, resulting in secondary porosity only. In County Sligo the upper carboniferous limestone formations are the regionally important aquifers, the majority of which are karstified with variable yields. Further west in Connemara, West Mayo and the Ox Mountains aquifers are poor yielding as the predominant geology is igneous and metamorphic in origin, providing little porosity and permeability. There are some locally important aquifers along the west coast of Mayo and in the Connemara area and the granites in West Galway can give small yields, particularly in the fault zones. There is a regionally important lower carboniferous limestone aquifer which stretches from Oughterard and Moycullen in the west to Elphin and Athlone to the east of the region.

Nationally groundwater resources provide about 25% of all drinking water supplies. However, in County Donegal it is estimated that groundwater supplies only about 2% of the total water supply as most of the county is underlain by crystalline basement rocks which are poor aquifers. Generally groundwater quality in Donegal is good except where there are localised sources of pollution such as septic tanks, intensive agriculture or industrial pollution. In many areas underlain by grey soils or boulder clays heavy rainfall runoff is common due to the heavily consolidated deposits

The most significant aquifers in the east of the region are the Ballysteen, Dartry, Meenymore and Maydown Limestone formations. These aquifers are located in counties Cavan and Monaghan. There are other regionally important aquifers in the south of County Cavan in the Lough Sheelin area and the Mullintra aquifer at Kingscourt.

## 6.7 HYDROLOGY

### 6.7.1 Rivers

All Irish rivers have been allocated to one of 12 primary types, further details of which can be found in *Irish river typology* (Ireland W.F., 2004).

The Water Framework Directive has led to the establishment of eight river basin district projects throughout the island of Ireland. Five River Basin Districts, each with its own Water Quality Management Plan, feature in the Connacht Ulster Region as follows:

- Shannon International River Basin District is the largest in Ireland and stretches from the source of the River Shannon in the Cuilcagh mountains in counties Cavan and Fermanagh to the tip of the Dingle peninsula in north Kerry;
- The North Western International River Basin District covers the north west corner of the island of Ireland. Major rivers and lakes include the Erne system, which supports boating and leisure tourism as well as some hydroelectric power generation, to the River Finn and Foyle systems that drain much of the mountains of Donegal and the Sperrin mountains;
- Neagh Bann International River Basin District. Lough Neagh is situated in the centre of Northern Ireland. It is the largest freshwater lake on the island of Ireland and is very shallow for its size. The Upper Bann is one of six major rivers that flow into the Lough, while the lake drains through the Lower Bann River from the north end of the Lough at Toome to the sea on the north coast of Northern Ireland;
- Western River Basin District. The main rivers are the Corrib, draining Lough Corrib, Mask and Carra, the Moy; draining Lough Conn and Cuilin, Owenmore/Ballysadare, Dunkellin and Bonet. Smaller catchments, such as the Erriff, drain directly to the sea. Some river systems like the Gort River draining the Slieve Aughty Mountains in the south of the basin drain to the sea via underground routes; and
- Eastern River Basin District. The Eastern River Basin District incorporates all or part of 12 Local Authority areas: Dublin City, Meath, Kildare, Wicklow, Cavan, Dún Laoghaire-Rathdown, Fingal, Offaly, South Dublin, Westmeath, Louth and a small portion of Wexford; the main river catchments in the area are the Boyne, the Nanny/Delvin, the Liffey, and the Avoca/Vartry.

### 6.7.2 Lakes

The lakes of note in the region include Lough Corrib, which is the largest lake in the country. The surface waters in the region are shown in **Figure 6-1**.

## 6.8 ECONOMIC ACTIVITY

The main economic drivers in the CUR are the principal urban centres and associated hinterlands. Galway City and County account for 34% of the people at work within the region (Census 2011) while Donegal accounts for 16% and Mayo a further 16%. The remaining six counties of the region account for 34% of the people at work. **Table 6-3** summarises the numbers at work in the region.

**Table 6-3: Employment by Economic Sector**

Industry	Galway City	Galway	Mayo	Roscommon	Sligo	Leitrim	Donegal	Cavan	Monaghan
Agriculture Forestry Fishing	126	3,697	3,019,	1,536	1,005,	665	2,451	2,227	2,210
Building and Construction	816	1,311	1,184	371	402	154	969	685	547
Manufacturing	7,203	6,097	5,560	1,880	2,963	831	3,704	3,481	2,978
Commerce and Trade	9,596	8,620	9,248	3,334	4,457	1,822	9,223	4,532	3,925
Transport and Communications	2,498	2,466	1,420	536	820	261	1,955	584	801
Public Administration	2,693	1,410	2,552	1,267	1,863	777	2,948	1,215	888
Professional Services	12,488	10,037	8,862	3,766	6,655	2,467	10,313	4,293	3,426
Other	5,278	5,113	5,099	1,732	2,648	1,065	5,795	2,234	1,745
<b>Total</b>	<b>40,698</b>	<b>38,751</b>	<b>36,944</b>	<b>14,422</b>	<b>20,813</b>	<b>8,042</b>	<b>37,358</b>	<b>19,251</b>	<b>16,520</b>

The Professional Services Sector is the largest employer in the region with 27% of the total employed in this area. Commerce and trade is the second biggest employer with 24%, followed by Manufacturing with 15%. Following the contraction in the construction sector the percentage at work in this area in the region has fallen to 3% and, consistent with national trends, the numbers at work in Agriculture, Forestry and Fishing remain low at 7%. Manufacturing is largely concentrated in the south of the region, with Galway City and County accounting for 38% of people at work in manufacturing. **Figure 6-4** illustrates the distribution of employment activities across the region.

### 6.8.1 Integrated Pollution Prevention and Control Sector Companies

A system of Integrated Pollution Prevention and Control (IPPC) licensing applies to certain industrial sectors in Ireland. The licensing procedure is administered by the EPA. Progressively various industrial production scenarios are being included in this system. A licence will only be issued on the basis that environmental impact including waste is minimised, and often the applicant will be required to undertake a complete environmental audit or implement a complete environmental management system. The location of IPPC licensed facilities is illustrated in **Figure 6-4**.

### 6.8.2 Extractive Industries

There are over 355 registered extractive industry sites in the Region. A register of these is available online at <http://www.epa.ie/enforcement/extractiveindustriesregister>

### 6.8.3 Tourism

Tourism is a significant industry in the region with real growth potential following the successful development of many Greenways and the promotion of the Wild Atlantic Way. The west of the region is serviced by Ireland West Airport while the northwest is serviced by Donegal Airport. The east of the region is within reasonable travelling times of Dublin Airport.

Over 1.7 million foreign tourists visited the Region in 2012 (Ireland, 2012), which resulted in a spend of €450m in the region. Information in relation to tourist attractions on a county by county basis can be accessed on the Discover Ireland Website.

## 6.9 TRANSPORTATION

The Connacht Ulster Region is served variously by all modes of transport including road, rail, air and sea. The transportation network is illustrated in **Figure 6-4**.

### 6.9.1 Roads

With the completion of the Major Inter Urban route Motorway development project in December 2010, the new M6 Motorway became the first city to city motorway in Ireland, connecting Dublin with Galway. The motorway has significantly reduced travel times from Galway to Dublin and is the only motorway link into the Connacht Ulster Region. Work is continuing on the Atlantic Corridor, which will ultimately link Letterkenny to Galway and beyond, with the commencement of the Gort to Tuam Motorway. This development will eliminate a number of notorious bottlenecks and provide a major interchange with the M6, which will further enhance access into the south and southeast of the region. At the northern end of the region there was a commitment for the provision of a cross-border motorway linking Dublin to Donegal; however, that commitment has been altered with a focus now on the upgrade of the existing road network. At the eastern end of the region the extension of the M3 to Kells in County Meath has brought motorway connectivity to within 10 km of the Cavan border, while the M1 at Dunleer is less than 20 km from the Monaghan border.

The region is serviced by a number of national primary routes. County Monaghan is serviced by the N2 while Cavan is serviced by the N3. Counties Leitrim, Roscommon and Sligo are serviced by the N4 while counties Roscommon and Mayo are serviced by the N5. All of the aforementioned primary routes follow a north-west radial orientation from Dublin. There are a number of north-south orientation Primary Routes which link key urban centres in the region and also link the north-west Primary Routes together. The N15 runs north from Sligo to Derry via Strabane and links with Letterkenny via the N13, while the N17 runs south from Sligo to Galway.

The national primary route network is complemented by the national secondary route network in the region. The principal national secondary routes include the N56, which takes the west coast route from Donegal Town back to Letterkenny, while in the west of the region the N59 takes the west coast route south from Sligo to link ultimately with Galway City. Cavan and Monaghan are linked to the west of the region via the N55, which joins the M6 at Athlone, while Roscommon is linked to the north and south of the region via the N61 and the N63 and to the west by the N60.

The region has a large network of regional roads which are not as heavily trafficked as the national routes. These roads carry local and tourist traffic and lead into the secondary and primary network in a radial fashion. In the more isolated areas of the region, and particularly along the Atlantic seaboard, these roads can be narrow and as a result difficult to navigate for refuse collection vehicles.



**Legend**

**IPPC Facility Type**

- ) Cement, Lime & Magnesium Oxide (1)
- ) Fossil Fuels (1)
- ) Minerals & Other Materials (1)
- ) Energy (3)
- ) Metals (6)
- ) Surface Coatings (13)
- ) Wood, Paper, Textiles & Leather (14)
- ) Chemicals (16)
- ) Food & Drink (26)
- ) Intensive Agriculture (105)
- ) Waste Management Region
- ) County / Administrative Area

**Road Network**

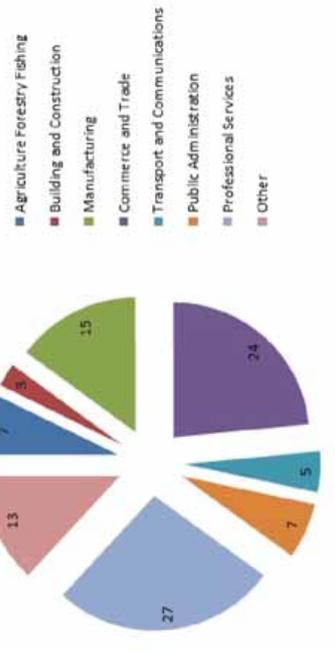
- Motorway
- National Primary Road
- National Secondary Road

**Rail Network**

- Railway
- Disused/Dismantled Rail
- Airport
- Y International Ferry Port
- Y Commercial Port
- Y Local Ferry Port

*Note: number in brackets denotes the number of licensed facilities in the region.*

**Employment by Economic Sector**



**Figure 6-4 Economic Activity & Transportation Network**

## 6.9.2 Rail

The region is serviced by three rail links which all radiate from Dublin in a west/north-west orientation. The north-west of the region is serviced by the Sligo line which runs direct from Dublin, Connolly Station. This line also services Leitrim and North Roscommon. The Sligo line provides seven services per day.

The West of the region is serviced by the Westport line which runs direct from Dublin, Heuston Station. This line also services Roscommon. The Westport line also provides a service to Ballina in North Mayo with a change at Manulla junction. The Westport line provides five services per day.

The south of the region is serviced by the Galway City Line which runs direct from Dublin, Heuston Station. The Galway City line provides 10 services per day. The south of the region is further connected to the Intercity rail network via the first section of The Western Rail Corridor to be completed from Ennis to Athenry. Ultimately if completed the Western Rail Corridor will provide a north-south rail link between Galway and Sligo, intersecting the three current rail lines into the west.

There are no direct rail services to Donegal, Cavan or Monaghan. Irish Rail also provides bulk freight or intermodal freight services on all of the lines into the region.

## 6.9.3 Air

The region is serviced by two commercial airports at Carrickfin in County Donegal and at Ireland West Airport Knock in County Mayo.

Donegal Airport is located at Carrickfin, Kincasslagh, Co. Donegal. Carrickfin is on the west coast of Donegal and is in the Gaeltacht region. The airport is approximately a 15 minute drive from Dungloe and Gweedore, and a 45 minutes drive from Letterkenny. Flights operate twice daily all year round from Donegal to Dublin Airport, with a schedule four times weekly all year round from Donegal to Glasgow International Airport increasing to six times weekly during peak seasons.

Ireland West Airport Knock is Ireland's fourth international airport and the main international air access gateway for the West, North-West and Midland regions of Ireland. The airport has experienced rapid development and now serves more than 25 scheduled and charter destinations across Ireland, the UK, Europe and beyond. In 2013 passenger numbers reached 655,000, with 700,000 passengers expected in 2014.

## 6.9.4 Sea Ports

The region is serviced by a number of well developed ports at Galway City, Sligo, Killybegs in County Donegal and Rossaveel in County Galway.

Galway Harbour is located in the heart of Galway City and handles liquid and dry bulk traffic including fuels, which are stored at the adjacent oil storage facility at Galway City Enterprise Park. There are major proposals for the expansion of the port including a 27 hectare extension, 216 berth marina, a deep commercial quay to facilitate cruise liners and a nautical centre. Plans however are subject to EU approval due to the Habitats Directive.

Sligo Port is located in the heart of Sligo and is the most northerly commercial port on the west coast. The port handles coal, timber, fish meal and scrap at two working jetties, one of which is a deep water jetty.

Killybegs harbour is situated in Donegal Bay and located at the tip of a deep fjord-like inlet which makes it one of the safest and most sheltered deep water harbours on the Irish coast. Killybegs is Ireland's leading fishing port and there are plans to further develop the port as a general cargo facility servicing the oil and gas industry offshore.

Rossaveel Harbour is located in the well sheltered Cashla Bay at the northern approaches to Galway Bay. A major programme of works was completed at Rossaveel during the 1990's to add to the existing facilities and included the provision of approximately 300 metres of new pier.

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

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

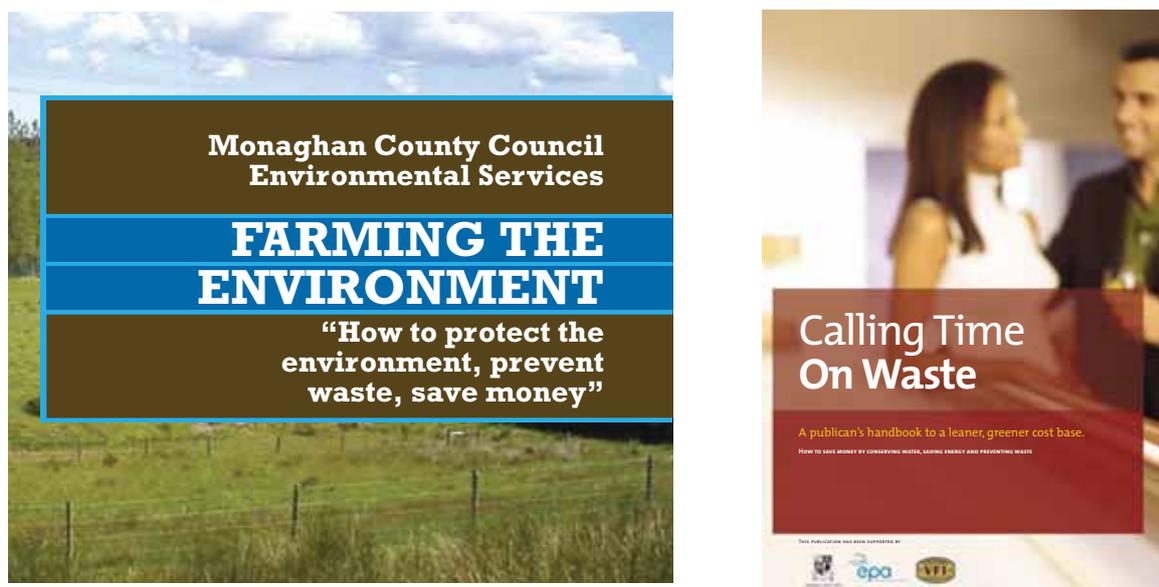
Sligo County Council is a participant in the national pilot of the Brown Bin Advisor Pilot Programme to promote the continued diversion of biodegradable waste from landfill through the use of the brown bin. This project includes waste characterisation work before and after the rollout of the brown bin, 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](http://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](http://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.

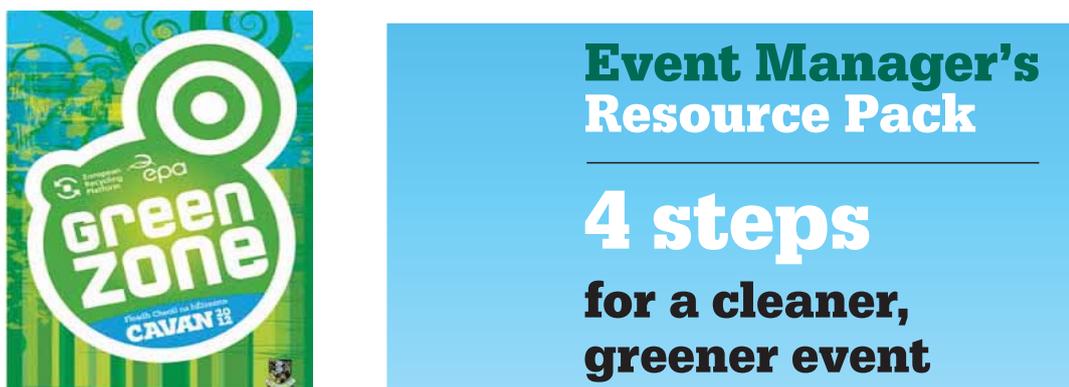


Figure 8-4 Regional Prevention Events

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](http://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

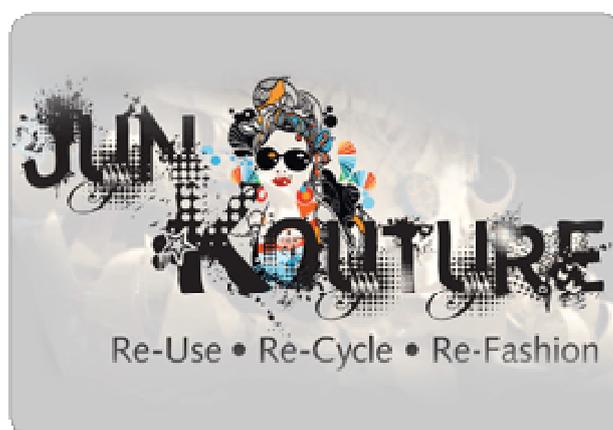
### 8.2.3 Waste Prevention – Education

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**

<b>No. of Mainstream Primary School Pupils</b>	<b>94,059</b>
<b>No. of Secondary Level Pupils</b>	<b>65,014</b>

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](http://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 Shed<sup>36</sup>**

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.

<sup>36</sup> [www.cumannabhfeard.com](http://www.cumannabhfeard.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](http://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:**

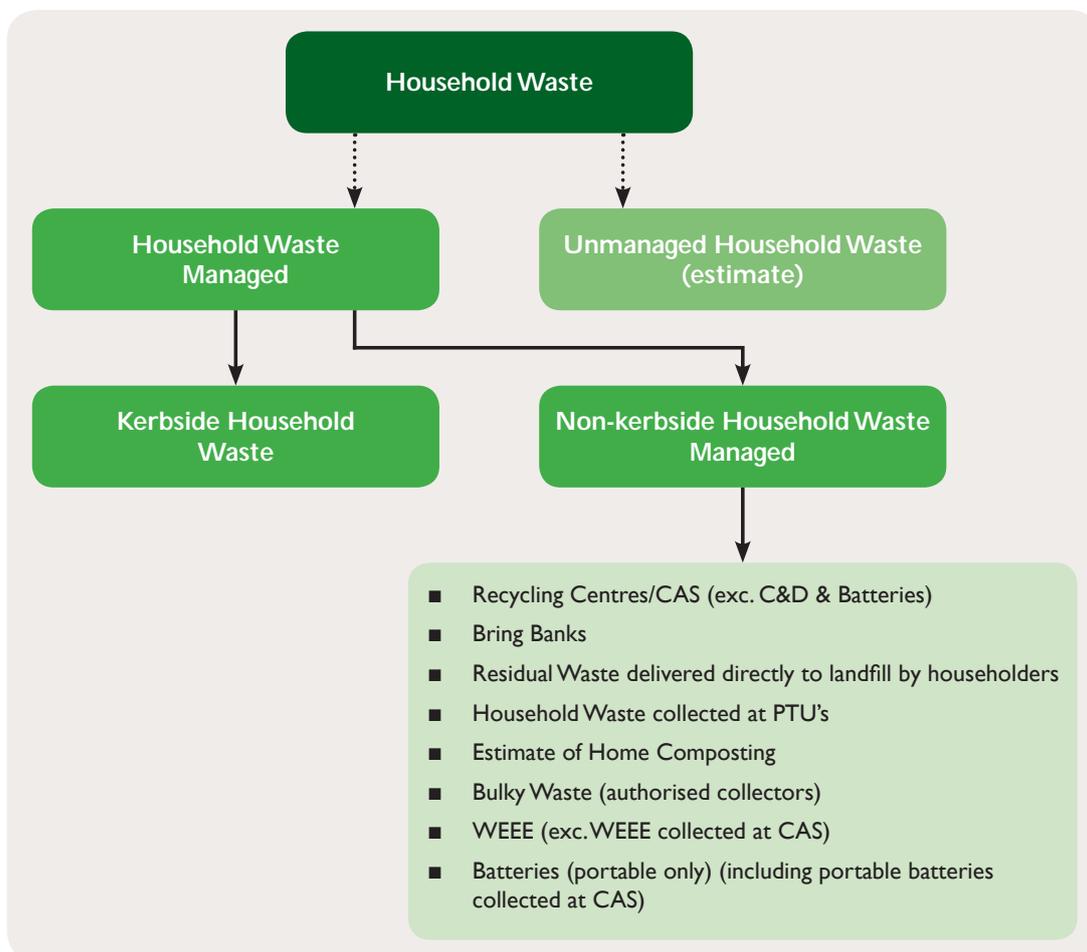
- B4. Harmonise prevention activities in the region to link with the national hazardous management plan, producer responsibility operators and other related programmes (such as litter, sludge, water etc).

## 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 reports<sup>37</sup> 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

<sup>37</sup> 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 waste<sup>38</sup> collected is generally brought to a mechanical treatment facility for sorting.

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<sup>38</sup> 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)

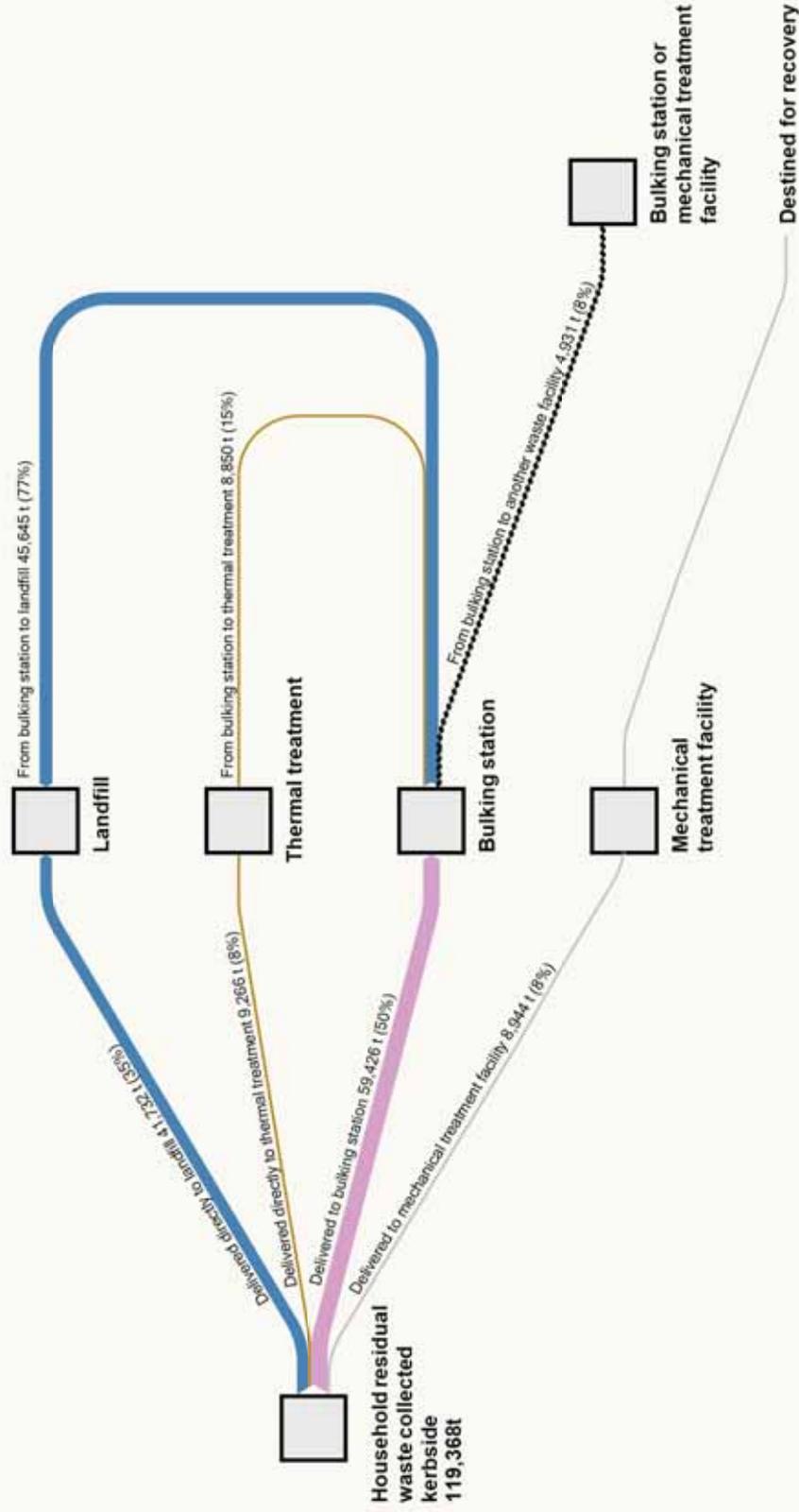


Figure 9-2 Treatment of Residual Household Waste

## 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.

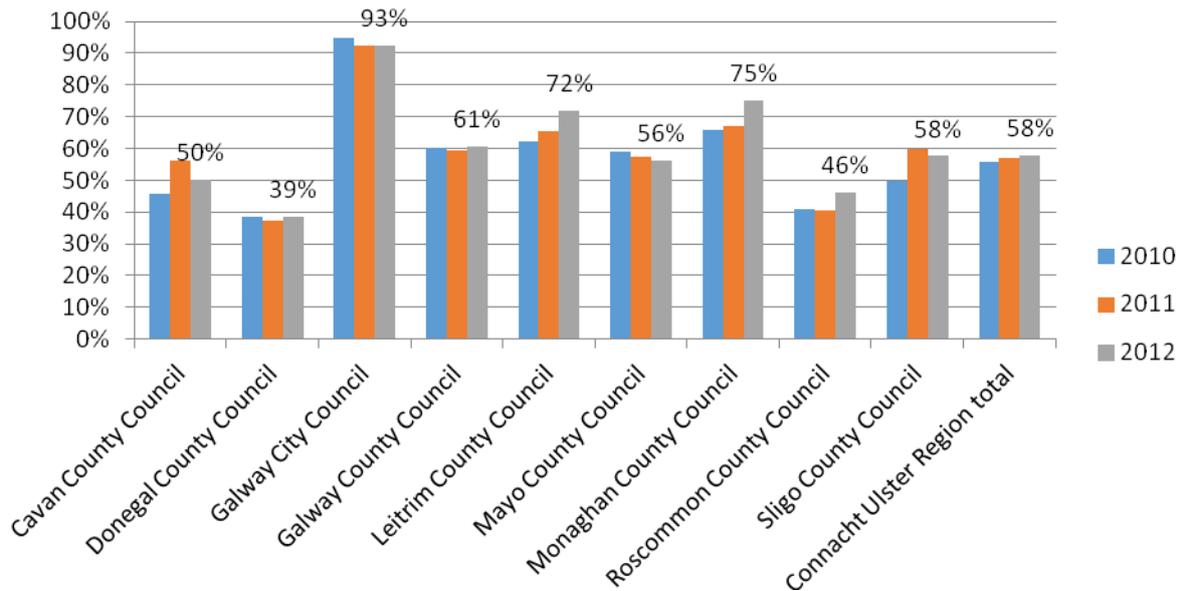
### 9.2.1 Collection Service

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.

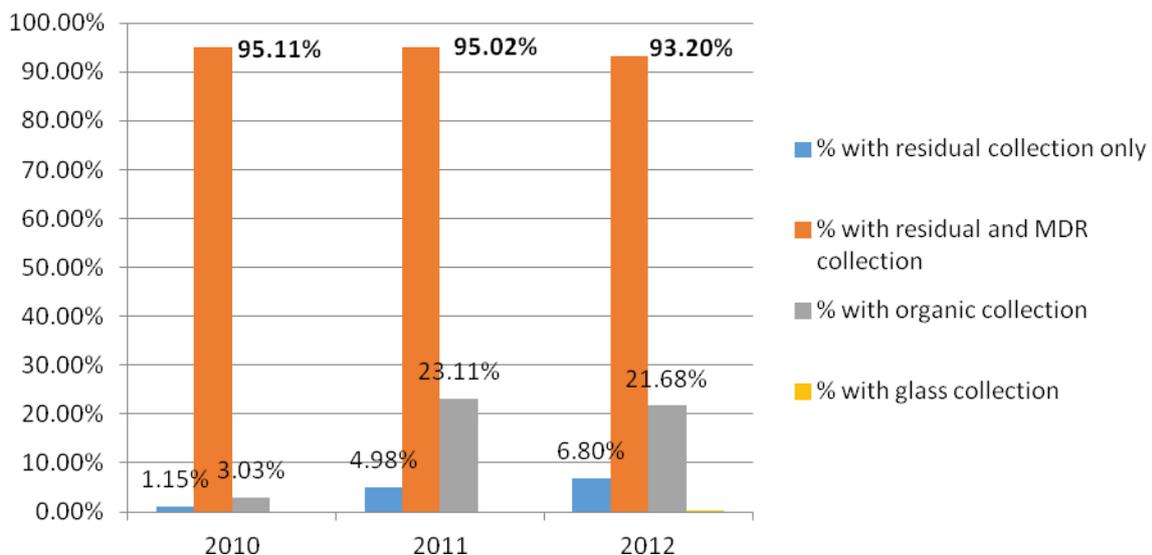
**Figure 9-3** indicates a generally higher participation rate in urban areas, i.e. Galway City. There was in general a steady increase in participation over the period involved. Some rural counties have quite low levels. The lower participation rate in rural areas is due to householders bin sharing 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**

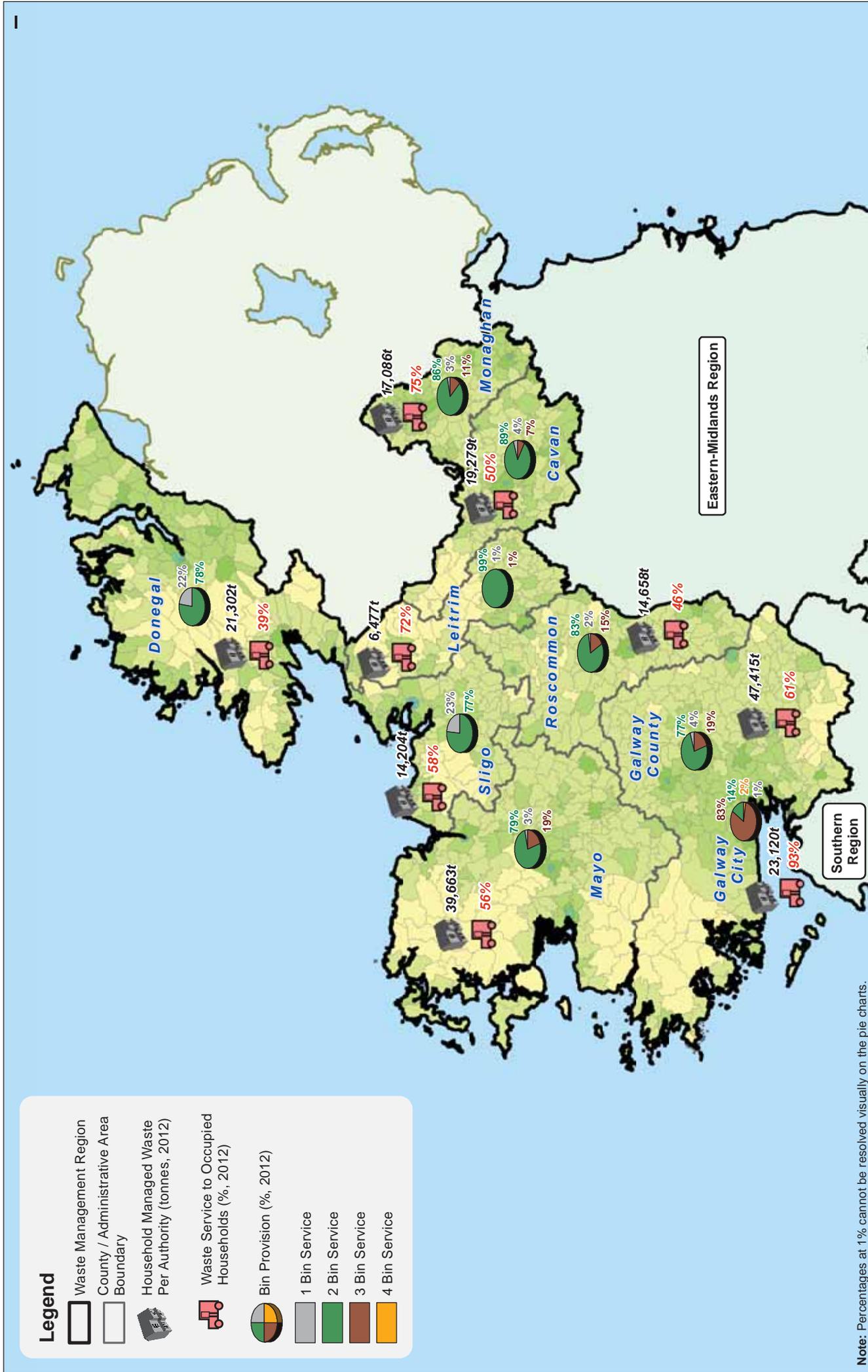
Year	Residual kerbside household waste collected (tonnes)	Residual kerbside household waste collected / household served (tonnes/household)
2010	126,658	0.75
2011	126,972	0.74
2012	119,368	0.685

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.



**Legend**

- Waste Management Region
- County / Administrative Area Boundary
- Household Managed Waste Per Authority (tonnes, 2012)
- Waste Service to Occupied Households (% , 2012)
- Bin Provision (% , 2012)
- 1 Bin Service
- 2 Bin Service
- 3 Bin Service
- 4 Bin Service

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.

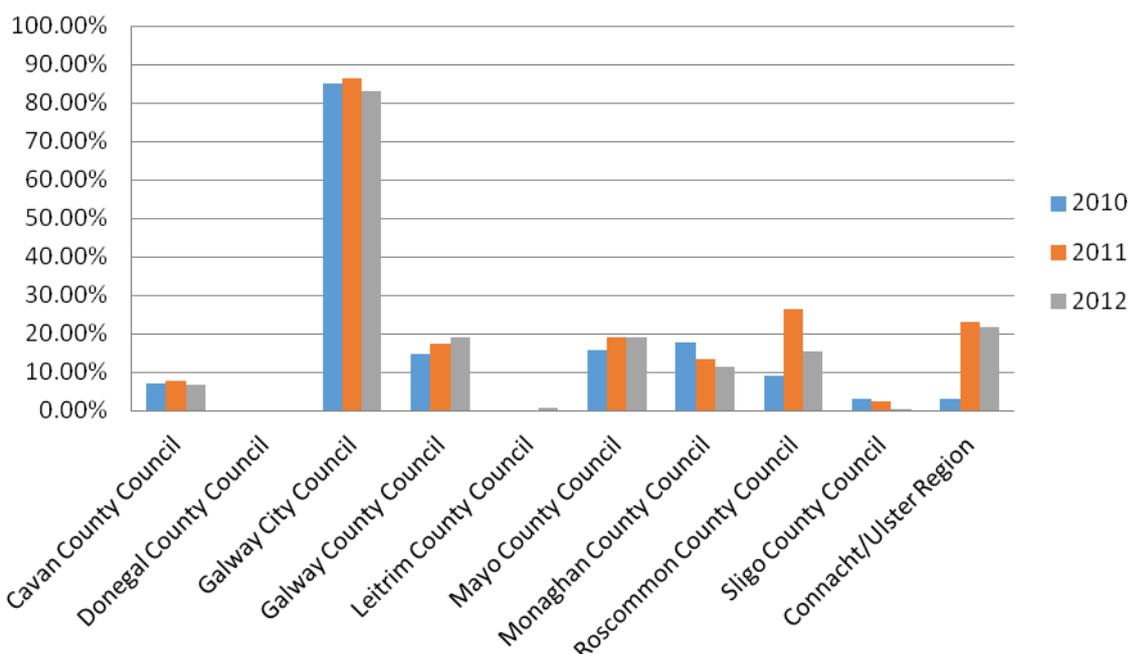
#### 9.2.4 Organic Waste

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**

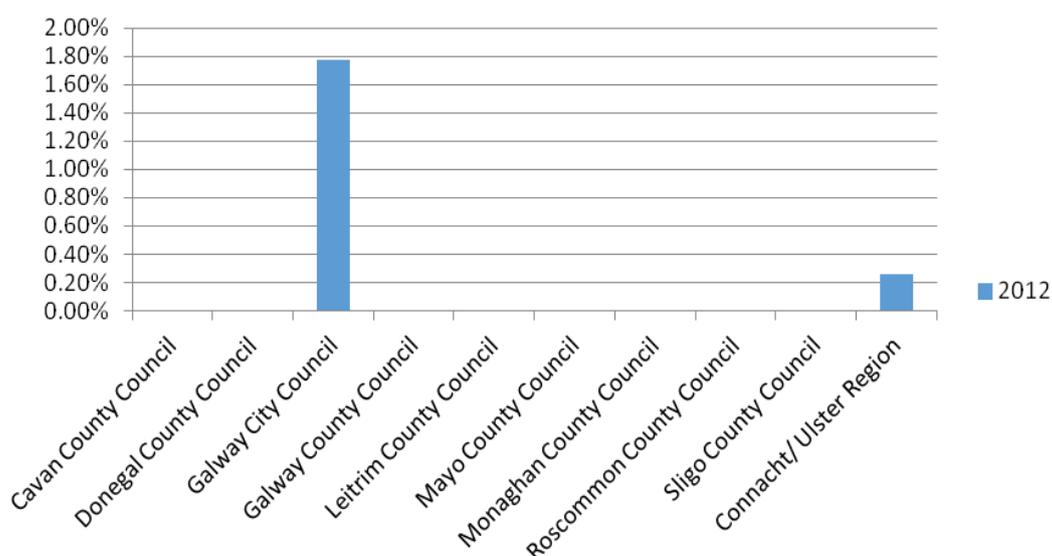
Year	Organic kerbside household waste collected (tonnes)	Organic kerbside household waste collected / household served (tonnes/household)
2010	7,847	0.046
2011	8,864	0.051
2012	10,351	0.059

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
<b>Total Household bulky waste collected (t)</b>	<b>5,310</b>	<b>9,260</b>	<b>6,022</b>

**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 m<sup>2</sup>, 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 2010–2012<sup>39</sup>. 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
<b>Total household WEEE collected for recovery (t)</b>	5,691	5,059	5,076
<b>Total household WEEE collected for recovery per inhabitant (kg)</b>	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 reported<sup>40</sup> 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.<sup>41</sup> 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

<sup>39</sup> 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.

<sup>40</sup> EPA National Waste Report 2012.

<sup>41</sup> 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) <sup>42</sup>	Waste mineral oils & filters (t)	Paint & varnish (t)	WEEE (t)	Household hazardous waste (t)	Other (t) <sup>43</sup>	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.

<sup>42</sup> 80% of which (in t) are lead acid.

<sup>43</sup> 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:

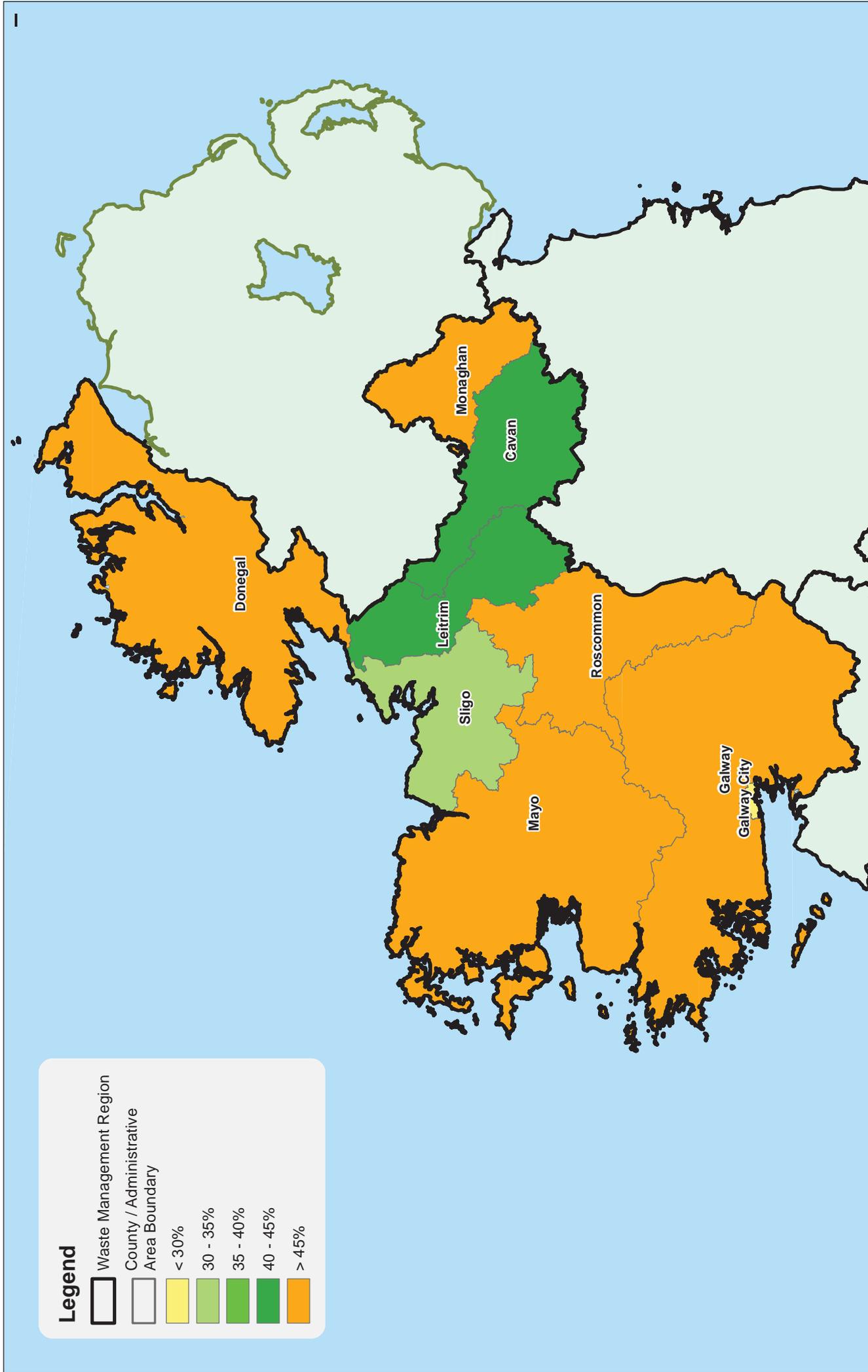
G4. Implement a co-ordinated approach to address unmanaged waste and the potential impact to the environment and human health.

## 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;



**Legend**

- Waste Management Region
- County / Administrative Area Boundary
- < 30%
- 30 - 35%
- 35 - 40%
- 40 - 45%
- > 45%

**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.

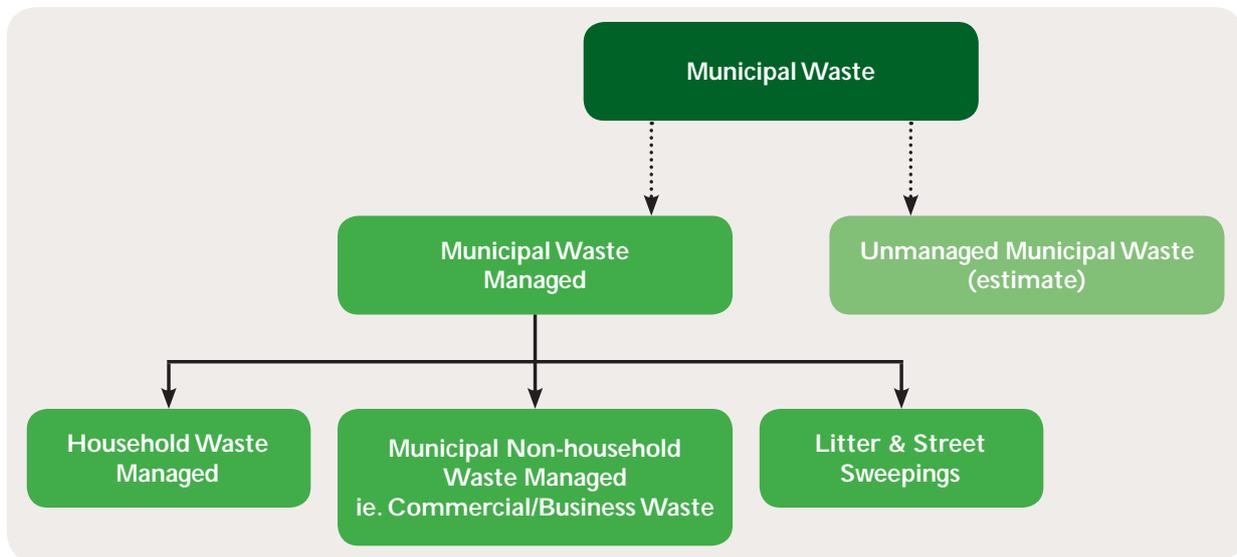
There are no charges to householders for the use of bring banks, and charges at civic amenity facilities and landfills vary depending on the waste types presented. In most sites within the region segregated recyclables are accepted free of charge or for a nominal fee. Residual waste is accepted at some 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
<b>CUR – % BMW in municipal waste</b>	<b>58%</b>	<b>61.40%</b>	<b>55.8%</b>
<b>National – % BMW in municipal waste</b>	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
<b>CUR - Non-household municipal waste managed (t)</b>	156,161
<b>CUR - Non-household municipal waste managed per inhabitant (t)</b>	0.186
<b>National - Non-household municipal waste managed per inhabitant (t)</b>	<b>0.243</b>
<b>CUR - Non-household municipal waste recovered (t)</b>	94,881
<b>CUR - Non-household municipal waste recovered per inhabitant (t)</b>	0.113
<b>National - Recovery rate for non-household municipal waste managed</b>	<b>61%</b>
<b>CUR - Non-household municipal waste disposed (t)</b>	61,280
<b>CUR - Non-household municipal waste disposed per inhabitant (t)</b>	0.073
<b>National - Disposal rate for non-household municipal waste managed</b>	<b>39%</b>

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

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.<sup>44</sup> 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
<b>Total for CUR</b>	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.

<sup>44</sup> <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.<sup>45</sup> 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,

<sup>45</sup> National Waste Report 2012, EPA (2014).

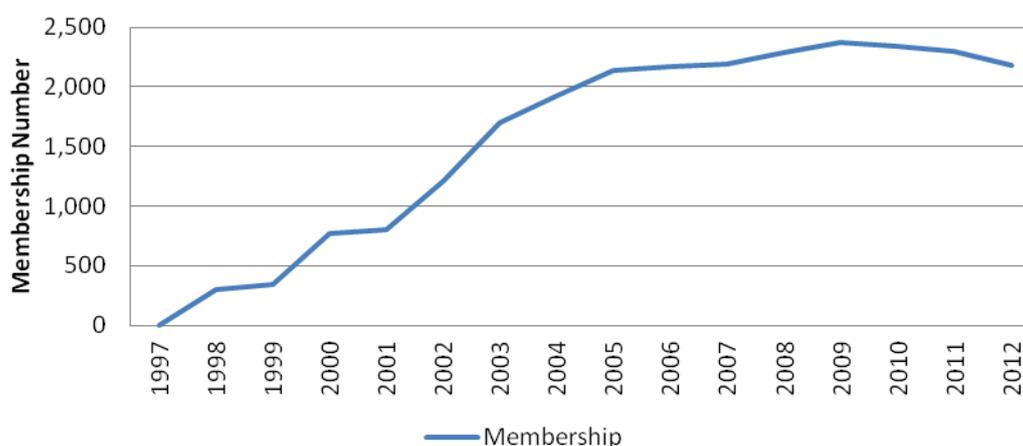
- Businesses that are below the “de minimis” thresholds of waste tonnages are exempted from major producer obligations (i.e. enterprises with a turnover greater than €1 million and that supply 10 tonnes or more of packaging material or packaging to the Irish market), and
- Businesses that are “non-compliers” 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 reported<sup>46</sup> 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 1997–2012<sup>47</sup>**

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).

<sup>46</sup> Forward Together, Annual Report 2013–2014, Repak (2014).

<sup>47</sup> 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.<sup>47</sup>

### 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, 2014<sup>48</sup>). 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 under-performing.

**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

<sup>48</sup> EPA emailed data 14<sup>th</sup> 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 2007–2011**<sup>47</sup>

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.<sup>47</sup> 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 report<sup>47</sup> 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

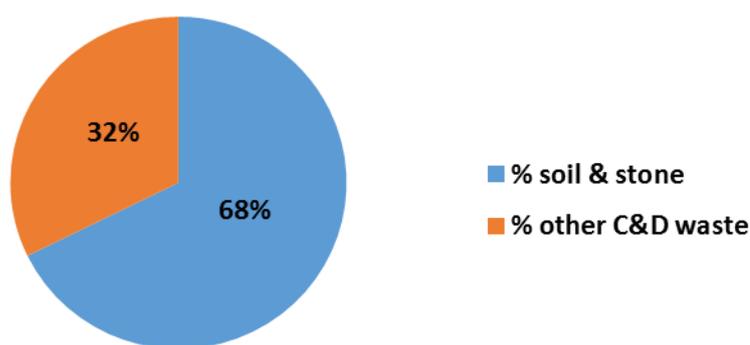
Nationally the quantities of C&D waste managed peaked in 2007 and decreased year on year during the period 2007–2011, mirroring the national economic downturn. The EPA report<sup>45</sup> does not provide details on the quantity of C&D waste managed in 2012.

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 reported<sup>45</sup> 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 on 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 EPA<sup>45</sup> 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%.<sup>45</sup> 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 13<sup>49</sup> classes of authorised activities covered by CoR.

A single database of all local authority authorised waste sites did not exist prior to the preparation of the waste plans. The local authorities spent considerable time developing a baseline of treatment capacities for the purpose of the regional waste management plan. This data has been compiled using information<sup>50</sup> 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).

<sup>49</sup> Class 8 of the certificates of registration is a spare class, not used.

<sup>50</sup> Includes local authority permitting records and Annual Environmental Reports.

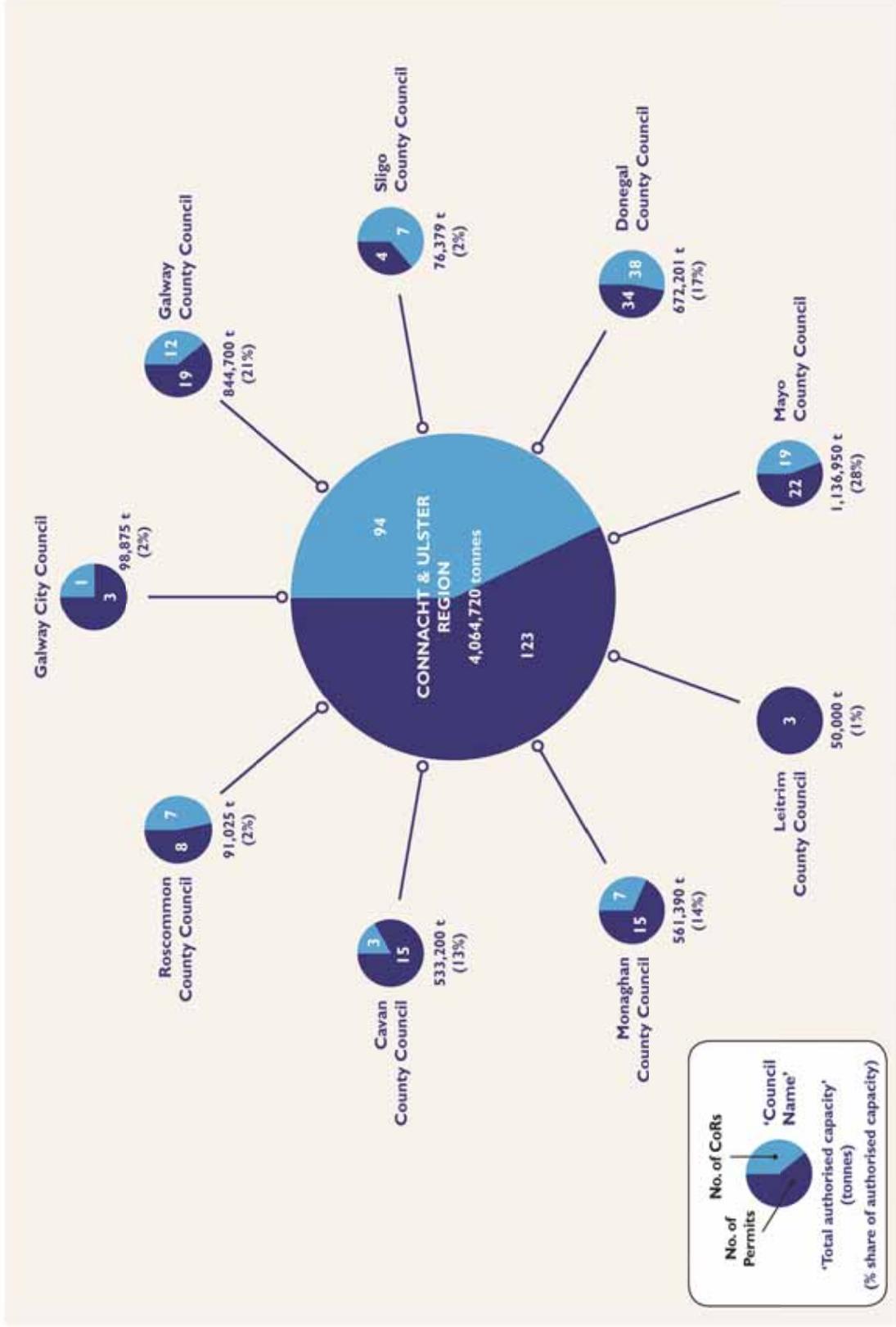


Figure 12-1 Number and Capacity of Local Authority Authorised Facilities in the CUR

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 <sup>51</sup>	CoR Classes <sup>52</sup>	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
<b>Total</b>	<b>12 classes</b>	<b>13 classes</b>	<b>123</b>	<b>94</b>

**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.

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

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

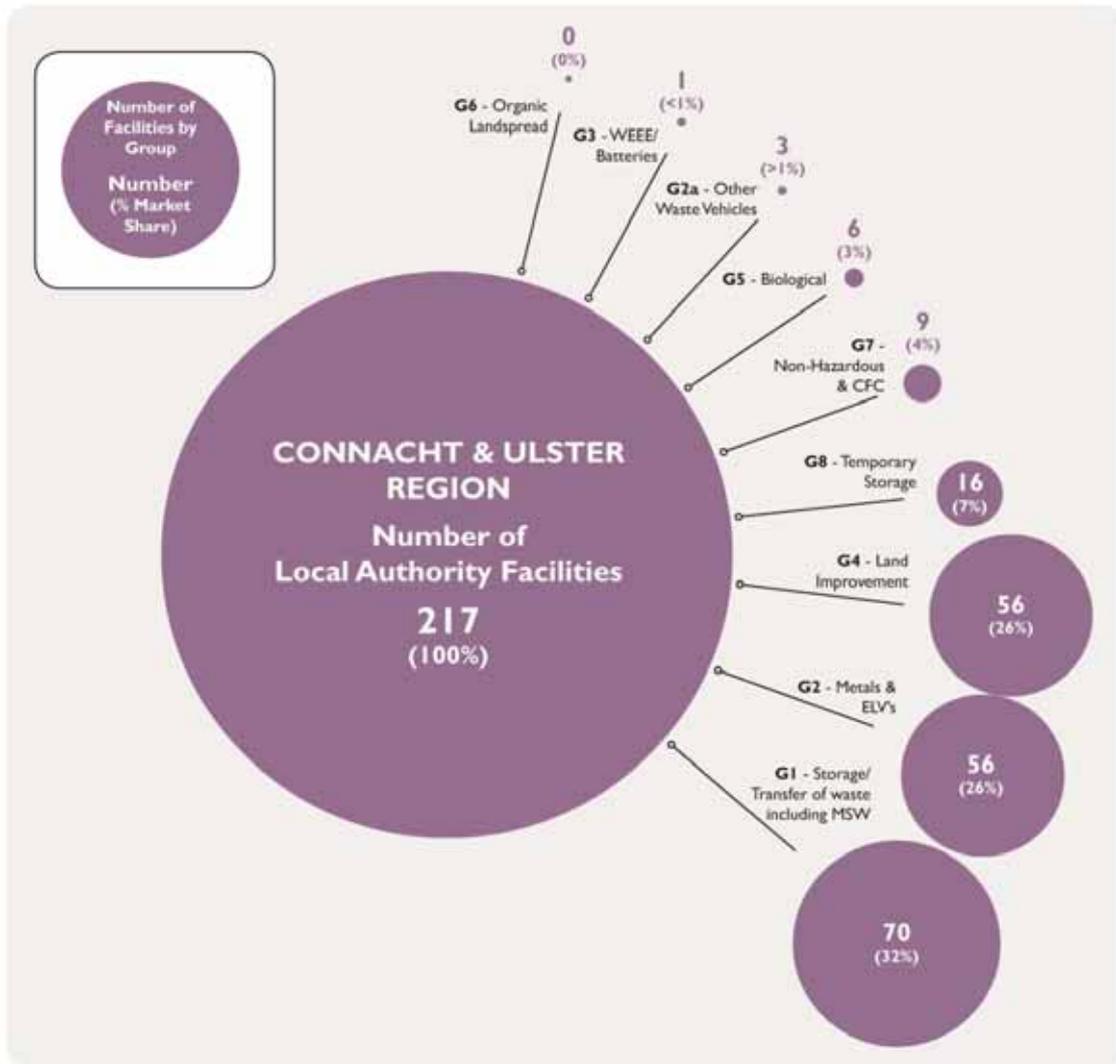
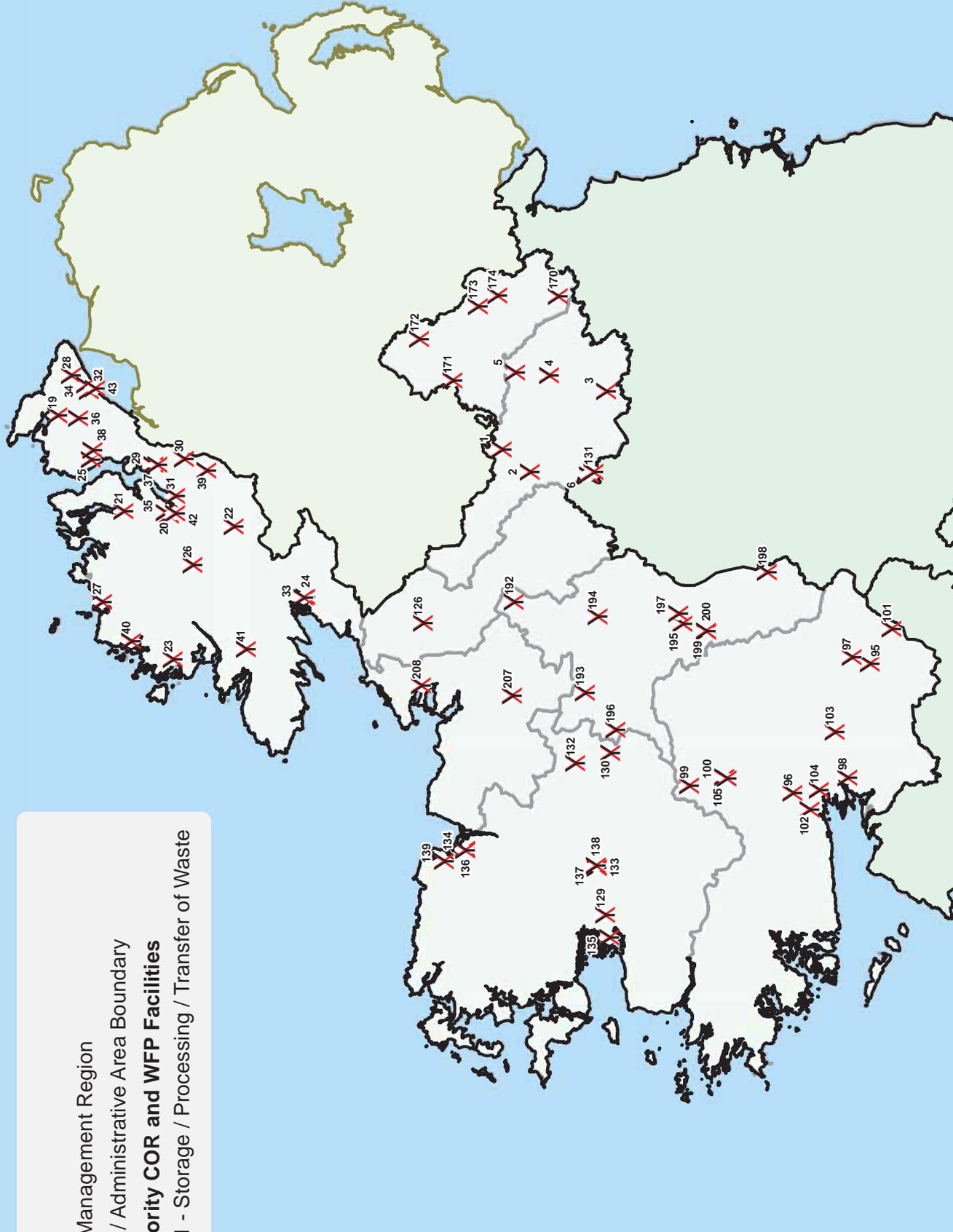


Figure 12-2 Local Authority Waste Authorisations by Group

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



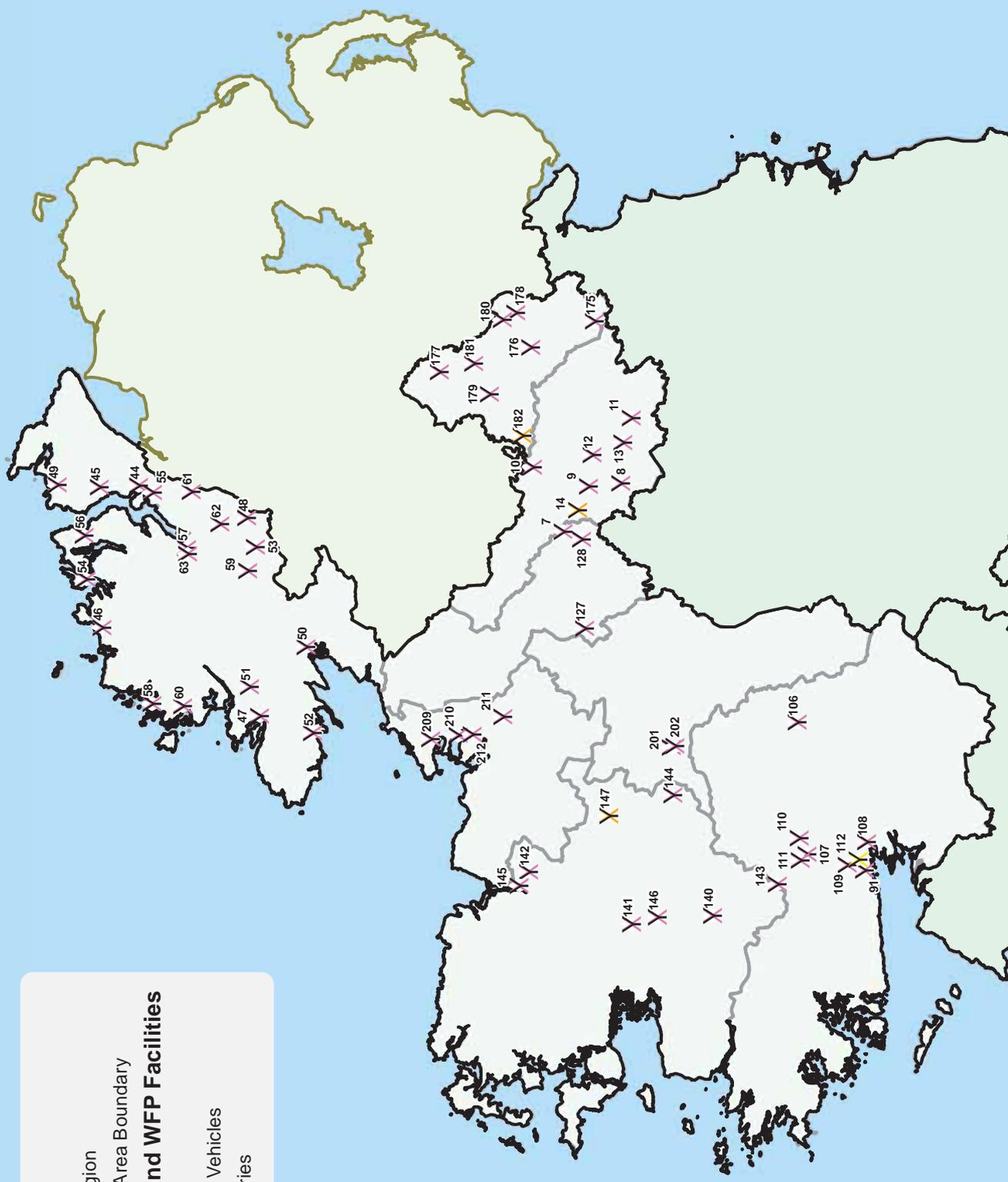
**Figure 12-3** Group 1 Local Authority Authorised Waste Facilities in the Connacht-Ulster Region

### Legend

- Waste Management Region
- County / Administrative Area Boundary

### Local Authority COR and WFP Facilities

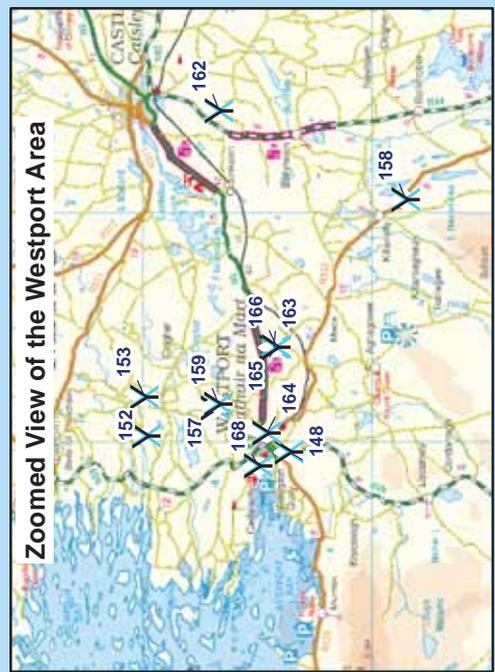
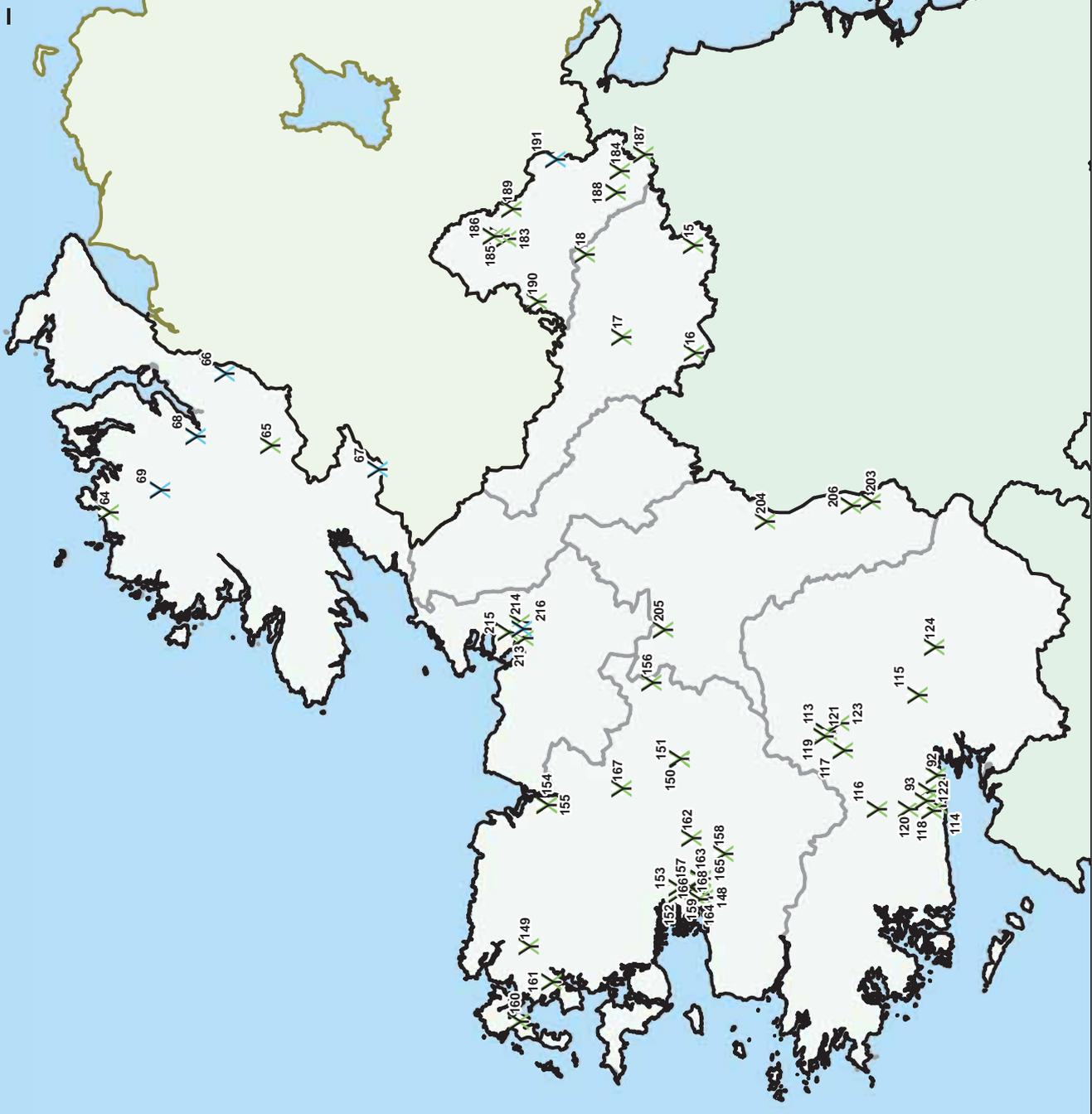
- Group 2 - Metals / ELVs
- Group 2A - Other Waste Vehicles
- Group 3 - WEEE / Batteries



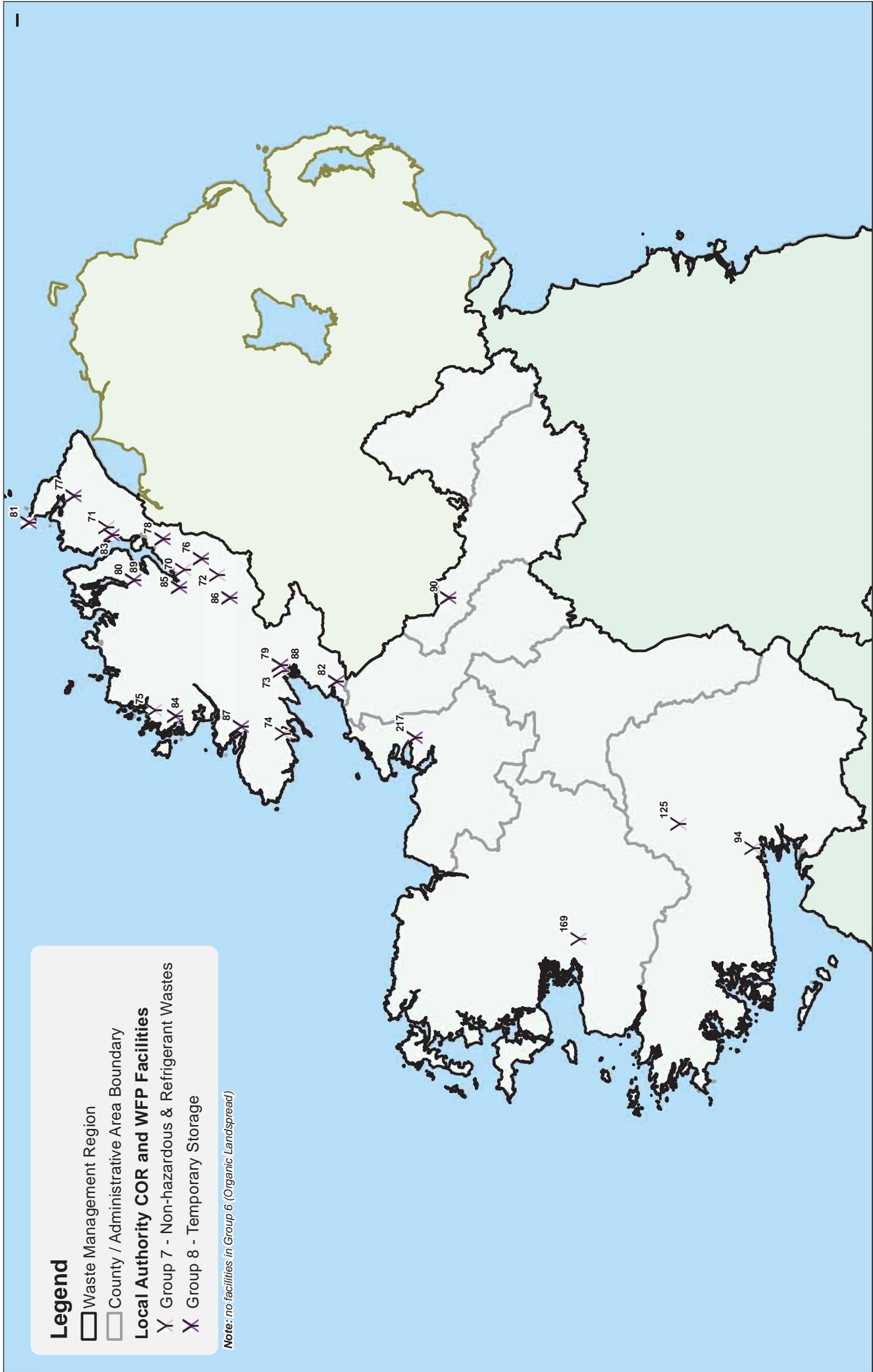
**Figure 12-4** Groups 2, 2A and 3 Local Authority Authorised Waste Facilities in the Connacht-Ulster Region

**Legend**

-  Waste Management Region
-  County / Administrative Area Boundary
- Local Authority COR and WFP Facilities**
-  Group 4 - Biological
-  Group 5 - Land Improvement



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



**Legend**

- Waste Management Region
- County / Administrative Area Boundary
- Local Authority COR and WFP Facilities**
- Group 7 - Non-hazardous & Refrigerant Wastes
- Group 8 - Temporary Storage

Note: no facilities in Group 6 (Organic Landspread)

**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 regulations<sup>52</sup> 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
<b>Total</b>	<b>9</b>	<b>674,680</b>

\*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.

**Legend**

- Waste Management Region
- County / Administrative Area
- Boundary

**Waste Facility Type**

- ⦿ Composting/Anaerobic Digestion (2)
- ⦿ Soil Recovery Facility (1)
- ⦿ Waste Transfer Station (8)

**Landfill Type**

- ⦿ Active MSW Landfill (2)
- ⦿ Closed Landfill (20)

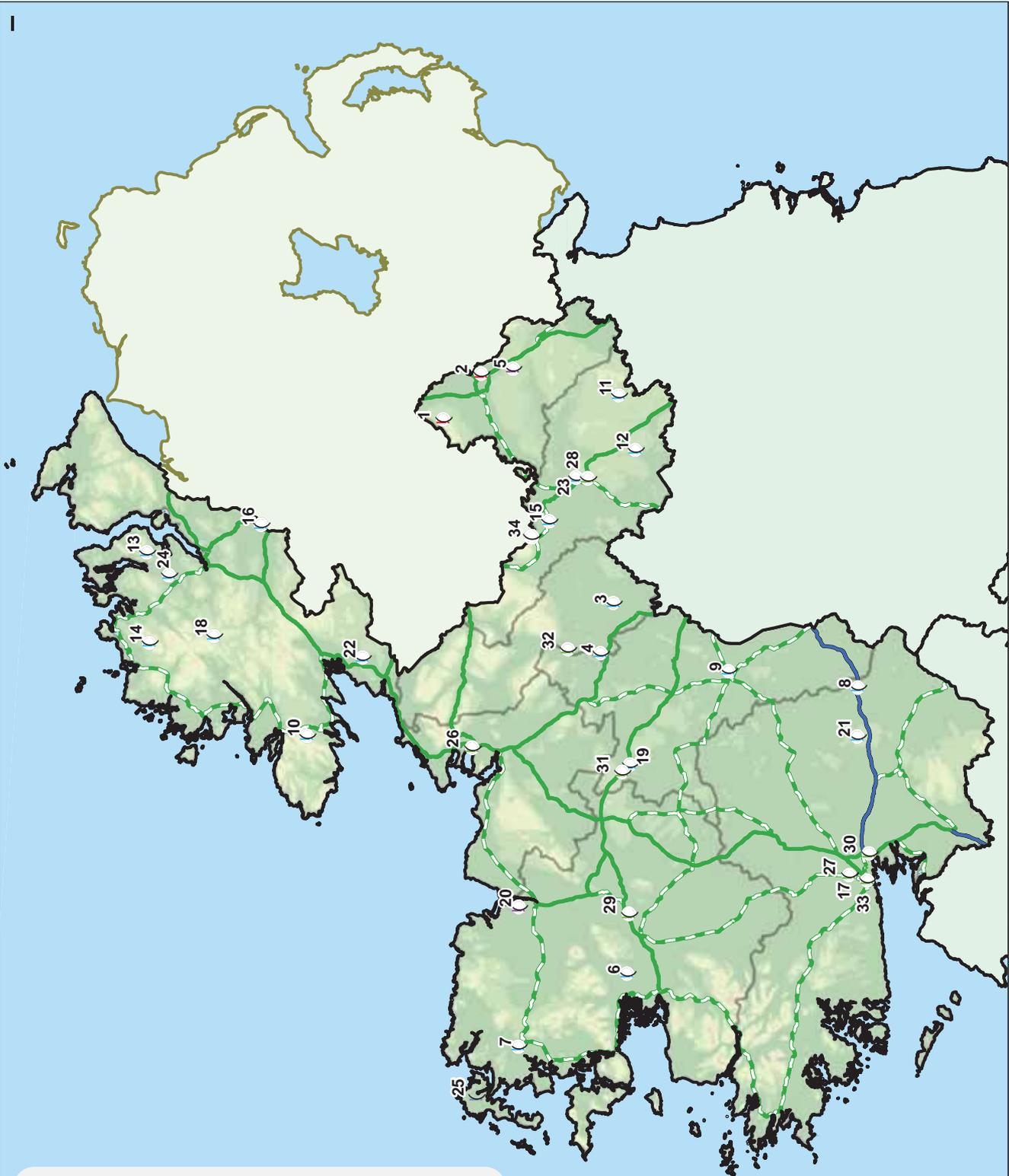
**IPPC Facility (Co-incinerates Waste)**

- ⦿ Cement Plant (1)

**Road Network**

- Motorway
- National Primary Road
- National Secondary Road

*Note: number in brackets denotes the number of licensed facilities in the region.*



**Figure 12-7** EPA Waste Licensed Facilities in the Connacht-Ulster Region

## 13 DISPOSAL INFRASTRUCTURE

This chapter sets out the existing disposal infrastructure and capacity in the region, which has changed significantly. One of the key objectives of the previous plans 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

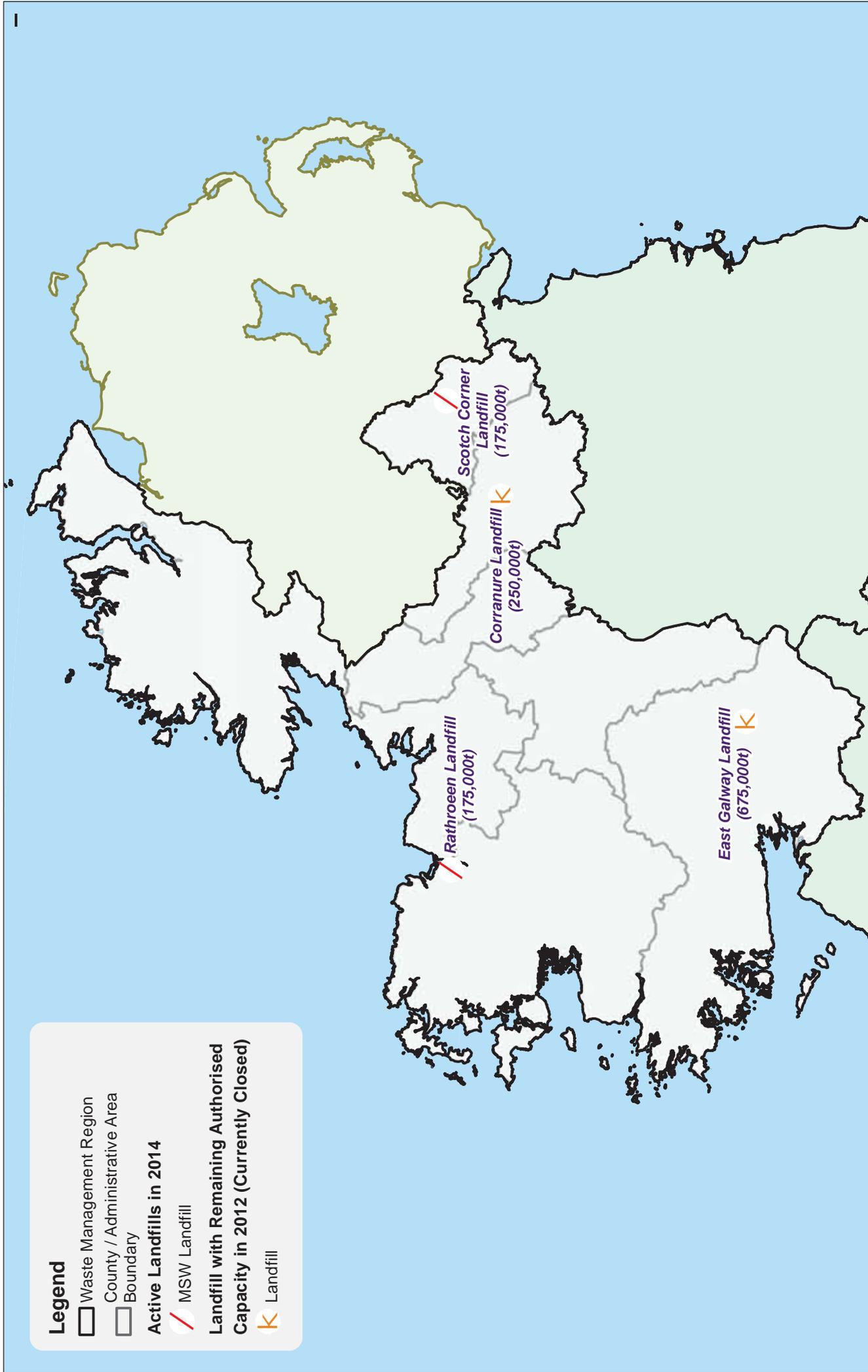
The impact of the landfill levy has been to divert waste away from landfill, primarily towards export to waste to energy facilities, with the result that many landfills have become financially unviable. Other factors that have influenced the diversion of waste from landfill include:

- 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.



**Figure 13-1** Active Landfills in the Connacht Ulster Region

### 13.1.1 Quantities of Waste Accepted to Landfill

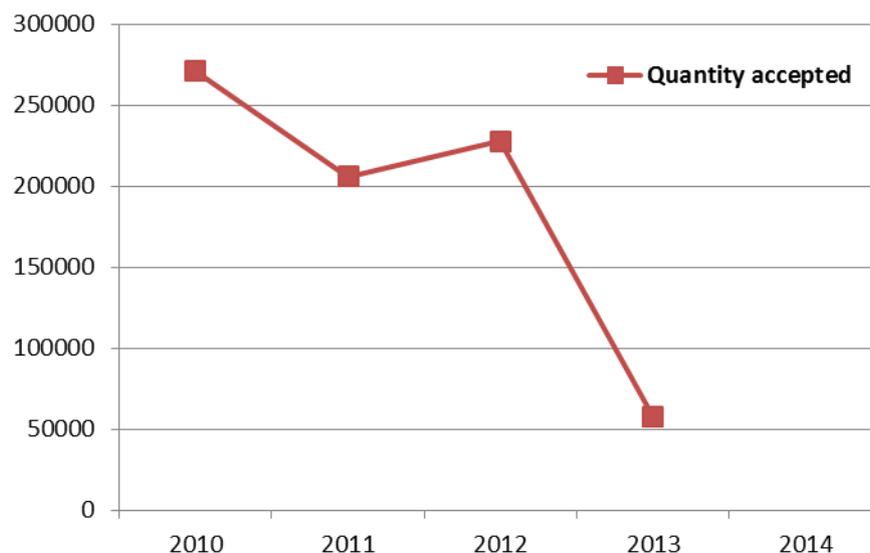
The total quantities of households, commercial and industrial waste accepted at landfills in the Region from 2010 to 2012 are shown in **Table 13-2**.

**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
<b>Total</b>		<b>270,801</b>	<b>205,786</b>	<b>227,560</b>

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).

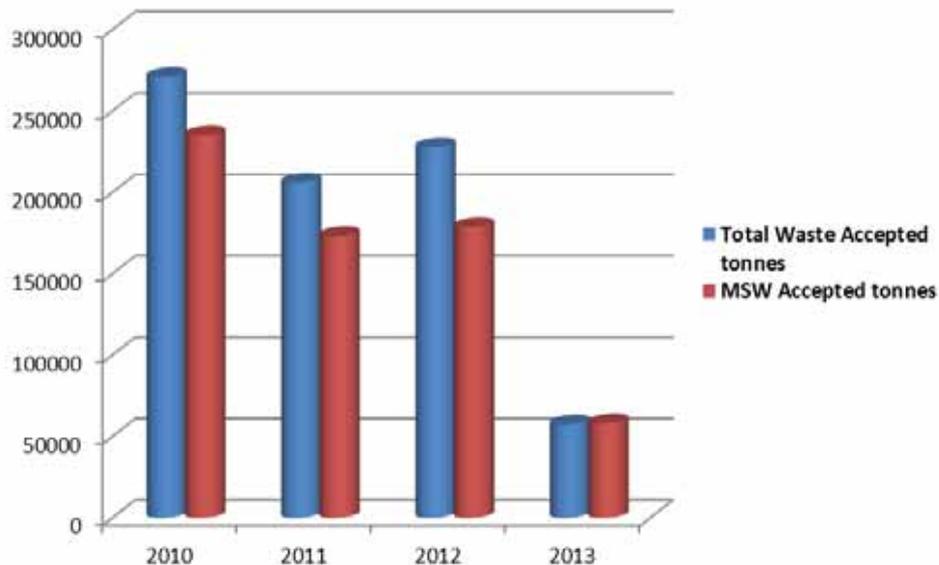


**Figure 13-2 Total Quantities of Wastes Accepted to Landfill in CUR 2010–2013**

### 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 Rathreen, 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 MSW<sup>53</sup>**

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 2016<sup>54</sup> 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 O<sub>2</sub>/g DM (until 1-1-2016), and <7 mg O<sub>2</sub>/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**.

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

<sup>54</sup> 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)
- Ballagherreen 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 CUR<sup>55</sup>**

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

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.

<sup>55</sup> 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.<sup>56</sup>

### 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)<sup>57</sup> licences;

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

<sup>57</sup> 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 published<sup>58</sup> provides details of Ireland's enforcement of environmental law in the period 2009 to 2012 by the EPA and local authorities.

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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.

<sup>58</sup> 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
<b>CUR</b>	<b>37</b>	<b>836,335</b>	<b>22,603</b>

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

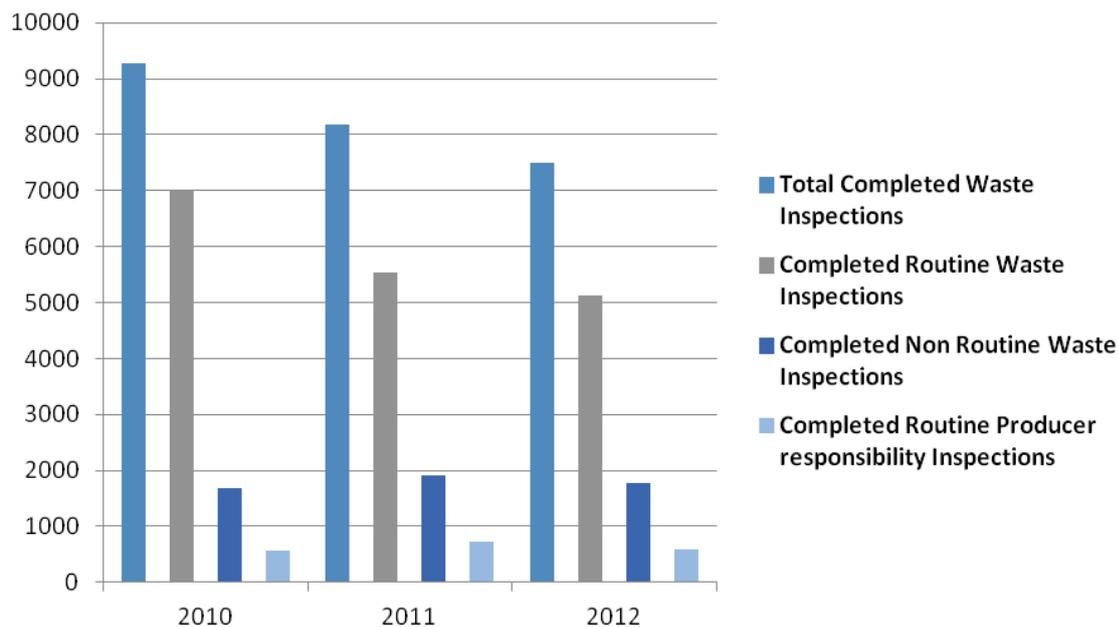
Local authorities undertake:

- Routine waste inspections to assess compliance with specific waste legislation, 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.



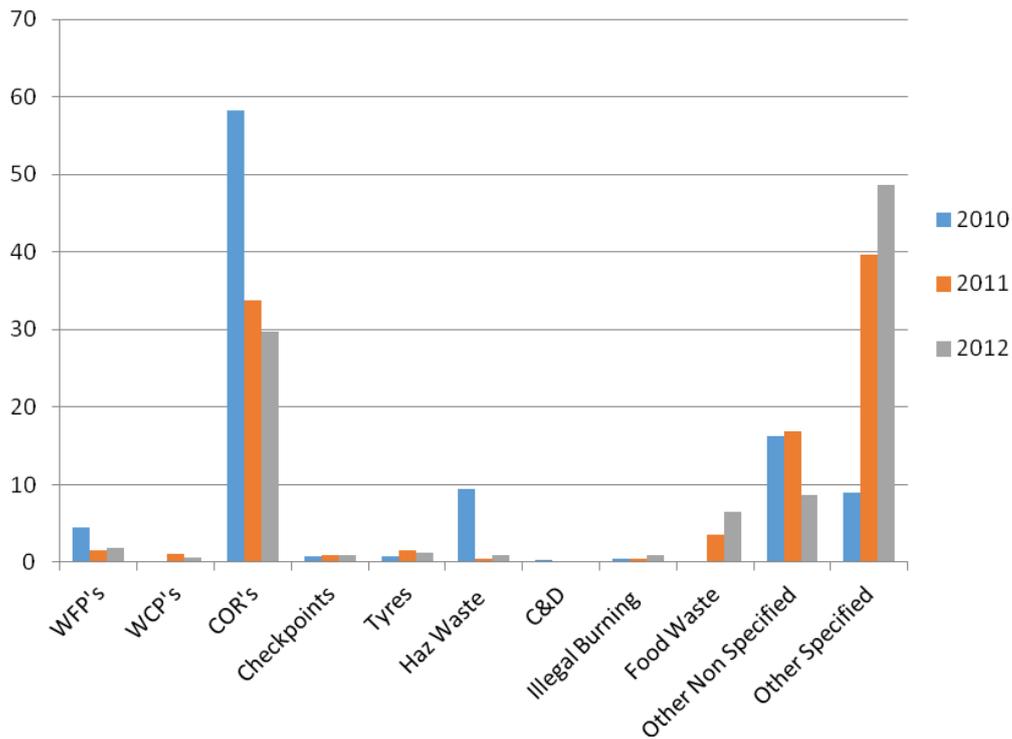
**Figure 14-1 Waste Inspections Undertaken in the CUR 2010–2012<sup>59</sup>**

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**.

<sup>59</sup> Local authority RMCEI Annual Return 2010–2012.



**Figure 14-2 Percentage of Completed Routine Waste Inspections by Activity 2010–2012<sup>59</sup>**

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.<sup>60</sup> 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.

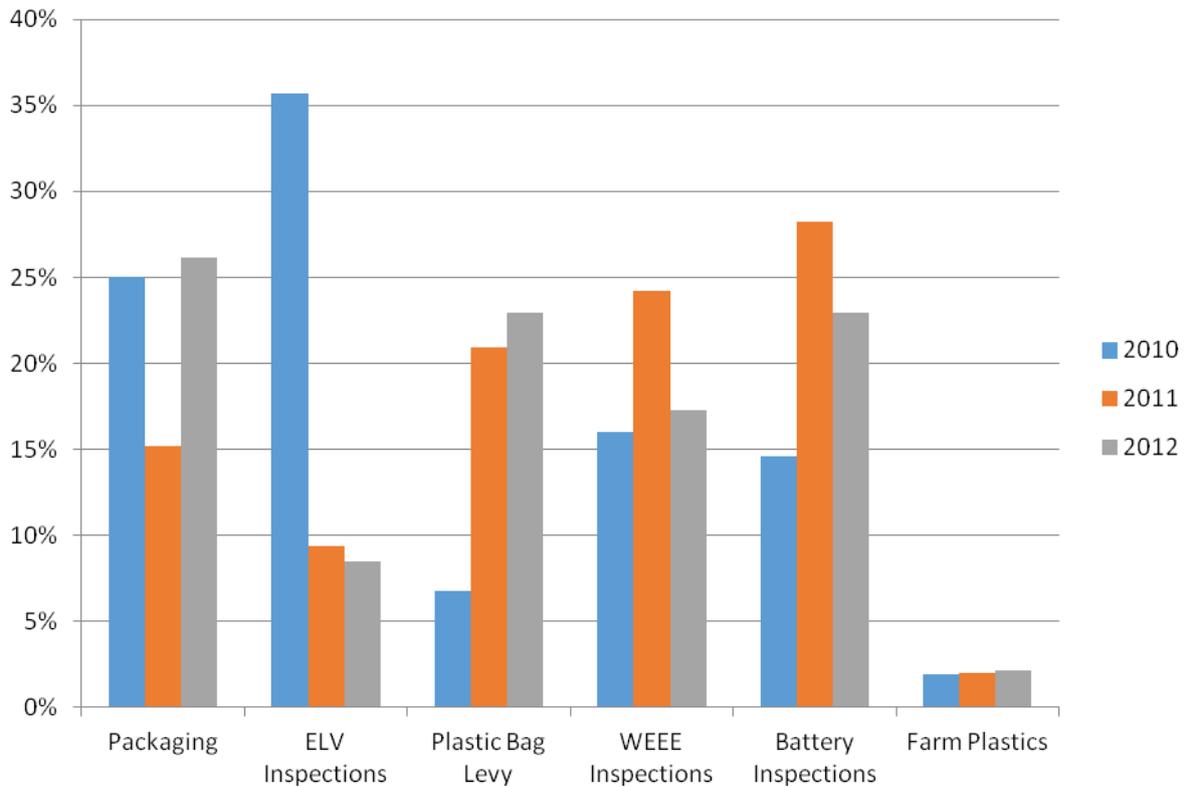
The trend in relation to COR inspections and non-specified inspections is downward while the trend in relation to other specified inspections is upward, indicating a more targeted approach to inspection activity across the region.

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

<sup>60</sup> 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 2010–2012<sup>59</sup>**

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.

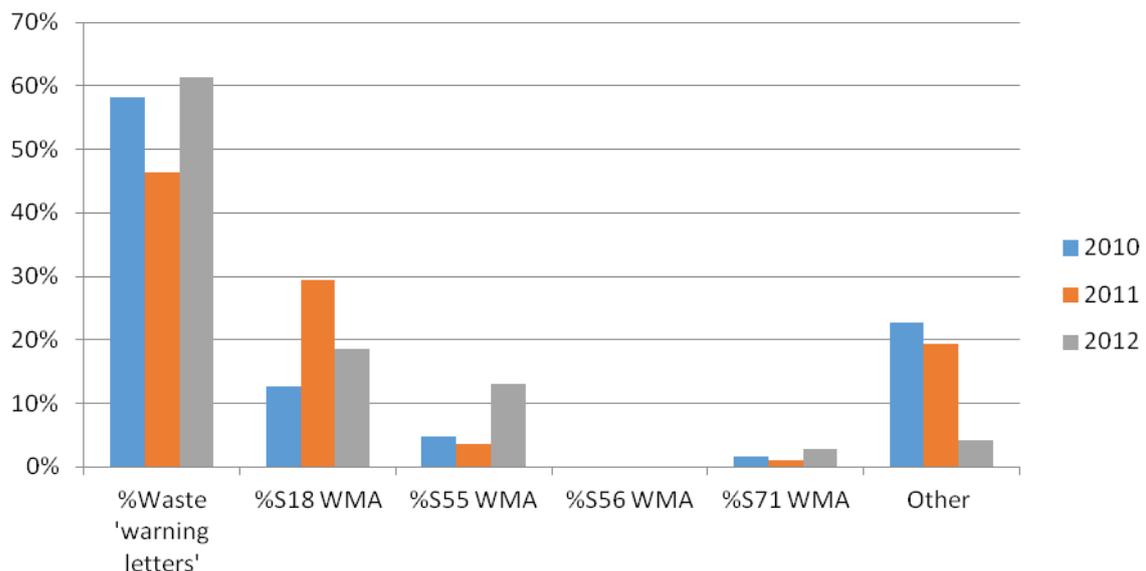
The number of plastic bag levy inspections has increased steadily since 2010, while the WEEE and battery inspections combined accounted for 41% of all producer responsibility inspections in the CUR in 2012. Farm plastics inspections account for approximately 2% of annual producer responsibility inspections 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 2010–2012<sup>59</sup>**

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.

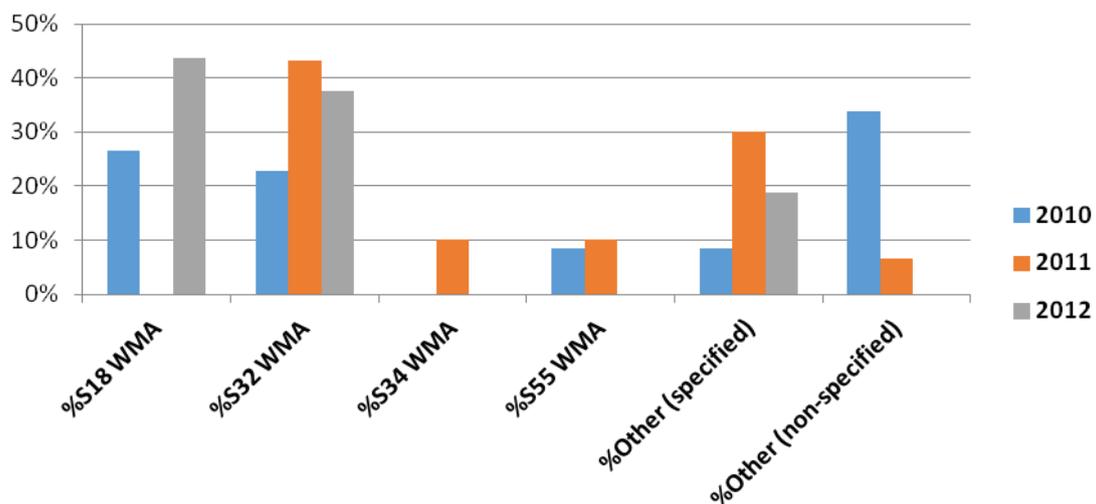


Figure 14-5 Prosecutions Initiated in the CUR 2010–2012<sup>59</sup>

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.

## **PART 3 IMPLEMENTATION**

## 15 WASTE PROJECTIONS

Waste projections are critical tools in waste management planning for a number of reasons. They form the basis for decisions on the type of future waste management infrastructure which may be required, and provide an understanding of what has to be achieved when considering targets and how they are to be met. Forecasting highlights the importance of, and need for, greater waste minimisation. Finally, the ability to estimate future waste quantities enables a variety of potential outcomes to be assessed depending on the estimated growth rates.

### 15.1 RECENT TRENDS IN WASTE GENERATION

Recent trends in waste generation show that Ireland is on schedule to meet many of its EU obligations across a broad range of waste legislation.

MSW generation in Ireland peaked during 2003–2007 with the economic boom and then decreased annually from 2008–2012. The decline is linked to a decrease in personal consumption as result of the economic recession in Ireland, despite an increase in population over the same period. Ireland's MSW recovery rate increased from 36.5% in 2007 to 56% in 2012.

Household waste collection rates have a major effect on municipal waste generation rates. In 2013, approximately 72% of occupied Irish households availed of a kerbside collection service, with lower rates in rural areas and higher rates in urban. Households which did not sign up to a collection service most often chose not to; it was not because a service was unavailable to them. However, such behaviour is not an indication of improper waste management, as some households choose to share bins or dispose of waste in authorised facilities, e.g. civic amenity sites.

More households are being offered a third bin for food and organic waste and there has been a corresponding increase in the quantity of segregated household waste being collected.

The amount of household waste managed per person in Ireland has reduced from a high of 420 kg per person in 2007 to 304 kg per person in 2011. Much of the decrease can be attributed to a decline in personal consumption rates; however, it is also an effect of waste prevention programmes and campaigns carried out by local authorities aimed at changing waste generation behaviours.

The quantity of commercial waste managed nationally dropped 2% from 2011 to 2012. There was a small increase in the recovery rate and significant decrease (~10%) in commercial waste landfilled. The amount of packaging waste being managed per inhabitant decreased from 240 kg in 2007 to 177 kg in 2012. Nationally 7.5 kg of WEEE was collected in 2012 per person, unchanged since 2011, but down from the 2008 high of 9.0 kg. Collection rates met the EU target of 4 kg per inhabitant.

### 15.2 FACTORS INFLUENCING HISTORICAL WASTE GROWTH

In preparing these waste projections for the Connacht Ulster Region it is prudent to examine the projections generated in previous plans and identify suitable techniques or trends to apply to the new forecasts.

### 15.2.1 Household Waste

The Connacht Region based its household projections on both the population growth projections from the Regional Planning Guidelines and the population and labour force projections produced by the Central Statistics Office (CSO). A mean of these two sets of projections was used. The North East Region selected two of the four projection scenarios from the Regional Planning Guidelines to obtain a single set of household projections providing a lower and upper band of growth, and a mean of these two sets of projections was used. The Connacht and the North East Regions projected household waste similarly for the period 2004–2011 at 3.3% and 3.4% per annum.

County Donegal presented an estimated annual growth rate of 1.5% for municipal waste graphically (no data) over the life of the Plan. No breakdown was provided for household, commercial/industrial and construction and demolition waste.

The projections estimated are reflective of the growth period experienced at the time of Plan preparation. In the previous years from 1996 to 2002 the Connacht Region experienced a population growth of 7.2% and a household waste growth of 2% per annum. The North East Region had a population growth of 12.7% and a household waste growth of 5.8% per annum over the previous five years. In Donegal the population also grew by 5.8%

Data available from the EPA shows that between 2003 and 2011, household waste increased by 5.4% nationally (NWR data for the years from 2003 to 2008 is for household waste arisings and for the years from 2009 to 2011 is household waste managed).

**Table 15-1** shows the arisings reported in 2003, the base year in the previous plans, beside projections for 2010. The table also shows the recorded arisings reported in 2010.

**Table 15-1: Household Waste Arisings and Projections 2003 to 2010**

Household	2003 Arisings <sup>61</sup>	2004 Arisings <sup>61</sup>	2010 Projections Arisings	2010 Reported Arisings <sup>62</sup>	% Difference projected over reported
Connacht	-	174,951	209,785	248,696	-16%
North East	161,350	-	204,945	185,188	+11%
Donegal	-	46,416	50,753	60,461	-16%

The projection for household waste arisings in the North East Region was 11% greater than actual arisings in 2010. Thus, less waste was generated than projected. However, the projections for household waste arisings in the Connacht and Donegal Regions were 16% less than the actual arisings in 2010. For these Regions more waste was generated than projected.

There are clear differences between the 2010 figures and those forecast but no consistent pattern emerges from one set of projections to the next. The spread between over- and under-projections reflects the variability in the methods used to generate the forecasts. Factors which could have influenced (apparent) waste growth in the period may include:

<sup>61</sup> Source: second generation regional waste management plans prepared by local authorities in the CUR.

<sup>62</sup> Evaluation Reports, 2012 on 2005–2010 Waste Management Plans.

- A rapid contraction of the Irish economy that started in 2008 which depressed GNP and personal spending. Waste generation rates, which are coupled to these, fell accordingly;
- Discrepancies in the quality and reporting of data between 2003 and 2010;
- Demographic changes which occurred during the period; and
- The degree to which waste prevention measures inhibited waste production.

### 15.2.2 Commercial Waste

The Connacht and the North East Regions used the same approach for commercial/industrial waste and construction and demolition waste projections, using Gross Domestic Product (GDP) estimates. These regions projected commercial/Industrial waste similarly for the period 2004–2011 at 2.5% per annum. County Donegal presented an estimated annual growth rate of 1.5% for municipal waste with no breakdown provided for household and commercial/industrial.

Data now available from the EPA shows that from 2003 to 2011, commercial waste (managed) fell by 16% nationally. Construction and demolition waste fell by over 10% per annum between 2004 and 2011, equating to 72% when compounded over the period.

**Table 15-2** shows the managed quantities of commercial waste reported in the previous waste management plans. Also shown are projections made for 2010 in those plans along with actual arisings reported for 2010 in the relevant evaluation reports on the relevant plans.

**Table 15-2: Commercial Waste Arisings and Projections 2003–2010**

Commercial	2003 Managed <sup>61</sup>	2004 Managed	2010 Projections <sup>61</sup>	2010 Reported Managed <sup>62</sup>	% Difference projected over reported
Connacht		173,695	201,990	192,463	+5%
North East	97,165	-	114,236	191,795	-40%
Donegal		30,084	32,895	22,684	+45%

Connacht and North East Regions recorded an increase of 11% and 97% while Donegal showed a decrease of 25% from the base year data. During this period the EPA reported a national decrease by 16% between 2003 and 2011. This apparent increase in commercial and industrial waste managed in the Connacht and North East Regions could be explained by the fact that the base commercial and industrial managed data, which formed the basis for the projections, was of poor quality, as a significant quantity of material was not weighed and estimates were applied. By 2010, most or all waste generated was weighed and recorded.

The projections for commercial waste managed in the Connacht and Donegal Regions were 5% and 45% greater than the actual waste managed in 2010. Therefore for these regions less waste was managed than projected. Some conclusions can be drawn from the commercial projections made.

- The 2003 commercial and industrial data, which formed the basis for the projections, was poor quality, and a lot of waste entering facilities was not weighed; rather estimates were applied. By 2010, most or all waste generated was weighed and recorded. This could explain the apparent increase in commercial and industrial arisings in some regions. Projections made in 2014 will have the benefit of much better data; and

- The application in 2004 of a factor to reflect waste prevention effects seems to have been reasonable although the value to be assigned will be a judgement rather than being designed from research and available data. The scale of this factor was overshadowed in the final results by macroeconomic changes.

### 15.2.3 Conclusions

It is essential when generating waste forecasts that the initial base data is of good quality. The waste data that was available in 2003/2004 was somewhat inaccurate due to use of estimated figures of the amount of waste managed and uncollected. The methodology for calculating these fractions of household waste arisings has improved in recent years. Furthermore, the availability of actual data, not estimates, has increased in more recent years. This will improve the reliability of the projections made using this data.

Further, the previous plans relied on the accuracy of the economic data used. This data did not foresee the significant economic growth that was followed by a rapid contraction which started in 2007. Finally, the methodologies used in the various 2004 regional projections differed from each other, unlike the 2014 plans, where a similar methodology is applied across the three regions.

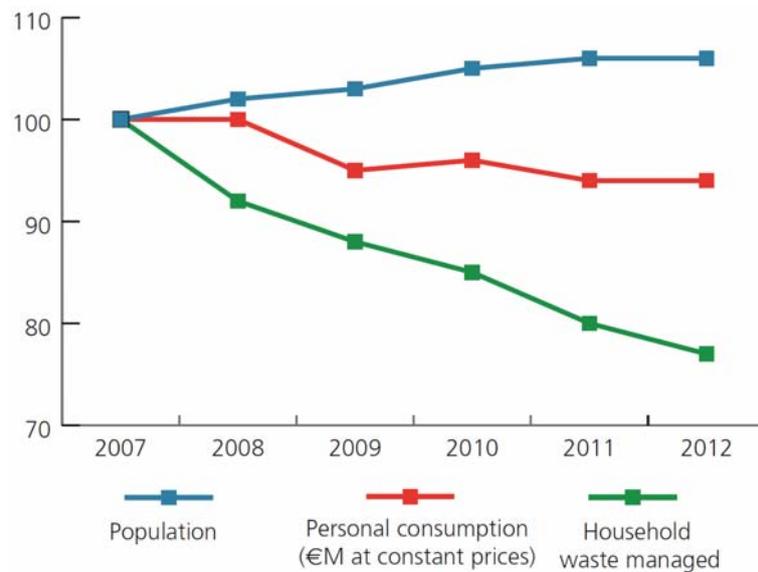
## 15.3 FACTORS INFLUENCING WASTE GROWTH

The preparation of robust projections is required to guide policy actions to achieve statutory targets and develop treatment capacity infrastructure. There are different approaches to generating waste forecasts and, depending on the selection made, the outcomes can vary quite significantly. A review of national and international reports on the key drivers and approaches to projections has been undertaken to help guide the projections for this plan.

In Ireland, in deriving waste projections the Economic and Social Research Institute (ESRI) and the EPA have used population projections to forecast household waste growth and economic factors for commercial waste growth. However, in recent years the latest data shows that household waste nationally has dropped even though the population in the State continues to grow and economic activity is a stronger driver for household waste growth. **Figure 15-1**,<sup>63</sup> sourced from the EPA's NWR, 2011, "*shows that there was a substantial drop in municipal waste generation between 2007 and 2011, although the rate of decrease is not as sharp as 2009. This decrease while reflecting the decrease in personal consumption, has taken place despite increasing population over the same period.*"

The ESRI was commissioned by the EPA STRIVE research programme to design and build a Sustainable Development Model for Ireland (ISus) that forecasts national environmental emissions and resource use up to 2030, having regard to economic and social developments. The ISus model is driven by the ERSI's HERMES model, which projects economic production and consumption per sector. The model was used by the EPA to generate municipal waste forecasts with data reviewed each year and published in the annual national waste report. The model is no longer funded and it is unclear if it will have a continued use as a forecasting tool.

<sup>63</sup> National Waste Report 2012, EPA (2014).



**Figure 15-1 Household Waste Managed with Population and Personal Consumption Indices, 2007–2012**

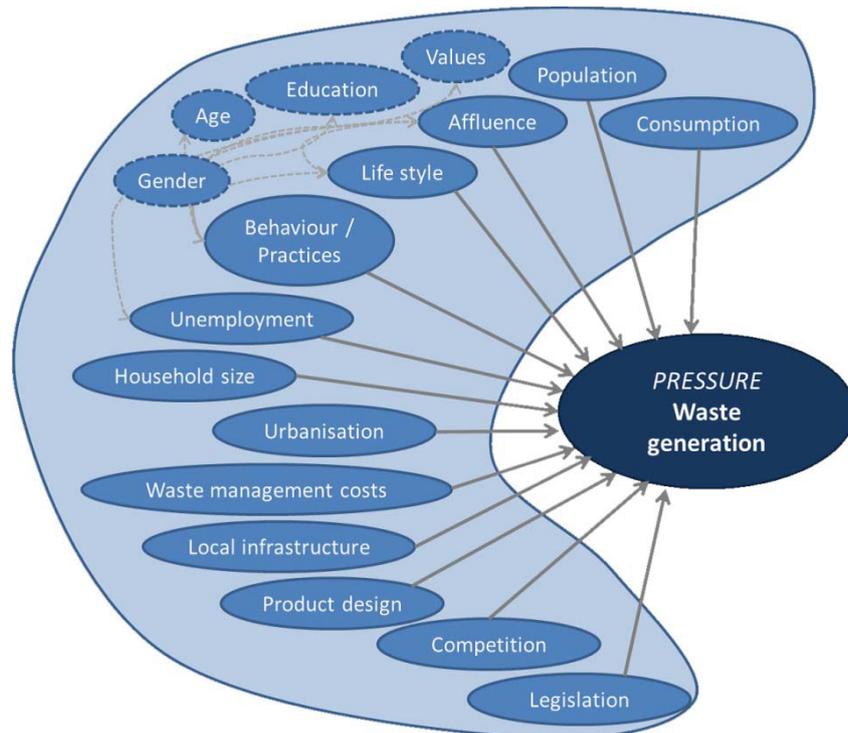
The European Commission Guidance's Note entitled *Preparing a Waste Management Plan – A Methodological Guidance Note, 2012* notes that the following parameters can influence waste generation (although the degree of influence is not described):

- Population growth;
- Changes in the economic situation (growth/recession);
- Changes in the demand for, and nature of, consumer goods;
- Changes in manufacturing methods;
- New waste treatment methods; and
- The effects of policy changes (prevention, minimisation, reuse, recycling).

WRAP's report entitled *Decoupling of Waste and Economic Indicators, 2012* provides an overview of the many drivers that can have positive or negative effects on household waste arisings illustrated in **Figure 15-2**.

Regression analysis was undertaken by WRAP, 2012 investigating factors affecting generation of household waste across the UK. The results suggest the drivers include household size, with smaller households generating more waste per capita, increased household expenditure on snack and takeaways which increase waste arisings, and landfill tax, which has the effect of slightly reducing household waste arisings.

**Figure 15-2** illustrates some of these drivers are associated with significant elements of uncertainty. It is not possible to predict future waste generation with absolute certainty and without ambiguity. However there is a need to develop (and review) forecasts which act as a reliable basis for securing the necessary treatment capacity for the waste management system.



**Figure 15-2 Overview of Drivers of Change in Waste Arisings<sup>64</sup>**

It is essential that data quality is continually monitored and tracked over the plan period and continually improved upon. Flexibility should be built into waste management plans so as to deal with the possibility that projections may not be perfectly accurate (DEFRA 2005).

## 15.4 APPROACH TO PROJECTIONS

DEFRA<sup>65</sup> made the following observation on the development of forecasts, which is also relevant to the Irish waste system; *“Waste is unlikely to grow at a steady rate. The conventional approach to forecasting in this way reflects our limited understanding of exactly how the many underlying factors influence waste growth. It is not statistically robust to make forward projections for twenty years or so, on the basis of even ten years’ data.”*

The statement confirms the difficulty in preparing accurate forecasts due to the many influencing factors. Short-term predictions are likely to be more accurate than long-term ones. Assessing previous reported waste data and the relationship between key drivers over the evaluation period is an important first step and can provide valuable insights for informing new projections. The longer the time period for which data is available, the better, provided the data is reliable and of good quality.

An example of how household waste generation should be calculated is provided in the European Commission Guidance Note 2012. This suggests using the number of inhabitants multiplied by the waste generated by inhabitant. A low and high value is proposed for both variables to generate a low and high range for the resulting waste generation figure.

<sup>64</sup> Decoupling of Waste and Economic Indicators, WRAP 2012.

<sup>65</sup> DEFRA Information Sheet 8, Waste forecasting, 2005.

The European Environment Agency in its report *Baseline Projections of Selected Waste Streams: Development of a Methodology, 1999* notes that “Waste production is influenced both by how we efficiently use resources in production and the quantity of goods we produce and consume. The importance of quantity means that in general it is possible to demonstrate a link between Gross Domestic Product (GDP) and waste generation” and that for municipal waste a strong link between economic activity and waste generation can be demonstrated. The report goes on to say: “However, assuming a close correlation between the generated amounts of municipal waste/household waste and the overall national income (GDP) will not be the right approach. This is primarily due to the specific origin of the household waste, but also to the fact that fluctuations in national income will not necessarily affect the basic consumption (for example, a decrease in the growth of national income may well be neutral on the consumption that generates household waste, but have a negative impact on savings).”

A more reasonable methodology is given in line with the approach adopted by Coopers and Lybrand (1996) and National Institute of Public Health and the Environment (RIVM) in the Netherlands, where the generation of municipal waste can be explained by the share of the national income spent on private consumption. The European Environment Agency seek to identify the various items of consumption that most likely generate municipal waste/household waste, and assumes that the quantity of municipal waste/household waste changes proportionally to the consumption of these goods. The goods of particular importance are food and beverage items, clothing, furniture and household equipment. In the NWR 2009, the EPA stated that the drop in municipal waste generation in Ireland in 2009 mirrored the fall in GNP (Gross National Product) and a significant fall in personal consumption despite a population increase. Therefore it can be said that household waste generation reflects personal consumption patterns.

DEFRA in 2013 based its commercial/industrial waste projections for 2020 in line with economic growth but instead of GDP it used GVA (Gross Value Added), which measures the total economic outputs of a sector net of the economic inputs it uses. It is similar to GDP but can be used to measure growth in individual sectors rather than the economy as a whole.

CIWM in its report entitled *Commercial and Industrial Waste in the UK and Republic of Ireland, 2013* applies a methodology based on projected changes in the labour force up to 2035 for forecasting commercial and industrial waste in the Republic of Ireland. Baseline data of waste tonnage per employee have been calculated for the different sector divisions.

#### **15.4.1 Waste Projections in Ireland**

The June 2012 ESRI Report Environment Review summarises that MSW generation is projected to increase by roughly 0.9 million tonnes over the next 20 years, with more than half being generated by the services sector. An important driver for this growth is the assumption that the population will increase to 5 million within 15 years or so. The EPA predicted a similar outcome in the NWR 2011, forecasting that municipal waste generation will grow by 830,000 tonnes within the next 15 years. The expectation from the ESRI is that a growing population and expanding, recovering economy could lead to greater pressure on the environment from increased waste generation.

The ESRI states that “projecting the destination of waste streams (e.g. landfill, recycle etc.) is considerably more difficult than projecting waste generation and subject to greater uncertainty ...” For example, the scale of the export of SRF/RDF material from Ireland to waste-to-energy recovery facilities in Europe was unforeseen when making projections about the possible destinations for

waste streams, and highlights the difficulty in predicting where waste will flow in a small accessible globalised economy like Ireland.

According to the ESRI, reliance on landfill is projected to decrease significantly below current levels, with recovery and recycling activities expected to dominate. It anticipates that incineration and other treatment technologies (including composting, refuse-derived fuel manufacture etc.) will play a key role in achieving a number of waste management plan policy targets. The ESRI also notes that its *“figures suggest that, while pre-collection activity (e.g. segregation waste for recycling) is important, increasingly greater capacity will be needed in post-collection treatment of the residual bin.”*

The ESRI projects that the volume of biowaste will increase by an average of 28,000 tonnes per annum to 2030. *“In 2008, 36 per cent of biowaste originated from the food and beverage sector, less than one third from the residential sector and just above one-third from the services sector.”* The focus of Irish policy on three-bin collection systems has largely been to increase the number of households who have a brown bin. However, the ESRI analysis indicates that how the brown bins are being used and how much BMW material is actually being diverted from the residual bin in households with a three-bin service is of equal importance.

The opinion of the ESRI is that having waste management plans that focus on environmental outcomes rather than treatment technologies is key for development and investment in the sector, especially in light of the current difficult trading environment.

#### 15.4.2 Conclusions

The following concluding remarks have been drawn from the review of reports as outlined in the previous sections:

- There are many drivers that can have positive or negative effects on household waste arisings;
- Short-term predictions are likely to be more accurate than long-term ones;
- Sensitivity analysis (high and low growth) around the best estimate figures should be incorporated in waste projections;
- For municipal waste a strong link between economic activity and waste generation can be demonstrated;
- Private consumption has been shown in studies to be a strong influencing driver for municipal waste growth;
- Reduction measures can be applied to the underlying growth rate to take account of prevention initiatives being undertaken; and
- The ESRI estimates that by 2030 municipal waste generation will be 33 per cent higher than current 2010. In the case of households it forecasts that waste generation will be 24 per cent higher than current levels.

## 15.5 MUNICIPAL WASTE PROJECTIONS

This section sets out projected arisings for household, commercial and municipal waste in the CUR. These projections were generated using the waste, economic and demographic data that was available at the time and combined these with reasonable assumptions.

### 15.5.1 Household Waste Projections

The projections for household waste arisings were calculated using two different methods – a population-based scenario (which included a prevention factor) and a consumption-based scenario. The population-based forecast was made by multiplying the following two factors:

1. Connacht Ulster regional population projections (high) each year to 2021; and
2. A factor linking household waste arisings generated per person from 2003 to 2012 to population.

The resulting projections show an initial jump in the data and this was adjusted and brought in line with current trends in household waste per capita to reduce this artificial increase. An alternative scenario using population projections from the DECLG produced negligible differences and was not considered further.

The consumption forecast was made by multiplying the following two factors:

1. Recorded household waste arisings in 2012; and
2. Projected consumption each year to 2020.

Further variant calculations considered combinations of projected growth in the number of households, averaged historic waste arisings per household and projected consumption rates. These calculations were not considered to be sufficiently robust and were discounted. The projections developed are presented in **Table 15-3**.

**Table 15-3: Household Waste Arisings to 2021**

	2013	2015	2017	2019	2021
<b>Consumption Scenario</b>	248,907	253,371	266,182	282,388	297,253
<b>Population Scenario</b>	253,063	257,775	260,691	264,278	267,489

### 15.5.2 Commercial Waste Projections

Due to commercial waste data being unavailable on a regional basis, a basic method of estimating commercial waste for the region was applied. The national commercial waste figure reported by the EPA was apportioned to each region based on the reported level of collection by operators of this stream. The projection for commercial waste arisings was made by multiplying the following factors:

- Estimated national (recovery scenario) GNP to 2021; and
- Factor linking national commercial waste arisings (2003–2012) to GNP;

Similar to the household waste projections, the initial jump in projections was adjusted in line with current trends for this stream. The methodology also considered, but eventually excluded from final projections, 5% increases or 5% decreases in regional population of employees reporting that they live in the region. An alternative projection scenario was considered using national “people at work” data and projected labour force figures. Following consultation with the CSO it was decided that this scenario was unreliable due to the different methods used to determine employment at labour force data. The projections developed are presented in **Table 15-4**.

**Table 15-4: Commercial Waste Arisings to 2021**

	2013	2015	2017	2019	2021
<b>GNP scenario</b>	179,270	196,690	208,830	220,688	232,720

### 15.5.3 Municipal Waste Projections

The municipal waste projections for the region have been compiled using the household and commercial waste forecasts and are presented in **Table 15-5**. This data does not include street cleaning or cleansing wastes which are typically reported as part of the municipal waste stream. These quantities tend to be consistent from year to year. It is forecast that by 2021 the region will generate between 500,000 and 530,000 tonnes of municipal waste.

**Table 15-5: Municipal Waste Arisings to 2021**

	2013	2015	2017	2019	2021
<b>High Range (Consumption &amp; GNP Scenarios)</b>	428,177	450,061	475,012	503,076	529,973
<b>Low Range (Population &amp; GNP Scenarios)</b>	432,333	454,465	469,521	484,967	500,029

## 15.6 IMPACT OF PROJECTED WASTE GROWTH

While considerable effort has been made in developing the waste projection scenarios presented in this plan, the numbers are only as reliable as the data used to develop them, and the projections are subject to the same errors as those which may be present in the source data. Factors such as GNP are difficult to forecast accurately and the further into the future the projections are made, the more unreliable the data will be.

Furthermore, forecasts may be strongly influenced by unforeseen external factors. Human-mediated factors strongly affected the global economy in 2001 and 2007, while a tsunami and volcanic eruption had regional economic effects in 2004 and in 2010 respectively. Any external factors that impact on waste arisings in Ireland will need to be considered as part of the forecasts if they occur during the period of this plan.

For these reasons, it is prudent to consider the projections in the context of the time at which they were prepared (mid-2014) and to expect that waste arisings may fall somewhere within the wide range of values shown. Of course there is also the possibility of significant external factors occurring over the period of the plan that would affect arisings. The annual review and revision of projections conducted during the plan period will indicate which scenario has proved to be the most accurate.

Considering these observations, it is expected that municipal (i.e. combined household and commercial) waste arisings in the Connacht Ulster Region will rise 2–3% per annum over the period. The higher of these rates of increase especially presents a challenge to the Connacht Ulster Region to ensure that adequate collection and treatment capacity is developed to allow the Connacht Ulster Region to achieve targets. Furthermore, the need to progressively treat more of this material in Ireland means that treatment capacity provision needs to increase at rates above those shown, making the targets still more challenging.

## 16 MARKET ANALYSIS AND INFRASTRUCTURE PLANNING

This chapter provides a comprehensive review of the treatment capacity market in the CUR and considers national capacity levels for particular treatment methods. The data used in the market analysis was compiled by the local authorities and the EPA and was the best available information at the time. Authorisation and intake data was sourced for all facilities in the market analysis where available. Lists of the facilities authorised by local authorities and the EPA are given in **Appendices D and E** along with capacity authorised and intake data for each facility. The findings of the market analysis have been used to shape the policies in this chapter, which are for the most part designed to provide clear development signals to operators in the waste market.

### 16.1 LOCAL AUTHORITY WASTE AUTHORISATIONS

**Chapter 12** provided details on pre-treatment and recovery infrastructure in place in the Connacht Ulster Region. Currently there are 217 facilities authorised by local authorities in the region (94 CoR and 123 WFP) to accept and process at least 4 million tonnes of waste.

#### 16.1.1 Market Capacity & Utilisation in the Region (by Group)

As outlined in **Chapter 12**, there are similarities between many classes of waste activities authorised by WFPS and CoRs. Similar classes of activities have been grouped together to enable effective analysis of the treatment capacity market, including an examination of the treatment methods available in the region.

**Table 16-1** presents these groups, which cover the 25 classes of activity as included in the Regulation. It also includes the total authorised capacity by group, and the intake data reported in 2012 which is based on annual returns from each facility.

The grouping of facilities into one of the activity groups was difficult for certain authorisations, specifically those containing multiple classes of activity with each potentially assigned a different capacity threshold. To resolve this, the available data for each facility was reviewed together with other background information on the facility. Based on this assessment the facility was assigned to the group considered to best represent the main activity at the site. This approach was taken to enable a thorough market analysis to be completed. The assumptions made were necessary and practical and ultimately did not alter the findings of the capacity analysis.

**Figure 16-1** graphs the data from **Table 16-1** and includes an estimate of the rate of utilisation for each group of activity based on the reported quantities of waste accepted at facilities in 2012.

The data also shows that 82% of the total authorised tonnage “on paper” was not used in 2012. The two largest groups account for some 91% of authorised capacity –

- Group 1 (mechanical pre-treatment activities) accounts for some 2 million tonnes or 51% of authorisations; and
- Group 4 (land improvement activities) account for some 1.6 million tonnes or 40% of authorisations.

The authorised tonnages per group vary, reflecting the nature of the activities and quantity of waste which can be accepted. High-volume activities include processing of MSW and C&D wastes (Group 1) and also land improvement activities (Group 4) while low-volume activities include the management of materials such as refrigerants (Group 7) and temporary storage activities (Group 8).

**Table 16-1: Details of Authorised Facilities by Waste Treatment Activity**

Group and Description	WFP Classes <sup>66</sup> (No of Facilities)	COR Classes <sup>67</sup> (No of Facilities)	Total authorised tonnage	Tonnes received 2012	Tonnes received 2012 (% of available capacity)
<b>G1 - Store/transfer of waste incl. MSW</b>	1,7,10 (53)	1,7,10 (17)	2,054,596	95,721	5%
<b>G2 - Metals and ELVs</b>	4,12 (46)	- (10)*	190,515	74,400	41%
<b>G2a – Other waste vehicles</b>	2 (3)	3 (0)	68,000	22	0.02%
<b>G3 - WEEE, Batteries</b>	3,9 (0)	4 (1)	Not specified	0	-
<b>G4 - Land improvement</b>	5,6 (8)	5,6,9 (48)	1,634,705	519,237	32%
<b>G5 - Biological</b>	8 (4)	11,12 (2)	41,050	12,110	30%
<b>G6 - Organic landspread</b>	-	13 (0)	No facilities registered in the region		
<b>G7 - Non-haz &amp; Refrigerant Wastes</b>	11 (9)	14 (0)	60,000	6,254	10%
<b>G8 - Temp. storage</b>	-	2 (16)	15,854	611	4%
<b>Total</b>	<b>12 classes</b>	<b>13 classes</b>	<b>4,064,720</b>	<b>708,355</b>	<b>17%</b>

\*Some ATFs authorised with CoR although no classes exist.

Group 1 activities represent the largest treatment capacity available in the region. This grouping has the largest number of facilities (70 of a total of 217) and primarily includes mechanical pre-treatment for inert and municipal wastes. The percentage of tonnage used for this grouping is low relative to the capacity authorised. However, the capacity authorised for a facility does not necessarily represent the current operational or available capacity of a facility. The issuing of future authorisations by local authorities must take account of the existing scale of supply of authorised and available capacity as well as needs of the market.

<sup>66</sup> Under Part 1 of Third Schedule, Waste Management (Facility Permit and Registration) Regulations, S.I. No. 821 of 2007 (as amended).

<sup>67</sup> Under Part 2 of Third Schedule, Waste Management (Facility Permit and Registration) Regulations, S.I. No. 821 of 2007 (as amended).

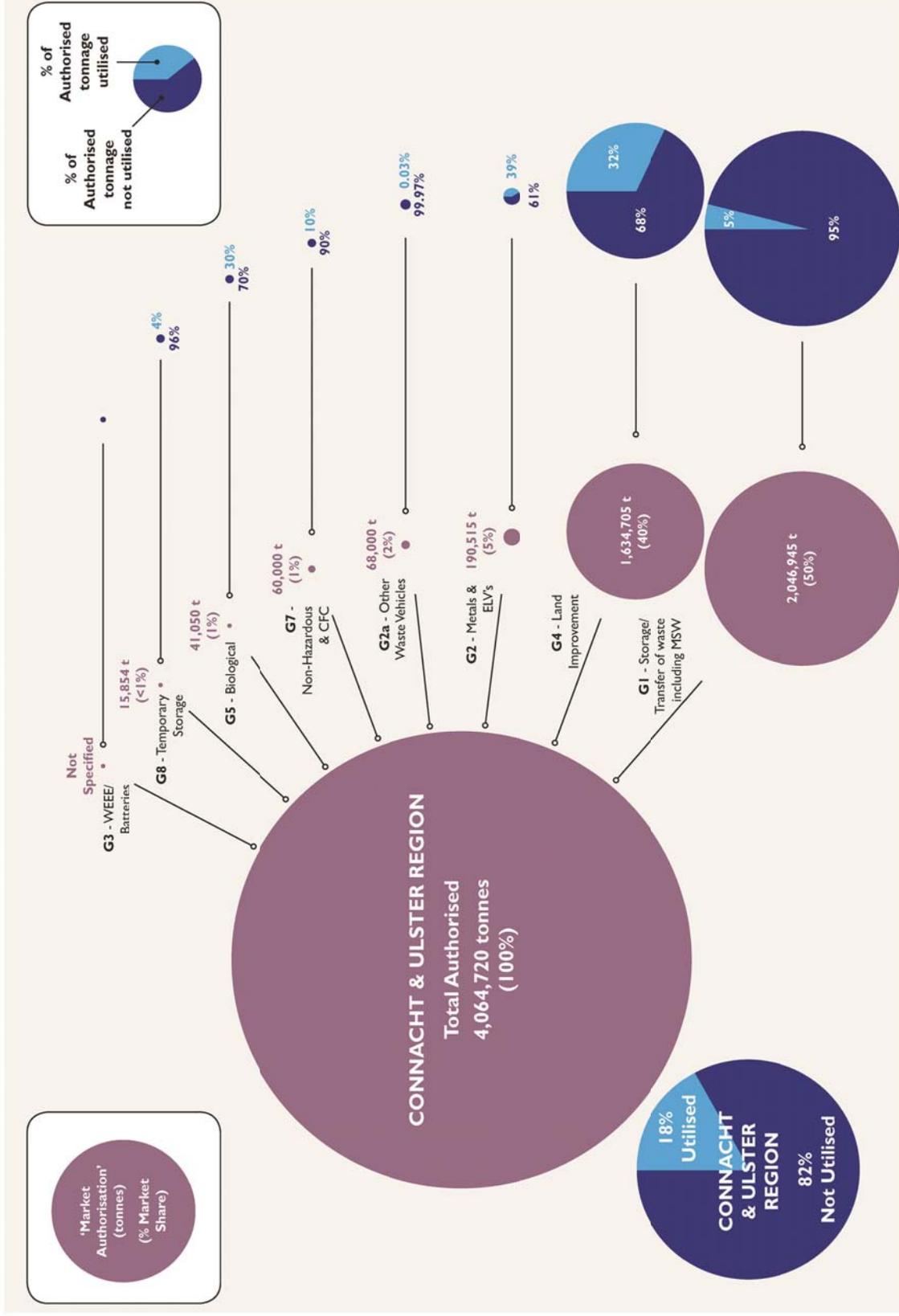


Figure 16-1 Authorisation and Utilisation of Active Treatment Capacities (Grouped)

Group 2, which includes activities handling metal and ELVs, has the highest rate of utilisation. In this group authorisations issued by the local authorities are in many instances specified not in tonnage terms but in terms of number of vehicles. In this grouping 25 facilities were not allocated any authorisation so there is an underestimation of available capacity.

Group 2a relates to vehicles that are not ELVs and there are three authorisations in the region; however, two of the three facilities commenced operations at the end of 2012, reflecting the scale of intake waste.

The authorisation for Group 4 (land improvement activities) is difficult to present as an annual available tonnage as authorisations for this group are often issued as a single quantity over the lifespan of the site (as opposed to an annual quota). To address this, an annual authorised tonnage was estimated taking account of the total authorisation issued for the site. The 1.6 million tonnes is best described as the available market capacity. The overall rate of utilisation for this group is low, largely due to low levels of activity across the State in the construction and building sector. There are signs of recovery in the construction market and this trend is expected to continue on a steady basis. This will likely lead to higher demand for outlets which can recover soil and stone materials. Future planning and authorisation of backfilling sites must take account of the location of existing capacities and the scale of available capacity across the region to ensure there is adequate, appropriate and balanced supply.

There is only one authorisation active under Group 3 in the region, in Galway County Council, although no data was available.

Group 5 covers facilities authorised to biologically treat biowaste, agri-sludges and other organic materials. There are six facilities in the region and the rate of utilisation in 2012 was recorded at 30%. This is considered to be under-estimating the rate of utilisation as two of the five facilities did not submit an AER for 2012. A shortage of capacity particularly for the treatment of biowaste would be a concern given the need to divert increasing quantities of biowaste from the residual waste stream.

No facilities are registered in the region under Group 6.

Group 7 is made up of facilities that store non-hazardous and refrigerant wastes and are low level activities in the region.

Group 8 in the region is made up of COR facilities only and the activities cover the storage of farm plastics. This is again a low-level activity.

### **16.1.2 Market Capacity Analysis and Findings**

Further analysis on the treatment capacity and rate of utilisation by group has been carried out to identify any consistent trends. On paper the region appears to have an adequate supply or, for specific groups, an over-supply of authorised capacity for many treatment activities. However, the capacity authorised by the authorities for a facility does not necessarily represent the operational or available capacity on the ground and this apparent gap needs to be taken into account. The 217 facilities recorded an intake of just over 708,000 tonnes of waste in 2012, which represents a regional capacity utilisation rate of 17% of the authorised “on-paper” capacity.

**Table 16-2** presents on a group basis the number of facilities and their capacities categorised according to the rate of usage at each site relative to the authorised capacity. The available intake data for each facility was used to decide on the categorisation.

**Table 16-2: Rate of Usage of Authorised Tonnage in Each Grouping**

Group and Description	Authorised Capacity (No. of Facilities) (tonnes)	No AER submitted in 2012 (tonnes)	No Authorisation Specified (tonnes)	Zero Intake 2012 (tonnes)	<50% capacity (tonnes)	>50% capacity (tonnes)
<b>G1 – Store/transfer of waste incl. MSW</b>	(70) 2,054,596	(7%) 165,000	0% (0t)	45% 1,054,976	37% 794,345	11% 40,275
<b>G2 – Metals and ELVs</b>	(56) 190,515	<b>37%</b> 35,490	23% (0t)	16% 13,080	13% 67,140	11% 74,805
<b>G2a – Other waste vehicles</b>	(3) 68,000	0%	0% (0t)	67% 18,000	33% 50,000	0%
<b>G3 – WEEE, Batteries</b>	Not specified	–	–	–	–	–
<b>G4 – Land improvement</b>	(56) 1,634,705	2% 25,000	0% (0t)	41% 680,375	33% 454,980	34% 474,350
<b>G5 – Biological</b>	(6) 41,050	<b>33%</b> 10,050	0% (0t)	0%	50% 21,000	17% 10,000
<b>G7 – Non-haz &amp; CFC</b>	(9) 60,000	<b>22%</b> 15,000	0% (0t)	22% 7,500	44% 30,000	11% 7,500
<b>G8 – Temp. storage</b>	(16) 15,854	6% 1,000	0% (0t)	13% 1,854	81% 13,000	0%
<b>Total</b>	<b>4,064,720</b>	<b>251,540</b>	<b>0</b>	<b>1,775,785</b>	<b>1,430,465</b>	<b>606,930</b>

**Table 16-2** shows there is significant capacity authorised in the region that is not currently built or available at the level authorised. The proportion of authorised but unused/under-used capacity may be due to a number of factors, such as:

- Temporary closure of treatment facilities or openings delayed in response to poor market conditions;
- Low levels of economic activity in particular sectors of the wider economy impacting on waste generation and the volume accepted at waste treatment facilities;
- Developers seeking and securing authorisations and not following through with the development due to changing market conditions, changes in business strategy or financial factors for individual companies;

- Built or available capacity at facilities being lower than the authorisation issued for the operation;
- Local authorities authorising capacity beyond the operational capability of the facility; and
- Under-reporting of waste intake as a result of facilities not submitting an AER or intake data, or reporting poor-quality data.

Analysing the intake data further, it is noted that a significant number of facilities reported zero intake for 2012 or failed to return an AER. The data shows the highest percentages for non-compliance with no AER being submitted include Group 2 (Metals and ELVs), Group 5 (Biological) and Group 7. With this in mind, the utilisation rates of the group activities are likely to be under-estimating activity at facilities in the region. The degree of underestimation is not clear, however, and the local authorities do not expect the missing data to significantly change the overall market findings.

## 16.2 MARKET ANALYSIS FOR EPA AUTHORISATIONS

The waste activities authorised by the EPA include waste disposal and recovery activities such as landfills, transfer stations, materials recovery facilities, mechanical treatment facilities, thermal recovery facilities and hazardous waste disposal facilities.

The EPA also issues CoRs to local authorities for smaller scale waste activities as listed in the Third Schedule Part II of the Waste Management (Facility Permit Registration) Regulations, S.I. 821 of 2007. These are primarily bring facilities (CASs 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 handling and treatment chain.

### 16.2.1 Overview of Waste Licensed Facilities in the Region

The EPA has supplied data to the local authorities relating to licensed waste activities in the region. There are 31 facilities in the region which hold a waste licence although not all of these facilities are currently active. The status of the waste licences and applications was categorised by the EPA and further reviewed by the local authorities.

The status of the 31 licences reported in the region is shown in **Table 16-3**. In total these licensed facilities have a gross authorised capacity tonnage of 1.8 million tonnes (although it is unlikely that 58% will become active). A facility can be licensed for multiple waste treatment activities, with distinct treatment methods often being controlled by separate capacity thresholds. The local authorities have attempted to take this into account when analysing the capacity data.

The data in the table shows the scale of licensed capacity in the region but indicates that only 42% is currently active. Twenty-five facilities were active in 2012 but since that time a further 14 landfills have closed in the region and so have been included in the closed category (including one inert landfill). In addition the five inactive sites all refer to landfills while many old landfill sites have reached their capacity and are now closed. In total 1 million tonnes of licensed capacity is categorised as inactive or as closed. There is one authorised facility that has not commenced, which also relates to a proposed landfill site in County Donegal which was refused planning by An Bord Pleanála. The inactive and closed facilities are unlikely to be active in the near future and have not been further considered as part of the market analysis.

**Table 16-3: Status and Tonnage of All Current Waste Licence Activities and Applications**

Activity Status	On-Going	Pending		Unlikely		Totals
	Active	Authorised But Not Commenced	Application Stage	Inactive	Closed	All Facilities
Number of facilities	11	1	-	5	14	31
Authorised tonnage	758,780	25,500	-	228,500	785,570	1,798,350
% of the total	42%	2%		56%		100%

The 11 active facilities have a combined licensed capacity of 758,780 tonnes in the region. Waste licences granted by the EPA typically specify the principal class of waste activity that is undertaken at the facility in question. These activities are set out in the Waste Management Act 1996, with disposal activities (D-codes) in the Third Schedule and recovery activities (R-codes) in the Fourth Schedule. Both the Third and Fourth Schedules also contain pre-treatment disposal and recovery activities.

The principal classes of activity at the active waste licence facilities in the region are outlined in **Table 16-4**. On paper, pre-treatment facilities make up the highest portion of active facilities (77%) in the region. The table also includes an indication of which tier on the hierarchy the facilities belong to. This classification has been determined by reviewing the facilities, and the local knowledge of these facilities, as opposed to relying on the consented recovery or disposal codes of the licence, which can be misleading.

**Table 16-4: Summary of Active Facilities and Treatment Capacities**

Principal Class of Activity (Waste Treatment Code <sup>68</sup> )	Facility No.	Authorised Total Waste (tonnes)	Authorised MSW (tonnes)	Treatment by Hierarchy
D1/D5	2	84,100	60,500	Disposal
D13*	4	274,690	104,490	Pre-Treatment
D14*	1	95,000	22,500	Pre-Treatment
D15*	1	166,000	73,000	Pre-Treatment / Recycling
R5	1	90,000	N/A	Other Recovery
R12*	2	48,990	31,000	Pre-Treatment
<b>Totals</b>	<b>11</b>	<b>758,780</b>	<b>291,490</b>	

\*Pre-treatment.

<sup>68</sup> For a full list of the waste recovery and disposal codes refer to the explanatory document hosted by the EPA [http://www.epa.ie/pubs/forms/wreport/nwr/EPA\\_explanation\\_of\\_Recovery\\_and\\_Disposal\\_Codes.pdf](http://www.epa.ie/pubs/forms/wreport/nwr/EPA_explanation_of_Recovery_and_Disposal_Codes.pdf)

The capacity information provides a comprehensive overview of the treatment market in the region showing active capacity and some of the key findings are outlined:

- Capacities covered by pre-treatment codes make up over 584,680 tonnes in the region or 77% of the active market capacity;
- Landfill capacities are over 84,100 tonnes or 11% of the active market capacity. The situation with landfill has changed significantly since 2012, with six facilities actively accepting MSW in 2012. At the time of writing there were a total of two landfills accepting MSW in operation in the region; and
- Treatments defined by code R5 are primarily soil recovery sites and one such facility exists in the region, which is a quarry site that accounts for 12% of the total market capacity at 90,000 tonnes.

For the active facilities, utilisation data was available for waste materials recovered at the sites and wastes transported out of each facility. This information was provided from different EPA data registers<sup>69</sup> and is presented in **Table 16-5**. Analysing the rate of utilisation at the active facilities provides further insights into the type of treatments which are prevalent in the region.

**Table 16-5: Waste Handled at Active Waste Licensed Facilities 2012**

Treatment Code <sup>68</sup> in EPA Licence	Number facilities	Authorised Total Waste (tonnes)	Authorised MSW (tonnes)	Waste sent offsite <sup>68</sup> 2012 (tonnes)	MSW sent offsite <sup>68</sup> 2012 (tonnes)	Landfilled (tonnes)	Recovered onsite (tonnes)
D1/D5	2	84,100	60,500	136,442	59,284	53,799	-
D13*	4	274,690	104,490	86,305	80,508	-	-
D14*	1	95,000	22,500	No AER	No AER	-	-
D15*	1	166,000	73,000	75,503***	73,752**	-	1,045***
R5	1	90,000	N/A	N/A	N/A	-	37,289
R12*	2	48,990	31,000	26,953**	24,374**	-	-
<b>Totals</b>	<b>11</b>	<b>758,780</b>	<b>291,490</b>	<b>325,203</b>	<b>237,918</b>	<b>53,799</b>	<b>38,334</b>

\*Pre-treatment Codes.

\*\*One of the two facilities intake data is for 2013 as 2012 was unavailable.

\*\*\*2013 intake data.

Galway City Council's Carrowbrowne facility (Closed Landfill) was accepting organic waste for composting in 2012. However, since 2013 composting operations have ceased at this site and it hasn't been included in the table. 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. Barna Waste is authorised to accept 20,000–40,000 tonnes of biological waste and 1,045 tonnes was recovered on site in 2013. The one soil recovery facility in the region recovered 37,289 tonnes (soil and stones) on site in 2012.

<sup>69</sup> Data from EPA Pollutant Release and Transfer Register, which provides the total quantity of wastes sent off-site from waste licensed facilities, and National Waste Report Registers.

The EPA NWR 2012 shows that the two landfill facilities that are currently active in the Connacht Ulster Region landfilled 53,799 tonnes of MSW in 2012.

Of the eight facilities authorised for the pre-treatment of waste in the region, intake data is available for seven, with a 39% utilisation rate.

### 16.3 MARKET ANALYSIS CONCLUSIONS

An extensive review and analysis of local authority and EPA authorisations of waste facilities in the region has been undertaken. The authorisations issued by the regulatory bodies differ in scale, complexity, and their potential risk to the environment. This extends to the different approaches taken by authorities in consenting waste activities and capacities. The regulations in place which describe the type of activities requiring authorisation add a further layer of complexity to the situation.

The design of the current regulatory and authorisation system makes it difficult to combine local authority and EPA authorised capacities to allow a seamless analysis of the market. Each authorisation market has been examined on its own merits with the analysis structured to allow an overview of the overall market to be formulated. This section draws conclusions from the findings of each analysis and aims to provide clear signals regarding the planning and development of future waste treatment facilities. The following points set out the critical findings:

- The Connacht Ulster Region has just under 5 million tonnes of active treatment capacity. The active capacity is available for treatment of all waste streams, and waste being accepted at these facilities is not necessarily generated within the region. Nevertheless the authorised treatment capacity in the region is significant, in terms of tonnage, in its own right; however, when considered with treatment capacity in the other regions it suggests that the supply of particular waste treatments is not adequate for some streams (e.g. recovery of MSW and biowaste) while other treatment capacity appears to be in plentiful supply (e.g. land improvement recovery of C&D wastes );
- The geography of the region and the supply of balanced waste treatment capacity requires improved coordination between local authorities and the EPA to ensure the region is adequately serviced by various treatment methods and that regional imbalances are avoided where possible. There is need to consider remote parts of certain counties and areas with low population density and how these are being serviced. The selection of appropriate sites for any proposed waste activity is essential so that potential impacts on communities and environmental receptors are avoided where possible.
- The compilation of authorised treatment capacity and the rate of utilisation on paper is a useful exercise, describing for the first time a sense of the scale of the treatment market in the region. However, the difference between authorised and available capacity is not necessarily a true reflection of the vitality of the market as available operational capacity is often lower than the authorised capacity as issued;
- The high number of active local authority authorised facilities which are not submitting an annual environment report needs to be addressed in order to keep market data up to date;
- The difference in capacity authorisations at facilities and available operational capacity is significant and needs to be addressed and attempts made to reconcile these in the future. The total authorised tonnage allocated by a local authority to a facility is determined by either the legislative maximum for the relevant class of activity or by the tonnage sought by the developer. Many tonnages authorised appear to have been allocated according to

maximum tonnage allowable for that class under the regulations. This approach needs to be reconsidered as the rates of utilisation indicate that many facilities are not handling the authorised amount. This misrepresents the actual treatment capacity required as well as adding substantially to the overall market capacity on paper. This approach not only sets a precedent but may restrict the development of future facilities in a market that appears to be adequately supplied or even over-supplied;

- All authorisations should have an overall authorised capacity specified in tonnage terms. A capacity breakdown (by waste stream) should also be provided for those facilities allocated two or more classes of activity. It would be preferable if in future the authorised capacity was more closely aligned to the planned or built operational capacity. The phasing of capacity increases, which are conditional on specific site developments, is an approach used by the EPA and will be considered by local authorities in the future as appropriate; and
- The complexity of the authorisation system is making analysis of the treatment market complicated and difficult. This is compounded by the lack of direct association with the waste hierarchy. This connection needs to be introduced into future consents issued by local authorities and the EPA as the principles of the hierarchy remain fundamental to the plan and infrastructure development. The hierarchy provides a clear order to waste treatments and is a principal policy tool for the sector.

## Policy

The analysis undertaken as part of the plan has revealed inconsistencies in the manner in which local authorities in the region are issuing Waste Facility Permits and Certificates of Registration. This includes the allocation of treatment capacity being authorised for proposed activities. During the plan period the local authorities will work together to bring greater consistency to the issuing of authorisations including standardising documents. The approach will mirror the system in place for the issuing of collection permits and formulating permit conditions. A greater level of consistency will ensure that all operators in the market are treated equally and will facilitate more effective enforcement of the sector. Delivering on this policy will have a positive long-term impact on the environment and society.

### Policy:

- F4. Improve the consistency of local authority waste authorisations and conditions issued to waste collectors and facility operators.

## 16.4 POLICIES

Taking on board the findings of the market analysis and conclusions, the following policy recommendations have been made in relation to the future development of waste infrastructure in the region. They are targeted at the lead authorities, local authorities and operators in the waste market and are designed in accordance with the tiers of the waste hierarchy.

The local authorities in the region will ensure that any project and associated works, individually or in combination with other plans or projects, are subject to Appropriate Assessment Screening (AAS) to ensure there are no likely significant effects on the integrity (defined by the structure and

function) of any European site(s) and that the requirements of Article 6(3) and 6(4) of the EU Habitats Directive are fully satisfied.

Where a project is likely to have a significant effect on a European site or there is uncertainty with regard to effects, it shall be subject to AAS. The project will proceed only after it has been determined that it will not adversely affect the integrity of the site or where, in the absence of alternative solutions, the plan/project is deemed imperative for reasons of overriding public interest, all in accordance with the provisions of Articles 6(3) and 6(4) of the EU Habitats Directive.

#### 16.4.1 Pre-Treatment Infrastructure

The European Commission has provided guidelines<sup>70</sup> and explanatory descriptions of key definitions and articles in the WFD. A pre-treatment activity is defined as *“the processing of waste which still results in a waste which subsequently undergoes other waste recovery or disposal treatment”*.

Pre-treatment activities include operations like “dismantling, sorting, crushing, compacting, palletising, drying, shredding, conditioning, repackaging, separating, blending or mixing if the material or substance resulting from such operations is still waste”. These activities do not sit on any particular rung of the waste hierarchy and instead can be regarded as “precursors” to specific types of treatment.

Pre-treatment activities are not restricted to particular waste streams and the operations listed cover activities in the region which handle and pre-treat many different types of wastes.

- Municipal wastes (household and non-household);
- Commercial waste (non-municipal);
- Packaging wastes;
- Construction and demolition wastes;
- Skip wastes, bulky wastes including metals;
- Industrial wastes;
- End-of-life vehicles;
- Waste electrical and electronic wastes;
- Waste batteries; and
- Hazardous wastes.

Pre-treatment capacity is prevalent in the region and accounts for over 2.6 million tonnes of the 4.7 million tonnes of authorised capacity. Pre-treatment facilities represents 55% of the authorised treatment capacity with rates of utilisations at existing facilities appearing to indicate an adequate supply (or potential supply) remaining at existing sites. As noted previously in this chapter, the available treatment capacity at pre-treatment facilities may be less than the treatment capacity authorised by the local authorities and the EPA.

The local authorities, mindful of the quantity of authorised pre-treatment capacity in the region, recognise the need for better co-ordination between the lead authority, local authorities in the region and the EPA.

<sup>70</sup> European Commission, Guidance on the interpretation of key provisions of Directive 2008/98/EC on waste.

Consent for the greater part of the existing infrastructure was granted when landfill was the primary means by which residual wastes were treated. Excluding landfills, much of the authorised waste capacity in the region is effectively pre-treatment, bulking of waste, possibly with some degree of mechanical treatment, in advance of transferring off-site for final treatment elsewhere.

Setting aside the need for pre-treatment activities to prepare waste for further treatment, in Ireland or abroad, there is a need to take stock of existing authorised and available capacities. Decisions on future facilities need to be made in full knowledge of the existing market and will focus on the quality of pre-treatment activities being proposed. The underlying strategic approach of the plan aims to improve the quality of waste along the entire treatment supply chain. Pre-treatment capacities are typically the first destination for wastes and are vital in extracting and generating high quality outputs for onward treatment.

### Policies:

- E1. Future authorisations by the local authorities, the EPA and An Bord Pleanála of pre-treatment capacity in the region must take account of the authorised and available capacity in the market while being satisfied the type of processing activity being proposed meets the requirements of policy E2.
- E2. The future authorisation of pre-treatment activities by local authorities over the plan period will be contingent on the operator demonstrating that the treatment is necessary and the proposed activities will improve the quality and add value to the output materials generated at the site.

Consideration of pre-treatment authorised and available capacity at existing sites in the region prior to authorisation of future pre-treatment activities may have a positive effect on the environment in terms of potentially reducing the scale of development of new greenfield sites.

#### 16.4.2 Public Civic Amenities and Bring Centres

The network of local authority civic amenity facilities and bring banks is a valuable part of the collection infrastructure in the region and helps to serve the growing population. In 2012 over 33,127<sup>71</sup> tonnes of waste was collected using this infrastructure.

Bring banks can be difficult to retain in particular locations due to issues such as noise, illegal dumping and vandalism. To address this the local authorities intend to prepare and include specific conditions requiring the provision of such bring facilities with planning permissions for relevant developments. Developers of new residential and commercial developments may have conditions included in their planning permissions that require them to install bring facilities as part of the development infrastructure.

Civic amenity facilities are important pieces of infrastructure for the collection of non-hazardous and hazardous wastes. In the NHWMP the EPA has identified the potential for these facilities to accept

<sup>71</sup> National Waste Report 2012, EPA (2014).

hazardous waste from small businesses and local authorities will consider whether this is possible. The collection of hazardous farm waste at local marts has been piloted recently by the EPA, together with other stakeholders, including local authorities. The local authorities will continue to support these collection events during the plan period.

### Policies:

- E3a. The local authorities in the region will maintain and develop their existing networks of bring infrastructure (e.g. civic amenity facilities, bring banks) to facilitate the recycling and recovery of hazardous and non-hazardous municipal wastes.
- E3b. The Plan supports the development by the private sector of public bring infrastructure (e.g. civic amenity facilities, bring banks) subject to appropriate statutory approvals and in line with appropriate environmental protection criteria.
- E4. The local authorities may include as a condition of planning that developers of commercial and large-scale residential developments provide bring facilities to serve occupants and residents.
- E5. Local authorities will explore the possibility of accepting hazardous waste at existing civic amenity facilities from small businesses, which is similar in nature to household hazardous wastes currently received. A charge may be introduced for such a service.
- E6. The local authorities may require waste developers seeking a waste facility permit to develop a Class 10 waste treatment activity, as defined by the Third Schedule: Part I of the Waste Management (Facility Permit and Registration) Regulations 2007 (as amended), to provide bring facilities for the acceptance of non-hazardous wastes from members of the public and businesses.
- E7. The local authorities in the region will continue to work with the EPA and other key stakeholders to support the collection of hazardous farm waste from designated bring centres e.g. marts.

### 16.4.3 Disposal

There has been a significant shift away from landfill in the region (and nationally) with the number of active facilities accepting non-hazardous municipal waste falling to two (March 2015). The plan is clear in its intention to follow European and national policy and continue to move waste away from landfill. The local authorities in the region support this policy ambition and are proposing to revise collection permit conditions to eliminate the direct disposal of unprocessed<sup>72</sup> residual waste to landfills (see policy action A.1.1 in **Section 19.2**).

<sup>72</sup> Unprocessed residual waste means residual municipal waste collected at kerbside or deposited at landfill/CA sites/transfer stations that has not undergone appropriate treatment through physical, biological, chemical or thermal processes including sorting.

The local authorities anticipate that there will be an ongoing need for landfill capacity during the plan period for processed residual wastes. There is also a need to maintain a contingency supply, in response to potential situations which pose a risk to the health and well-being of citizens, livestock and the environment.

In addition there is a need for capacity to address the treatment of hazardous wastes which cannot be recycled or recovered. The EPA has identified<sup>73</sup> the need for up to 277,000 tonnes of disposal capacity for hazardous waste materials over the period 2014–2019. This is a national capacity need and the EPA recognises the value of developing existing landfill sites, including those which are currently closed or uncommenced, for the disposal of certain hazardous wastes, i.e. asbestos.

A number of local authority owned landfills in the region closed during the period of the last plans in advance of their lifetime capacity being reached. Significant investment has been made in developing these sites and substantial infrastructure has been put in place at each site to provide access, landscaping and management of environmental emissions. Many sites also have connections to the electricity grid, which are valuable assets.

The local authorities in the region are keen to explore the potential to develop alternative activities at closed landfill sites which optimise the land use and provide a revenue supply to the authority to help with on-going management costs at local authority waste facilities.

Finally, in accordance with an intergovernmental agreement in 2008, the repatriation of waste, which originated in Ireland but which was illegally disposed of in Northern Ireland, in the early 2000s is now under way. A co-operative agreement provides a template for dealing with this historical issue, which was endorsed by Ministers from both jurisdictions and by the EU Commission. Under the agreement, the costs of disposing of the waste will be met by the Irish Government together with 80% of the costs of removing the waste from Northern Ireland.

In April 2012, Dublin City Council's NTFSO established a Framework Agreement for licensed waste disposal facilities in the Republic of Ireland in order to provide a service for the disposal of waste excavated from sites in Northern Ireland. Its duration is four years, and eight landfills are on the framework located within the three regional waste areas.

Currently, however, only four landfills on the framework remain open; three are located in the Eastern-Midlands Region and the fourth site is in the Connacht Ulster Region. There are seven sites remaining in Northern Ireland with an estimated 120,000 tonnes of mixed municipal waste to be repatriated for disposal over the next few years.

Due to security issues, on-site segregation of waste is not possible – other than the removal of tyres, metals and batteries. All waste repatriated must go for disposal. The work is progressing at a rate of two to three sites per year and is wholly dependent on funding from DECLG.

Work is due to commence at some of the larger sites and is expected to take longer than previous operations. If a replacement framework is required, NTFSO as the Competent Authority will be responsible for its establishment. The waste plan supports the repatriation of this waste to landfills in the region.

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<sup>73</sup> National Hazardous Waste Management Plan, 2014 –2020, EPA (2014).

### Policies:

- E8. The waste plan supports the development of disposal capacity for the treatment of hazardous and non-hazardous wastes at existing landfill facilities in the region subject to the appropriate statutory approvals being granted in line with the appropriate environmental protection criteria.
- E9a. The on-going availability of disposal facilities for non-hazardous municipal residual wastes in the region will be required during the plan period. The local authorities consider there is no need to provide additional disposal facilities for residual wastes over and above the existing authorised (i.e. operational, inactive or uncommenced) facilities in place.
- E9b. The waste plan supports the need for on-going disposal capacity to be developed for on-site generated non-hazardous/hazardous industrial waste over the plan period.
- E10. The waste plan recognises the need for on-going disposal capacity to be available in response to events which pose a risk to the environment and/or health of humans & livestock. The local authorities of each region will monitor available contingency capacity annually.
- E11. The plan supports the consideration of appropriate alternative future land uses at authorised inactive landfills (un-commenced; permanently-closed; or temporarily-closed) - subject to amendments of existing approvals being put in place. Any development proposals shall be subject to Appropriate Assessment Screening in accordance with the requirements of the EU Habitats Directive to ensure protection and preservation of the Natura 2000 Network.

#### Potential activities include:

- Waste treatment activities including pre-treatment, thermal recovery, biological treatment, reprocessing or preparing for re-use;
  - On-site temporary storage of waste and materials;
  - Co-location of utility services such as wind farms or other energy generating activities;
  - Development of public and recreational amenities;
  - Co-locating recycling / reuse waste enterprises on site; and
  - Resource mining;
  - Contingency capacity for crisis events such as risks to the environment and to the health of humans and livestock
- E12. The waste plan supports the repatriation of residual waste illegally disposed in Northern Ireland to licensed disposal facilities appointed to a framework set up on behalf of the State by the National Trans Frontier Shipment Office.

It is recommended that prior to policy E11 being implemented a feasibility study or similar study is undertaken of the closed or uncommenced landfills in the region to determine what activities may

or may not be appropriate for consideration at each site based on site and surrounding sensitivities. It is acknowledged that the policy specifically refers to consideration of the Natura 2000 network and this is considered positive. The feasibility study should also consider environmental sensitivities under the wider environmental scope of SEA.

For policy E12, it is recommended the NTFSO liaise with the relevant authorities in Northern Ireland to ensure there is a management plan in place to prevent the spread of invasive alien species associated with the repatriation of waste. The requirement for Appropriate Assessment screening would also apply to repatriation projects.

#### 16.4.4 Recovery – Backfilling

Backfilling activities (of inert waste), which meet the recovery definition and are in compliance with Articles 4 and 13 of the WFD, sit on the other recovery tier of the waste hierarchy. Local authorities in the region authorise such activities through the award of WFPs and CoRs. Similarly the EPA authorises significant backfilling of inert waste at large sites such as old quarries for restoration purposes.

Backfilling activities make up a significant treatment capacity in the region at present. Local authority and EPA authorised sites have a combined capacity of over 1.6 million tonnes. Local authority authorised sites generally have a shorter lifespan than EPA licensed sites and operations can often cease at these sites within the life of the permit, i.e. five years. EPA authorisations cover more substantial operations with a longer lifetime capacity. Utilisation of active local authority capacity at backfilling/land improvement sites was 32% in 2012. This relatively low level of utilisation reflects the depressed activity in the construction sector in Ireland and as a result supply of capacity exceeding current demand. Activity in the sector is expected to increase over the plan period as economic recovery continues to build nationally.

#### Policies:

- E13. Future authorisations by the local authorities, the EPA and An Bord Pleanála must take account of the scale and availability of existing back filling capacity.
- E14. The local authorities will co-ordinate the future authorisations of backfilling sites in the region to ensure balanced development serves local and regional needs with a preference for large restoration sites ahead of smaller scale sites with shorter life spans. All proposed sites for backfilling activities must comply with environmental protection criteria set out in the plan.

In the face of increased demand for backfilling authorisations there is a need for better coordination between local authorities in the region. This is to ensure that facilities are planned and developed at suitable sites and do not present a risk to European designated sites and existing biodiversity and habitats. It is recommended that the lead authority liaise with relevant stakeholders (including the EPA and the DAHG) to ensure appropriate measures are in place for the control and spread of invasive alien species at backfilling sites in the region where necessary.

### 16.4.5 Recovery – Thermal Recovery

Thermal recovery activities,<sup>74</sup> where the principal use of the waste is as a fuel to generate energy, sit on the other recovery tier of the waste hierarchy. The authorisation of these activities is the remit of the EPA. These facilities typically operate on a national market basis, accepting waste from all parts of Ireland.

The CUR does not contain any active thermal recovery activities for the treatment of municipal type wastes and at present the EMR is the only region in the country to have this type of treatment available. Thermal capacity is currently under construction at a cement kiln in the CUR (Q3 2014). **Table 16-8** provides a summary of the MSW thermal recovery capacity, both active and pending. In the State there are six facilities fully authorised (i.e. with planning permission and waste authorisation granted<sup>75</sup>) to accept 1,227,875 tonnes of MSW. Three of the six facilities are currently active. The intake levels at active facilities are high, with the existing waste-to-energy facility operating at capacity. The tonnage accepted at the cement kilns is growing.

The cement kilns accept solid recovered fuel (SRF) and refuse-derived fuel (RDF) type wastes, which are generated from municipal and construction sources, as well as other wastes such as meat and bone meal, chipped tyres and high calorific fuels. These alternative fuels replace the use of fossil fuels in the cement production process. The extent of this replacement depends on the quality of the SRF/RDF (and the moisture and chlorine content of the materials); the cement kilns are working with producers of SRF in the waste industry to agree specifications for product quality to facilitate increased rates of fossil fuel replacement. As outlined in **Table 16-8**, approximately 140,000 tonnes of SRF was used in 2013, and it is estimated that this will rise to 150,000 tonnes in 2015. It is anticipated that this could rise even further with additional capacity currently under construction.

The existing capacity is viewed by the local authorities as addressing national needs with respect to the recovery of residual municipal wastes and other waste streams (as described). Ireland's policy is to become self-sufficient in relation to the recovery of municipal waste and progress is being made in this area. The State is exporting a significant quantity of residual waste, which is poor use of a valuable resource from a self-sufficiency perspective. Over the lifetime of this plan it is expected that the capacity active in the market will increase substantially.

The need for future treatment capacity requires careful consideration and must take into account predicted waste growth, growing recycling rates, future targets, the continued move away from landfill and the conversion of pending capacity into active treatment. The development of future thermal recovery facilities will be viewed as national facilities addressing the needs of the State and will not be defined by regional markets alone. A coordinated and consultative approach is required for such authorisation between the regions and national authorities, i.e. the EPA and An Bord Pleanála.

The spatial distribution of facilities nationally is potentially imbalanced with all active and pending facilities located in one region. Despite the strong road network linking regional urban centres to the capital, there is a need to consider the spatial distribution of thermal recovery capacity in the State when authorising future facilities.

<sup>74</sup> Such as incineration (waste-to-energy), co-incineration (cement kilns), pyrolysis and gasification.

<sup>75</sup> Only facilities which have planning permission and a licence from the EPA have been considered in this table, as the timeframe involved in obtaining consent for these types of facilities is considerable.

A national thermal recovery capacity need of 300,000 tonnes is proposed (refer to policy E15a) over and above the active and pending capacity totals in **Table 16-8**. Thermal recovery activities, where the principal use of the waste is as a fuel to generate energy, sit on the other recovery tier of the waste hierarchy. The authorisation of these activities is the remit of the EPA. These facilities typically operate on a national market basis, accepting waste from all parts of Ireland.

**Table 16-8: Active and Pending Capacity for the Thermal Recovery of MSW**

Thermal Recovery Activity (Number of facilities)	Active (Tonnes)	Pending (Tonnes)	Total (Tonnes)	Intake (2013)
<b>Waste-to-Energy (2)</b>	220,000 <sup>76</sup> (1)	600,000 <sup>77</sup> (1)	820,000	206,000
<b>Cement Kilns (3)</b>	215,000 (2)	127,875 (1)	342,875	140,000 <sup>78</sup>
<b>Pyrolysis (1)</b>	-	65,000 (1)	65,000	-
<b>Total (6)</b>	<b>435,000</b>	<b>792,875</b>	<b>1,227,875</b>	<b>346,000</b>

This need has been determined by analysing future projections to 2020 and to 2030 and making realistic assumptions. By 2020 municipal waste generated in Ireland is forecast to grow to between 3.0 and 3.2 million tonnes. The lower forecast was selected for the purpose of determining the capacity need as it takes account of the proposed prevention target as set out in the plan. A growth factor of 2.5% has been applied for the period 2020 to 2030 with an arisings figure of 3.9 million tonnes estimated by the final year (2030). It has been assumed that Ireland will achieve its 50% municipal recycling rate target by 2020, from the current national recycling rate of 40%, with linear incremental growth over the plan period. Increases to the rate of recycling at the same rate are projected to 2030, with a rate in excess of 60% ultimately being reached. It is assumed that landfill is being phased out over the period, with the level of future activity related to the development and utilisation at thermal recovery facilities and other factors such as the landfill levy price. There is contingency built into the projections, with lower level quantities of uncollected waste used in the projections than reported in the plan. In summary, the capacity need is considered balanced and in keeping with the overall strategic approach of the plan.

In the recent National Hazardous Waste Management Plan, the EPA confirmed that there remains a need to develop thermal recovery infrastructure for the treatment of hazardous wastes in Ireland. The latest data shows that almost 60,000 tonnes of hazardous waste was sent for incineration<sup>79</sup> abroad. The EPA have authorised the treatment of up to 50,000 tonnes of hazardous waste in the Southern Region but this facility is yet to become active and has no planning approval. The current licence for this facility expires in November 2015.

<sup>76</sup> The active capacity refers to the Indaver Waste-to-Energy facility.

<sup>77</sup> The pending capacity refers to an authorised but unbuilt capacity. Only capacity with planning permission and EPA licences has been included.

<sup>78</sup> This figure relates to SRF which is not exclusively from municipal sources.

<sup>79</sup> 39,612 tonnes was sent for incineration without energy recovery (D10) and 20,464 tonnes was sent for incineration with energy recovery (R1).

Similarly there is a need for thermal recovery capacity for the treatment of industrial process wastes including sludges. These wastes are typically treated at the location of generation by producers or manufacturers. Other industrial process wastes which are sent off site are co-combusted with other residual wastes at thermal facilities or are exported.

### Policies:

E15a. The waste plan supports the development of up to 300,000 tonnes of additional thermal recovery capacity for the treatment of non-hazardous wastes nationally to ensure there is adequate active and competitive treatment in the market and the State's self sufficiency requirements for the recovery of municipal waste are met. This capacity is a national treatment need and is not specific to the region. The extent of capacity determined reflects the predicted needs of the residual waste market to 2030 at the time of preparing the waste plan. Authorisations above this threshold will only be granted if the applicant justifies and verifies the need for the capacity, and the authorities are satisfied it complies with national and regional waste policies and does not pose a risk to future recycling targets. All proposed sites for thermal recovery must comply with the environmental protection criteria set out in the plan.

E15b. The waste plan supports the need for thermal recovery capacity to be developed specifically for the on-site treatment of industrial process wastes and where justifiable the treatment of such wastes at merchant thermal recovery facilities.

E16. The waste plan supports the development of up to 50,000 tonnes of additional thermal recovery capacity for the treatment of hazardous wastes nationally to ensure that there is adequate active and competitive treatment in the market to facilitate self-sufficiency needs where it is technically, economically and environmentally feasible. The capacity is a national treatment need and is not specific to the region. All proposed sites for thermal recovery must comply with the environmental protection criteria set out in the plan.

Energy recovery is critical for operators developing thermal recovery waste facilities to ensure the sustainability and viability of their operations. The potential for investment and growth in this market is real and needs to be supported by the appropriate renewable energy pricing mechanisms. There needs to be greater recognition in energy policy of the contribution waste facilities are making, and will continue to make, to Ireland's renewable energy sector and its achievement of mandatory targets.

#### 16.4.6 Recycling – Biological Treatment

Under the WFD, the recycling of waste is defined as *“any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes”* and *“includes the reprocessing of organic material”*. Biological treatment is clearly an activity<sup>80</sup> which sits on the recycling tier of the hierarchy.

<sup>80</sup> It should be noted that biological treatment of organic fines is a recovery activity.

The capacity for biological treatment both in the region and nationally has grown during the period of the last plans. Nationally, 246,000 tonnes<sup>81</sup> of treatment capacity is authorised by the Department of Agriculture, Food and the Marine to treat food organics. In the region there is 40,000 tonnes of treatment capacity authorised to treat animal by-products between local authority and EPA sites.

The national quantity of municipal brown bin material being treated in 2012 was over 94,000 tonnes<sup>82</sup> and it is expected that this will continue to grow over the plan period, with a heightened focus on increasing the separate collection of food waste. Over 37,371 tonnes<sup>107</sup> of garden waste was treated nationally in 2012, primarily by composting. Biowaste materials tend to move shorter distances for treatment by comparison to residual wastes, which may be hauled across the country to treatment outlets.<sup>83</sup> Over the plan period it is expected that biowaste material generated will be principally treated within the region and the capacity need has been examined on the basis of serving regional needs. This approach will support the development of treatment facilities of varying scales.

The need for additional capacity in the region has been determined by examining the current levels of biological capacity in the region, specifically the capacity which is consented by the DAFM to accept animal by-products, and the increases in biowaste and organic waste that are expected to come into the market over the plan period. The increased penetration of segregated food waste collections from household and commercial customers is expected to increase the quantities of this stream collected. The rate of capture of the material is difficult to predict at this stage and will become clearer with the availability of new waste characterisation data expected in 2015.

### Policies:

- E17. The waste plan supports the development of at least 40,000 tonnes of additional biological treatment capacity in the region for the treatment of bio-wastes (food waste and green waste) primarily from the region to ensure there is adequate active and competitive treatment in the market. The development of such treatment facilities needs to comply with the relevant environmental protection criteria in the plan.
- E18. The waste plan supports the development of biological treatment capacity in the region in particular anaerobic digestion; to primarily treat suitable agri-wastes and other organic wastes including industrial organic waste. The development of such treatment facilities needs to comply with the relevant environmental protection criteria in the plan.

It is expected that the food waste generated in each region will not be transported long distances but will rather be primarily treated in each region. The nature of the material, which is wet and odorous, can limit the distances such loads are transported although the current movement of

<sup>81</sup> Data valid as of October 2014.

<sup>82</sup> National Waste Report 2012, Appendix I, EPA (2014).

<sup>83</sup> It is noted that quantities of segregated biowaste are currently being exported to biological facilities Northern Ireland. The preferential pricing of energy generated from AD plants in Northern Ireland is helping to grow the industry and keep treatment gate fee costs competitive with facilities south of the border.

biowaste to Northern Ireland is noted. The treatment capacity proposed is to ensure there is sufficient capacity approved – in particular, facilities which have animal by-product approval—and there is a balanced distribution of capacity in the region.

Biological treatment facilities for the primary and co-treatment of agricultural waste, along with biowastes and other organic wastes, are also required in the region and the waste plan supports the development of such facilities. Managing waste from a growing agricultural sector is a challenge which needs to be addressed to support Ireland’s growing agri-food sector.

#### 16.4.7 Recycling – Material Reprocessing

The reprocessing of waste materials into products, materials or substances “*whether for the original or other purposes*” falls within the recycling definition. Ireland’s reprocessing industry for secondary waste materials is limited, with the greater part of municipal recyclable wastes being exported. Similarly, significant quantities of hazardous waste are exported for reprocessing outside the State. In many cases the quantity of feedstock available in Ireland is not sufficient to make the development of indigenous recycling or reprocessing facilities economically viable.

There has been progress on the reprocessing of plastic wastes, with a recent report<sup>84</sup> estimating indigenous treatment capacity of 245,000 tonnes. Usage of this capacity was estimated to be at 30% in 2011. It is expected that usage will increase as export markets for lower quality plastic wastes are shrinking. Measures in the plan are designed to improve the quality of recyclables including plastic waste collected and processed for the market. Over the lifetime of the plan the local authorities in the region will support the development of indigenous secondary waste market reprocessing.

As described in **Section 3.2.3**, EoW criteria specify when certain waste ceases to be waste and obtains the status of a product (or a secondary raw material). According to the Waste Framework Directive<sup>85</sup> certain specified waste shall cease to be waste when it has undergone a recovery (including recycling) operation and complies with specific criteria to be developed in line with certain conditions. It is expected over the period of the plan that further EoW criteria will be published by the European Commission, which will provide opportunities for operators in the industry to reprocess waste into products or secondary materials. Developments in this area will be monitored by the regional waste office over the plan period.

#### Policies:

E19. The waste plan supports the development of indigenous reprocessing and recycling capacity for the treatment of non-hazardous and hazardous wastes where technically, economically and environmentally practicable. The relevant environmental protection criteria for the planning and development of such activities need to be applied.

<sup>84</sup> The Irish Recycled Plastic Waste Arisings Study – Update 2011.

<sup>85</sup> Articles 6(1) and (2).

### 16.4.8 Preparing for Reuse Activities

Preparing for reuse activities are defined under the WFD as “*checking, cleaning or repairing recovery operations by which products or component of products that have become waste are prepared so that they can be re-used with any other pre-processing*”. Preparing for reuse is a higher order recovery solution recognised as providing more benefits than recycling or other recovery treatments.

It is important to clarify the distinction between reuse, part of the prevention tier, and preparing for reuse activities, which are different. In the case of the former activity the material in question has not been discarded and as such has not become a waste. Reuse is not classed as a waste activity so any enterprise reusing material is not regulated under waste regulation.

In accordance with Regulation 27 of the Waste Directive Regulations 2011, an economic operator is required to notify the EPA of any decision made to classify a material as a by-product and to explain the grounds for that decision. The EPA may make a determination that the notified material should in fact be classified as waste.

By developing preparing for reuse activities the local authorities will improve how waste materials are managed and such enterprises will be supported by the waste plan. The local authorities recognise that many of these operations are small scale, with a large number of start-ups commencing as sole traders. To encourage these activities, the local authorities will engage with the Department in reviewing the regulation and authorisation processes with the intention of adopting procedures which better reflect the scale of these activities.

#### Policies:

- E20. The waste plan supports the development of repair and preparing for reuse enterprises in the region as part of the transition to a more resource focused management approach and will provide technical, regulatory and financial guidance to operators active on this tier of the hierarchy.

### 16.4.9 Facility Authorisations by Local Authorities

The market assessment and review of local authority permits and certificates of registration undertaken for the waste plan has brought into focus inconsistencies in the authorisations issued by authorities to facilities across the region. This needs addressing and the local authorities are committed to standardising the approach to facility authorisations across the region (refer to **Section 19.7**, policy action F.4.2).

In addition to the standardisation of templates, the allocation of treatment capacity quantities will be reviewed by the authorities with the intention of better aligning authorised and operational capacities. They will also examine the option of introducing a phased approach to authorisations to facilitate capacity increases, granted on the basis of actual need and progressive development works at the site. Local authorities will implement a coordinated and considered approach to the future

planning of treatment capacities in the region through better communication (between authorising bodies) and ongoing updates of regional capacity data.

### Policies:

E21. The Local Authorities will review the approach to authorising waste treatment facilities requiring a waste facility permit or certificate of registration having regard to the need to achieve consistency of approach between planning approval and operational capacity.

#### 16.4.10 Collection Infrastructure

Existing household waste collection infrastructure has been described in **Chapter 9** of the plan. The total quantity of household waste managed in 2012 in the region was 209,532 tonnes through a combination of existing collection systems. The quantity of household waste managed, collected at the kerbside, was 169,097 tonnes or 76% of the total. The overall percentage of households signed up to a kerbside collection service was 58% in 2012, an increase on the previous year but still significantly less than the average of the top three performing counties in the region, which stands at 80%. Approximately 8% of household waste managed in the region in 2012 was collected at civic amenity sites, bring centres, through producer responsibility initiatives or brought directly to landfill.

The quality of waste collected depends on the method by which the waste is collected. Segregation at source combined with kerbside collection is recognised as the best method currently employed in Ireland to ensure the presentation of high-quality material. It is recognised by the authorities that manual kerbside-sort collections are becoming more common, particularly in the UK, with multi-compartment vehicles and operatives facilitating the source-segregation of up to seven waste streams. The implementation by private operators of such systems in Ireland remains an option provided the obligations of all relevant regulations are met.

The quality of waste materials has a significant influence on the recycling or recovery potential of the waste. In the absence of source-segregated kerbside collection systems, authorised civic amenity facilities or bring centres provide the next best method of household waste collection.

### Policies:

E22a. The plan supports the primacy of kerbside source segregated collection of household and commercial waste as the best method to ensure the quality of waste presented.

E22b. The plan also supports the use of authorised civic amenity facilities and bring centres as part of the integrated collection system.

With regard to the operation of seasonal or intermittent waste facilities at ports, marinas, caravan parks, holiday villages or similar situations, waste segregation should be facilitated by the operators of such facilities.

### Policy:

E23. In the absence of kerbside source segregated collection services and where the proximity of the civic amenity facilities and bring centres is prohibitive the plan supports localised collection solutions such as community drop-off points or pay-to-use systems subject to compliance with the household waste collection regulations.

International Catering Waste (ICW) is food waste from international transport vehicles such as cruise ships, airlines, private or commercial yachts or boats, armed forces ships or submarines and ferries. Any operator engaged in the generation, handling, transport, processing, storing, or disposing of ICW must be authorised by the Department of Agriculture, Food and the Marine.

### Policy:

E24. The plan supports the appropriate management of international catering waste under the Animal By-products Regulations (EC) No. 1069/2009.

The rates of industrial production and goods consumption have been increasing for 40 years, giving rise to the twin problems of rising waste volumes and the obligation to adopt quality-driven management practices. To limit the environmental consequences associated with greater waste production it was deemed necessary to transfer the financial responsibility for waste management to the producer (manufacturer or importer) through the application of the polluter pays principle. This gave rise to the concept of extended producer responsibility whereby manufacturers and importers of products bear a significant degree of responsibility for the environmental impacts of their products throughout the life cycle. There are a number of Producer Responsibility Initiatives (PRIs) in place in Ireland for specific waste streams. Producers with responsibilities under these initiatives often join a compliance scheme to meet their obligations. Compliance schemes operating at present include Repak, WEEE Ireland, ERP and the IFFPG, with specific arrangements in place for end-of-life vehicles, tyres and batteries.

A recently completed review of the PRI model in Ireland proposes a range of recommendations in relation to existing PRIs and the development of new schemes for specific waste streams.

### Policy:

E25. The plan supports the improvement of existing PRIs and the development of new PRIs or similar industry/voluntary schemes for specific waste streams including but not limited to human and farm chemicals and medicines, paints, newspapers, magazines and bulky waste.

## 16.5 ENVIRONMENTAL PROTECTION CRITERIA

This section sets out overarching environmental protection criteria for waste related activities requiring consent<sup>86</sup>. The criteria are provided to assist project developers, operators and competent authorities in considering the environment early in the planning process. However, the criteria should not be taken as a strict interpretation of national or European legislation, policy, case law or guidance covering this area, but rather the first step in ensuring protection of the environment is integrated into project proposals.

The recently published Climate Action and Low Carbon Development Bill 2015 aims to transition Ireland to a low carbon, climate resilient and environmentally sustainable economy. If it is enacted the Government will be required to prepare a National Mitigation Plan which will specify the policy measures required to manage greenhouse gas emissions.

In addition to the mitigation requirements, the Bill requires the development of a National Adaptation Framework which will specify the strategy for the application of sectoral adaptation measures to reduce the vulnerability of the State to the negative effects of climate change. In terms of the waste sector, specific adaption measures are likely to include restrictions or modifications to facilities operating within or adjacent to areas of flood risk to eliminate the risk of leachate or contaminated run-off entering water courses. Similarly, for waste facilities located in coastal areas adaption measures for sea level rise may include specified engineering works to mitigate erosion and potential impacts on coastal waters and protected ecological areas. The National Adaptation Framework will be reviewed on a five year basis and should be used to identify existing sites that are vulnerable to climate change stresses as well as for the development of a policy to restrict the development of waste operations in areas of high vulnerability. The environmental criteria take account of potential impacts from climate on waste facilities.

It is strongly recommended that developers and operators consult with the regional waste office and the relevant planning and regulatory authorities prior to submitting an application for development consent. As a minimum, the criteria set out in this section must be applied in order to ensure the impact on communities, human health, ecology and the wider environment can be avoided where possible and minimised, managed and mitigated where necessary.

<sup>86</sup> Consent includes any licence, permission, permit, derogation, dispensation, approval or other such authorisation granted by or on behalf of a public authority, relating to any activity, plan or project that may affect a European Site, and includes the process of adoption by a public authority of its own land use plans or projects (from Habitats Regulations S.I. 477 of 2011).

### Policy:

- G3. Ensure there is a consistent approach to the protection of the environment and communities through the authorisation of locations for the treatment of wastes.

As noted elsewhere in this document, the waste plan does not identify specific technologies and/or locations for future waste-related activities. Rather, it has highlighted capacity need, and so guidance on proper siting of future waste-related activities (including expansion of existing facilities) is the most appropriate method at this stage in the planning hierarchy to address the potential for impact on the environment. This is particularly the case with regard to protection of European Sites designated for nature conservation, including Special Areas of Conservation and Special Protection Areas. These sites are afforded protection under the EU Habitats and Birds Directives and also under national legislation (European Communities (Birds and Natural Habitats) Regulations 2011 which complement relevant provisions of the Planning and Development Act, 2010).

The criteria are not intended to be an end point but rather a starting point for planning waste facilities. Subsequent plans and projects arising from the content of this plan will require further, more detailed consideration of the impact on the environment as a result of location or process/technology alternatives proposed to address the capacity needs identified in the plan.

The environmental protection criteria are consistent with the objectives pursued by the WFD, namely:

- The protection of public health and the environment;
- The establishment of an adequate network of appropriate installations;
- Disposal installations (taking into account the Best Available Technology (BAT) without involving excessive costs); and
- An adequate transport network so that waste can be disposed in one of the nearest installations.

For ease of reference, the environmental protection criteria are divided into (1) general environment and (2) European Sites (SPAs and SACs). In general future waste activities requiring consent need to consider the following:

#### General Environment

- Avoid, as far as possible, siting waste infrastructure or related infrastructure in areas protected for landscape and visual amenity, geological heritage and/or cultural heritage value. Where this is unavoidable, an impact assessment should be carried out by a suitably qualified practitioner and appropriate mitigation and/or alternatives must be provided.
- Avoid siting waste infrastructure or related infrastructure in proposed Natural Heritage Areas (pNHAs), Natural Heritage Areas (NHAs), Statutory Nature Reserves, Refuges for Fauna and Annex I Habitats occurring outside European designated sites;
- To prevent the spread of Invasive Alien Species (IAS), where waste material is transported from one location to another, an IAS survey of source and receptor sites will be conducted by a suitably qualified person. If IAS are found, preventative measures will be implemented to prevent the onward spread of the plant/animal material including: employment of good

site hygiene practices for the movement of materials into, out of and around the site; ensuring that imported soil is free of seeds and rhizomes of key invasive plant species; adherence to any national codes of practice relating to prevention of the spread of IAS (including both Ireland and Northern Ireland Codes of Practice).

- In order to protect habitats which, by virtue of their linear and continuous structure (e.g. rivers and their banks) or their contribution as stepping stones (e.g. ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species, these features will be protected as far as possible from loss or disruption through good site layout and design;
- Ensure a Sustainable Drainage System (SuDS) is applied to any development and that site-specific solutions to surface water drainage systems are developed, which meet the requirements of the Water Framework Directive and associated River Basin Management Plans;
- Avoid development of waste management infrastructure in flood risk areas. Reference should be made to the Planning System and Flood Risk Management for Planning Authorities (DECLG/OPW 2009) and the National Flood Hazard Mapping (OPW) while referring to the relevant Flood Risk Management Plan (FRMP);
- Ensure riparian buffer zones (minimum of 15 m) are created between all watercourses and any development to mitigate flood risk. The extent of these buffer zones shall be determined in consultation with a qualified ecologist and following a Flood Risk Assessment. Any hard landscaping proposals shall be located outside these buffer zones;
- To protect river habitats and water quality (including physical habitat and hydrological processes/regimes), ensure that no development, including clearance and storage of materials, takes place within a minimum distance of 15 m measured from each bank of any river, stream or watercourse;
- Avoid geologically unsuitable areas including karst where practicable, and areas susceptible to subsidence or landslides. Due consideration should be given to the primary water source of the area and the degree of surface water/groundwater interaction;
- If there is and airport within 13 km of the proposed waste facility the airport shall be consulted at an early stage of planning;
- Impact from a transport perspective will be assessed including road access, network, safety and traffic patterns to and from the proposed facility in accordance with road design guidelines and/or relevant LA guidelines in relation to roads; and
- There are existing, closed or uncommenced landfills which could be used for alternative waste activities as they are considered brownfield sites; also suitably zoned other brownfield sites could be used for alternative waste activities. Sites that offer the opportunities to integrate differing aspects of waste processing will be preferred choices. This will ensure maximum efficiency of waste processing.

The local authorities in the region recognise the importance of providing facility-specific guidelines and intend to develop and review such guidelines over the course of the plan, see policy action G.3.1 in **Section 19.7**.

### European Sites

In preparation of the SEA and Natura Impact Report to accompany this plan, the potential to impact on these European Sites (and the wider environment) has been identified. The protection of such sites has been included in the form of environmental protection criteria which must be applied to waste-related activities required to implement the policies of the waste plan.

### Policy:

G5. Ensure that the implementation of the regional waste management plan does not prevent achievement of the conservation objectives of sites afforded protection under the EU Habitats and Birds Directives.

Criteria to be considered:

- Avoid siting new waste infrastructure or related infrastructure in European Sites, including Special Protection Areas (SACs) and Special Protection Areas (SPAs);
- Undertake Appropriate Assessment Screening for all waste-related activities requiring development consent, e.g. new infrastructure, expansions and upgrades of existing infrastructure and activities, waste authorisation applications, licence reviews (CoR, WFP, and Licences).
- Where a significant effect on a European Site, either alone or in combination with other plans or projects, is identified, or where there is uncertainty with regard to effects, the competent authority will seek an NIS to inform an AA. In so doing, the implications for any European Site in light of the site's Conservation Objectives shall be considered.
- For upgrades, expansion, enlargements and reviews related to existing waste activities and infrastructure, the competent authority will seek an evidence base to show the existing operations are not negatively impacting on a European Site, alone or in combination with other plans and projects, with particular focus on avoiding the deterioration of natural habitats and the habitats of species as well as the disturbance of species for which the area has been designated.
- Avoid damage to features of the landscape which, by virtue of their linear and continuous structure or their function as stepping stones, are essential for the migration, dispersal or genetic exchange of wild species.

It is further noted that any risk of effects due to the lower tier Plans or projects arising from this strategy document will be avoided through an overarching environmental protection policy setting out the expectations and requirements for lower tier Plans and projects as regards European sites; this policy and related policy actions are included under **Section 19.8**.

### Climate Change

The recently published Climate Action and Low Carbon Development Bill 2015 aims to transition Ireland to a low-carbon, climate-resilient and environmentally sustainable economy. If enacted the Government will be required to prepare a National Mitigation Plan which will specify the policy measures required to manage greenhouse gas emissions.

In addition to the mitigation requirements, the Bill requires the development of a National Adaptation Framework which will specify the strategy for the application of sectoral adaptation measures to reduce the vulnerability of the State to the negative effects of climate change. In terms of the waste sector, specific adaptation measures are likely to include restrictions or modifications to facilities operating within or adjacent to areas of flood risk to eliminate the risk of leachate or contaminated run-off entering water courses. Similarly, for waste facilities located in coastal areas adaptation measures for sea level rise may include specified engineering works to mitigate erosion

and potential impacts on coastal waters and protected ecological areas. The National Adaptation Framework will be reviewed on a five year basis and should be used to identify existing sites that are vulnerable to climate change stresses as well as for the development of a policy to restrict the development of waste operations in areas of high vulnerability. The environmental criteria take account of potential impacts from climate on waste facilities.

## 17 ROLES AND RESPONSIBILITIES

This chapter sets out the roles and responsibilities of each of the stakeholders in the delivery of the plan. **Figure 17-1** illustrates the national organisational arrangements for the coordination of the implementation of the three regional waste management plans (RWMPs).



**Figure 17-1 National Coordinating Structures**

### 17.1 NATIONAL COORDINATING COMMITTEE FOR WASTE MANAGEMENT PLANNING

The National Coordination Committee for Waste Management Planning, (NCCWMP) coordinated the preparation of the three waste plans, namely Southern, Connacht-Ulster and Eastern & Midlands Regions. The coordinating committee consists of the DECLG, EPA, NWCPO, NTFSO and members from each of the three waste regions. Following the publication of the three RWMP's, the role of the NCCWMP will be to coordinate their implementation.

### 17.2 STAKEHOLDERS

Many stakeholders are involved in the effective implementation of the plan. **Figure 17-2** illustrates the key stakeholders who have a significant role and associated responsibility for the delivery of policies and actions contained in the plan.

#### 17.2.1 Lead Authority / Regional Waste Management Office

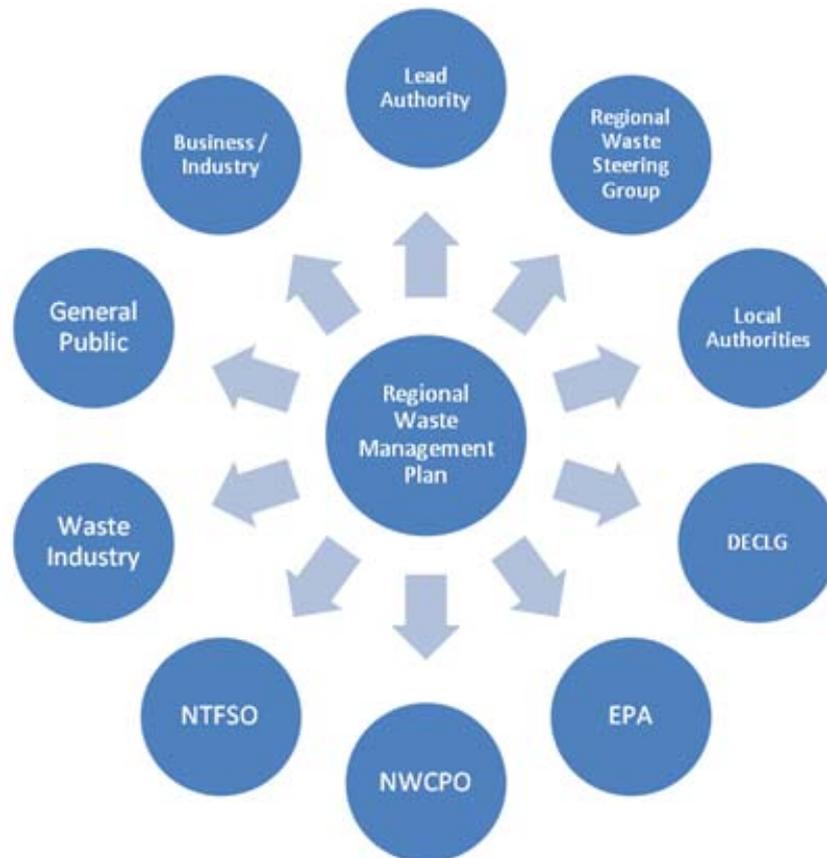
Arising from the reconfiguration of the Waste Regions and following a process facilitated by the County and City Managers' Association (CCMA), Mayo County Council was selected as the Lead Authority for the Connacht Ulster Waste Region.



As lead authority for the region, Mayo County Councils' responsibilities include the preparation of the RWMP, the coordination of the implementation of the plan and monitoring implementation of the new plan through preparation of annual reports.

To deliver and coordinate the implementation of the plan, Mayo County Council established a regional waste management office based at Aras An Chontae, Castlebar, County Mayo. The Office is

staffed by a Regional Waste Coordinator with technical and administrative support. It is anticipated that the Regional Waste Management Office will be a knowledge resource for all stakeholders with the capacity to promote higher order waste actions in the areas of prevention, reuse, resource efficiency and recycling.



**Figure 17-2 Key Stakeholders for Plan Delivery**

The role of the lead authority (regional waste management office) includes the following:

- To facilitate and service the regional waste steering committee in the implementation of the objectives set out in the plan. To develop a prioritised programme of objectives, targets and key performance indicators to ensure that the aims of the plan are delivered;
- To assist, facilitate and coordinate the implementation of objectives, policies actions and targets of the plan;
- To prepare annual reports as required for the region reporting on performance under each of the policy headings contained in the plan;
- To maintain and establish task groups on specific issues when required;
- To prepare applications for grant assistance for regional projects: and
- To identify, coordinate and facilitate the training needs of the region to ensure effective implementation of the plan.

## Policy

New management structures will be funded and established by the local authorities in the region to ensure the implementation of the waste plan. The nominated lead authority will act on behalf of the region, including representing the region on high-level groups and committees related to the waste plan. It is important that good channels of communication are maintained between the regions, Government, State agencies, and other national bodies on all waste matters over the duration of the Plan.

### Policy:

- D1. The lead authority on behalf of the region will participate in the national coordination committee for waste management planning and other national groups relevant to the implementation of the waste management plan.

The local authorities recognise the recent national review of the producer responsibility operators in Ireland and the extensive findings of that study. The potential to establish new schemes (mandatory or voluntary) was identified in the study, and over the course of the plan some of these schemes may be set up. The local authorities, through the lead authority, will be keen to participate in the establishment of any new schemes.

### Policy:

- H3. Co-operate and input into the setting up of new national producer responsibility schemes (statutory or voluntary) for waste streams to ensure the role of local authorities is clear and can be practically achieved.

Following the designation of Mayo County Council as the lead authority for the CUR, a regional waste steering committee was established consisting of one member from each of the nine local authorities in the region and chaired by the lead authority Chief Executive. The purpose of the committee is to make the strategic decisions necessary to achieve the objectives set out in the plan, and its role includes the following:

- To support the lead authority in the implementation of the objectives set out in the plan;
- To monitor and review the performance of each individual local authority in the region under each of the policy headings contained in the plan;
- To review and if appropriate approve, allocate and monitor the requisite budget for the lead authority / regional waste management office annually;
- To ensure that annual reports as required are delivered on time;
- To coordinate the activities of task groups such as enforcement & regulation; historic landfills; education/prevention/green business to support the delivery of plan objectives. All task groups operate according to agreed Terms of Reference; and
- To communicate with elected members.

## Policy

The structures for the implementation of the waste plan will include maintaining a regional waste management office over the course of the plan. The structures will include working groups to tackle those areas of implementation which are being led by the local authorities. The new structure will seek to facilitate better knowledge exchange between the local authorities and capacity building on particular issues.

### Policy:

- D2. The Lead authority and local authorities will work together on the structures required to implement the waste plan, capacity building, training and knowledge share on delivering waste management activities.

## 17.2.2 New Lead Authority for Waste Enforcement

The policies and actions under strategic objective F (Enforcement & Regulation) will be reviewed with regard to responsibility in consultation with the new regional enforcement authority. This authority will be established following the conclusion of a review of waste enforcement governance in Ireland.

## 17.2.3 Local Authorities



The role of local authorities has changed significantly over the years with a very small minority of local authorities still engaged in the collection of household waste nationally and none in the Connacht Ulster Region. Local authorities still have an obligation, however, under Section 33 of the Waste Management Act 1996 to collect or to arrange for the collection of household waste within their functional areas. Local authorities continue to provide waste management infrastructure such as bring centres and civic amenity sites, and a limited number of authorities provide landfills for the disposal of residual waste.

Figure 17-3 Participating Local Authorities in the Region

The role of local authorities has evolved and the principal areas of activity are now regulatory, educational, and enforcement related. The role of local authorities includes the following.

### Waste Planning

- Participation in the regional waste steering committee for the preparation and implementation of the plan;

- Planning and development of waste infrastructure either directly or indirectly as required by the plan;
- Ensuring through the planning process that appropriate waste systems are incorporated into all developments and that wastes arising from such developments are appropriately managed; and
- Application of the relevant environmental and planning legislation to waste projects which may have a significant impact on European sites in order to protect the environment/human health from the adverse impact of waste generated.

### **Waste Prevention**

- Participation in the Local Authority Prevention Network (LAPN);
- Support business and in particular SMEs in the prevention of waste through specific projects;
- Prevent food waste by working with the STOP FOOD WASTE campaign;
- Work with events and festivals to prevent waste through “greenyourfestival.ie”;
- Support communities through tidy towns waste prevention initiatives by providing guidance and awareness regarding best practice for prevention and minimisation;
- Support and encourage behavioural change throughout the community to promote resource efficiency;
- Implement green procurement;
- Segregate waste in-house and promote resource efficiency with all staff; and
- Act as resource efficiency exemplar in the business community;

### **Waste Regulation and Enforcement**

The role of the local authority regarding enforcement and regulation is fully described in **Section 14.1.4**.

### **Waste Data Management**

- Manage, validate and collate the WFP AER data;
- Validate the WCP AER data, in conjunction with the CUR
- Prepare annual reports for the EPA, i.e. RMCEI report and National Waste Report; and
- Input data regarding authorised sites on relevant databases.

### **Waste Infrastructure**

- Facilitate the provision of waste management infrastructure as required by the plan;
- Promote sustainable waste management infrastructure/technology in keeping with the waste hierarchy and self-sufficiency principle; and
- Encourage and support the provision of waste infrastructure using partnership and social economy models;

## **17.2.4 Department of the Environment, Community and Local Government**

The role of the Department of the Environment, Community and Local Government (DECLG) is to provide the policy and legislative framework within which the objectives, policies, actions and targets of the plan can be set. The most recent Government policy with regard to waste is set out in

*A Resource Opportunity-Waste Management Policy in Ireland* published in July 2012. The role of the DECLG also includes:

- Participate in the NCCWMP;
- Monitor, review and modify legislation as required over the period of the plan;
- Monitor existing compliance schemes and facilitate the development of new schemes as required;
- Advise and guide lead and local authorities with regard to the implementation of the plan;
- Support regional structures for the implementation of the plan;
- Support national, regional and local waste enforcement arrangements as agreed by the CCMA and the regions; and
- Support the operation of local waste infrastructure as operated by individual local authorities.

### **17.2.5 Environmental Protection Agency**

The EPA has a wide range of statutory duties and powers under the Environmental Protection Act 1992 as amended. Responsibilities of the EPA in relation to waste management include:

- Formulation of National Waste Prevention Plan (NWPP) and operation of LAPN;
- Formulation of the National Hazardous Waste Management Plan;
- Collation, analysis and reporting of national waste statistics;
- Licensing of large waste management facilities;
- Waste enforcement functions (refer to Section 14.1.2 for further details);
- Promotion of environmental best practice and circular economy developments;
- Auditing and reporting on the performance of local authorities in respect of their waste management responsibilities; and
- Assistance to local authorities in respect of enforcement.

### **17.2.6 National Waste Collection Permit Office**

The NWCPO was established in the Offaly County Council in 2012 and it significantly streamlined the collection permitting system from 10 issuing authorities into a single entity.

The NWCPO now processes the WCP application and reviews applications for all 31 local authorities. It also manages the WCP AER data, maintains the WCP register and associated IT system and websites revokes WCPs as appropriate, and provides data reports to relevant stakeholders when required. However, the enforcement of the WCPs and the verification of AER data are generally the responsibility of the local authority where the permit holder resides, with some consideration given to the area where most collection activity is undertaken.

Responsibilities of the NWCPO in relation to waste management include participation in the NCCWMP and working with the regional office and local authorities to develop standard mandatory and local discretionary conditions.

### 17.2.7 National Transfrontier Shipment Office

The National Transfrontier Shipment Office (NTFSO) is the national competent authority for administering and enforcing the Waste Management (Shipment of Waste) Regulations 2007 (S.I. No 419 of 2007) and Regulation EC 1013/2006 of the European Parliament. The Regulations empower the NTFSO to supervise and monitor the shipment of waste and prevent illegal shipments for the protection of the environment and human health.

The role of the NTFSO regarding enforcement and regulation is fully described in **Section 14.1.3**. Responsibilities of the NTFSO in relation to waste management include:

- Ensuring all waste exports and movements of hazard wastes within the state are carried out imports are carried out in accordance with the regulations;
- Maintaining all necessary documentation;
- Liaising with the CUR Waste Management Office and local authorities in relation to any issues arising from the export of waste; and
- Participating in the NCCWMP.

### 17.2.8 Waste Industry

The waste market in Ireland is atypical when compared to other EU Member States particularly in relation to household waste collection which has become a service performed almost exclusively by the private sector. Waste management infrastructure is largely owned and operated by the private sector, with many facility owners also involved in waste collection.

The recent national waste policy document *A Resource Opportunity-Waste Management Policy in Ireland* has concluded that the current system of competition in the market will be preserved but that the regulatory regime will be strengthened significantly. The waste industry, will therefore, have a very significant role to play in the achievement of the objectives policies actions and targets contained in the plan. The role of the waste industry includes the following:

- Cooperate with the designated lead authorities and local authorities to implement the objectives, policies, actions and targets contained in the plan;
- Provide sustainable waste management infrastructure/technology in keeping with the waste hierarchy and the principle of self-sufficiency;
- Comply with waste collection permit conditions as prescribed by the (NWCPO);
- Comply with permit/licence conditions as prescribed by local authorities/EPA;
- Comply with Transfrontier Shipment rules and the regulations governing the movement of hazardous wastes;
- Cooperate with PRI schemes and the DECELG to meet a wide range of EU Directive targets;
- Promote high standards of health and safety in the industry;
- Communicate with the public to encourage better waste management behaviours and better recycling;
- Participate in relevant forums and consultations with the EPA, government department and the local authorities; and
- Share expertise in the form of authorising and participating in waste sector workshops, seminars and conferences.

### 17.2.9 General Public/Communities

Each member of the public, as a waste producer, has a duty to handle waste responsibly and ensure that any waste produced does not cause environmental damage. Additional roles and responsibilities of the general public include:

- Aim to reduce the amount of waste being generated in the home through waste prevention for example buying products with less packaging, reducing food waste;
- Participate in kerbside waste collection schemes where available;
- Segregate recyclable waste for collection or take it to recycling centres or bring banks;
- Segregate organic waste for composting or for collection where the service is provided;
- Do not bury or burn waste;
- Ensure that waste is presented for collection in the manner required by the collector and in accordance with the relevant bye-laws; and
- Ensure that all waste collectors used have a valid waste collection permit.

### 17.2.10 Business and Industry

The business and industrial sectors contribute significantly to the overall amount of waste produced in Ireland. As waste producers these sectors must take responsibility for the segregation, handling and ultimate treatment of waste produced on their premises and, in accordance with particular producer responsibility regulations, for waste generated as a result of certain products and materials placed on the market. The role and responsibilities of business and industry include:

- Implementing best waste management practices in the workplace with an emphasis on waste prevention and resource efficiency;
- Segregation of waste produced into appropriate waste streams;
- Adhere to and comply with Producer Responsibility Initiatives and associated compliance schemes;
- Promote waste awareness and resource efficiency best practices among employees;
- Implement green procurement policies;
- Implement where appropriate Environmental Management Systems; and
- Ensure that all waste collectors have valid Waste Collection Permits;

### Policy

Business and industry need to ensure the efficient use of finite material resources. They have a duty to apply the general principle of producer responsibility through efficient planning of process, product or services, optimisation of product packaging, and implementation of good practices such as cleaner production. As well as the environmental benefit, these positive activities can also mean cost savings which will help to secure the future of any enterprise and its associated employment.

**Policy:**

- C5. Work with and through business support agencies and the National Waste Prevention Programme to encourage business and industry to implement resource efficiency principles including the use of clean technologies and preventing waste at source.

The local authorities in the region recognise the important contribution stakeholders in the waste and resource sector have to make towards the successful implementation of the waste plan. The local authorities aim to establish a mutually cooperative approach with all relevant parties to deliver the policies and actions in the plan.

**Policy:**

- D3. Foster links and activities with relevant stakeholders including businesses and Industry Groups, NGOs and other relevant networks (including cross-border networks) to extend the reach of the plan.

## 18 FINANCE AND INVESTMENT

This chapter sets out the current and projected local authority finances for waste-related activities over the course of the plan.

### 18.1 APPROACH AND METHODOLOGY

The approach adopted in carrying out this financial analysis is similar to that defined for Cost Benefit Appraisals by the Departments of Finance (DoF) and Public Expenditure and Reform (DPER). In summary, this requires the setting out of the incomes, expenditures and investments required under the plan; the derivation of the costs and benefits thereof; and comparison with at least one counterfactual to determine if the plan is more beneficial than alternative approaches.

The counterfactuals may include a “do nothing” option, a “do the minimum” option or an alternative approach to achieving the objectives of the plan. The preferred option is the one showing the greatest amount of net benefits. In reality, “doing nothing” is rarely a practical option. In the case of waste management activities being carried out by local authorities, it would not be practical to ask the various councils across Ireland to cease all waste management activities immediately. In addition, “no change” is not an option, as existing operations and activities will not remain as they are at present. For example, a landfill site may be filled within a year or two, and then a decision may be made as to whether a new cell will be developed or the site closed. Closure normally requires capping to be carried out and this is followed by a period of aftercare that can extend to as much as 50 years.

For this financial appraisal, it was decided that the counterfactual would be defined as “what the current plans and likely future activities of the relevant councils are; assuming that no new plan is put in place.” This approach should allow interested parties to see the full extent of the changes required by the plan, to assess the incremental expenditures and/or incomes resulting from the plan and to evaluate these in the light of the additional benefits and costs, if any, that will be generated.

The first stage in the analysis was to develop the counterfactual scenario while the key elements of the new plans were being drawn up. To do this, and to use the most up-to-date information, we used the Adopted Budget 2014 as published by the various councils as the basis for the counterfactual. The budgets documents published by local authorities give both an estimated outturn for 2013 and the budget for 2014. As the budgets are reported in a standard format, it would be expected that there would be a consistency across the councils. However, this is not entirely the case, as will be discussed later in this section.

To determine income, we relied on the material provided for the Environmental Services Division in table B of the Statutory Tables included in the budget. For expenditure, we relied on Table F of the Statutory Tables. While Table F does show income, it shows the source of the income and not the activity from which the income is generated; hence our preference for the data as presented in table B.

Combining the expenditures and incomes of all the relevant councils, and making the appropriate adjustments for inter-authority transfers, allowed us to generate a Regional estimate of net expenditure and income. The focus of the analysis is on the “current” budget, not the “capital” budget. This is because it is widespread practice that capital expenditure is ultimately provided for

in the current budget. In general, loans are drawn down by councils to fund substantial capital expenditure, such as on a new landfill cell. In subsequent years, the current account will include an expenditure item that represents the repayments of that loan in any particular year. Thus, capital expenditure is effectively shown in the current account. Other items that could be described as capital expenditure though they are generally relatively small amounts, such as provision of Litter Bins, are also shown in the current account.

There is one aspect of local authority accounting that cannot be accommodated in this approach, and that is that a number of councils categorise activities that could be defined as “waste management” under other headings. For example, some councils budget for certain street cleaning expenditure as roads upkeep expenditure under the roads division budgets, while some include street cleaning in local authority housing estates under estate management activities, which are under the Housing Division. It is not possible to identify all such categorisations without a detailed review of all potentially relevant transactions. However, our enquiries suggest that any understatement of waste management expenditure that might occur is limited.

In any event, the purpose of the counterfactual is to provide a basis for evaluating the incremental costs and benefits of the proposed plan and as long as the underlying assumptions in the plan and the counterfactual are the same, the comparison between the plan and the counterfactual will remain valid.

## 18.2 COUNTERFACTUAL SCENARIO

A summary of the financial projection for the counterfactual scenario for the CUR is shown in **Table 18-1**.

The nine councils in the Connacht Ulster Region are Cavan County Council; Donegal County Council; Galway City Council; Galway County Council; Leitrim County Council; Mayo County Council; Monaghan County Council; Roscommon County Council; and Sligo County Council. Total expenditure on waste-related activities by these nine councils was budgeted to be €26.37 million in 2014. Budgets for 2015 have been adopted by the Councils since the plan was drafted. The new budgets do not have any impact on the financial conclusions provided later in this chapter.

In the absence of any new waste plans, expenditure is expected to remain broadly at this level in real terms (i.e. not allowing for inflation). In addition, it is not expected that there will be any significant changes to the profile of the expenditure.

### 18.2.1 Landfill Operation and Aftercare

The financial profile of a landfill closure is typically as follows:

- When a landfill is closed, there is an immediate loss of the gate fees; hence the revenue generated ceases;
- Operations associated with the deposit of waste cease also. However, certain operations expenditures remain such as gas monitoring; pipe work; leachate collection, transport and treatment; security; insurance; EPA licensing; testing and sampling work;

Table 18-1 Counterfactual Scenario Financial Projections (Units = € millions)

	2013 Outturn € m	2014 Budget € m	2015 Proj. € m	2016 Proj. € m	2017 Proj. € m	2018 Proj. € m	2019 Proj. € m	2020 Proj. € m	2021 Proj. € m
Landfill Operation and Aftercare	11.91	10.07	10.07	10.07	10.07	10.07	10.07	10.07	10.07
Recovery and Recycling	3.65	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55
Waste to Energy	0	0	0	0	0	0	0	0	0
Waste Collection	4.39	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Litter Management	4.31	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28
Street Cleaning	3.30	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47
Waste Regulation	3.20	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
Waste Management Plan	0.75	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
<b>Total Expenditure</b>	<b>31.52</b>	<b>26.37</b>	<b>26.37</b>	<b>26.37</b>	<b>26.37</b>	<b>26.37</b>	<b>26.37</b>	<b>26.37</b>	<b>26.37</b>
<b>Direct Income</b>	<b>11.48</b>	<b>8.58</b>	<b>8.58</b>	<b>8.58</b>	<b>8.58</b>	<b>8.58</b>	<b>8.58</b>	<b>8.58</b>	<b>8.58</b>
<b>Funding from other sources</b>	<b>20.05</b>	<b>17.79</b>	<b>17.79</b>	<b>17.79</b>	<b>17.79</b>	<b>17.79</b>	<b>17.79</b>	<b>17.79</b>	<b>17.79</b>

**Notes:** The headings used in **Table 18-1** are those of the Statutory Local Authority Budget Tables.

Direct income comprises user charges, specific grants, litter fines and any other income received from waste management services

Funding from other sources is the amounts needed from income such as commercial rates and local property tax.

- Expenditure is then undertaken for capping and closure of the landfill. These expenditures can vary, depending on a range of factors unique to individual landfill sites;
- Capping and closure expenditure will cease when the work is completed, but this may take more than a year to complete. There may be further occasional work of this nature as subsidence occurs;
- Operations expenditure should also reduce in time as, for example, leachate and gas emissions reduce;
- There will be some revenue generation if the emitted gases are used to power an electrical generator. However, as gas emissions reduce this revenue stream will also reduce;
- Eventually, the landfill will become relatively inert, though on-going monitoring and aftercare will continue for many years, potentially as many as 50.

The status of local authority landfill sites in the region is as follows:

- Cavan County Council maintains four closed licensed landfill sites situated at Corranure, Belturbet, Bailieborough and Ballyjamesduff. All four sites require continuous environmental monitoring to comply with the licence issued by the Environmental Protection Agency. At Corranure gas is collected through a network of pipes and burnt in a gas turbine which produces electricity that is exported to the national grid. Permanent capping works were completed in 2013. Throughout the county there are a further 14 unlicensed landfill sites which are kept under review. No provision for any change in expenditure on the four licensed sites or any expenditure on legacy sites is made in the counterfactual scenario.
- Donegal County has no operational landfill sites. Some five local authority sites have been closed over the past 20 years, with the last, Ballynacarrick outside Ballintra, closing in 2012. No provision for any change in expenditure on maintenance of these sites or any expenditure on legacy sites is made in the counterfactual scenario.
- Galway City Council makes a budget provision for ongoing aftercare costs of the remediated landfill at Carrowbrowne and the need to ensure compliance with licensing requirements. The landfill has been closed for a number of years and the site now provides composting facilities, which are accounted for under recycling and Recovery. No change is made in projected expenditure on landfill maintenance.
- Galway County Council has made no substantive budget provision for landfill maintenance in its 2014 budget. There is a landfill in the county, the East Galway Landfill, also known as Connacht Regional Residual Landfill. As a result of the liquidation of the company operating the facility in May 2013, the Council is assisting the EPA to manage the site as part of the EPA's intervention under the Environmental Liability Regulations. A tender for day-to-day management of the site was issued in February 2014. No provision has been made for any expenditure or income associated with the operation of the site or the through flows of the landfill levy. It is assumed that all associated incomes and expenditures will be in balance.
- Leitrim County Council provides for maintenance of a closed landfill at Mohill. No change in current expenditure levels is foreseen.
- Mayo County Council is licensed by the EPA to operate two landfills. One, in Rathroeen, is developing additional cells, while the other, Derrinnumera, is currently not accepting waste. In addition, there are five closed landfill sites in Mayo (which all were closed by 1996) and on which further evaluations and work are dependent on funding being available from the Department of the Environment, Community and Local Government. No provision is made for any such work being carried out.

- Monaghan County Council operates a landfill site at Scotch Corner. At current acceptance rates, the site is expected to remain in operation for the duration of the Plan, and thus no change is provided for.
- Roscommon County Council's budget provides for the cost of maintaining Ballaghaderreen and Roscommon Landfills following their closure. Most of the reduction in landfill operations expenditure in the region between 2013 and 2014 was a result of the final repayments being made for a landfill loan in respect of the Ballaghaderreen Landfill. No further change is provided for. No provision is made for expenditure on legacy landfill sites.
- Sligo County Council has no provision for landfill operations or aftercare expenditure.
- In the counterfactual for the Connacht Ulster Region, the reduction in landfill operations and aftercare expenditure from €11.91 million in 2013 to €10.07 million in 2014 shown in **Table 18-1** is almost completely due to the ending of loan repayments by Roscommon County Council.

There is a significant level of unknowns in respect of future landfill activities, particularly the availability of finance to fund work on legacy landfill sites. There is also a substantial likelihood that the East Galway Landfill, also known as Connacht Regional Residual Landfill, will recommence operations in the future. We have taken the view that the landfill levy income and expenditure is a contra item. Therefore the overall funding requirement will not be affected by this potential development.

Income from landfill operations in the region is 45% of total expenditure, including overhead and service support costs. This includes some income from activities such as electricity generation, but is mostly due to gate fees at the two operational landfills.

### 18.2.2 Recovery and Recycling

In the absence of a new regional waste plan, expenditure in this area of activity is expected to remain at current levels in future years. There are currently no plans to augment the existing infrastructure of civic amenity centres, bring sites or bottle banks. Occasional and seasonal expenditures, such as Christmas tree recycling and WEEE promotional events, are generally included under this expenditure heading. Many of these activities are not revenue generating, but form part of awareness and promotional expenditure.

In respect of income generation, gate fees and DECLG grants provide some 41% of the operating costs of the recycling infrastructure. There is some income from pension deductions, but in the main, direct income in recovery and recycling operations does not cover the related expenditures

### 18.2.3 Thermal Recovery (Waste to Energy)

There is no expenditure under waste to energy in the Connacht Ulster Region and for the purpose of the counterfactual scenario, it has been assumed that there will be no expenditure in this area in future years.

### 18.2.4 Waste Collection

None of the councils in the Connacht Ulster Region provide any waste collection services at this time. Of the €0.89 million expenditure budgeted in 2014, some 66% relates to a composting facility. Other expenditures relate to awareness programmes, participation in pilot projects, bad debt provisions associated with former waste collection operations and some assistance to former waiver holders. For the purpose of the counterfactual scenario at this time, it has been assumed that expenditure in this area will remain at current levels in future years. Income from waste collection is negligible.

### 18.2.5 Litter Management

Litter management comprises the Litter Warden Service, litter initiatives, awareness programmes and central overhead cost attribution. The Litter Warden Service accounts for €1.04 million of the total expenditure on litter management of €4.28 million; litter initiatives and awareness programmes expenditure is €1.67 million; while service support costs are €1.57 million. Of the total expenditure of €4.28 million, 34% is accounted for by the two Galway Councils, which includes the most significant urban centre in the region.

Litter management activities include:

- Enforcement of Litter Pollution Acts & Bye-Laws by the Litter Warden Service;
- Litter Pollution and Litter Quantification Surveys carried out as part of National Litter Pollution Monitoring System;
- Litter awareness campaigns, including dog litter and graffiti;
- Competitions;
- Graffiti and chewing gum removed from public areas as well as paper and packaging waste; and
- Preparation of new bye-laws, such as for the storage, presentation and collection of waste.

For the purpose of the counterfactual scenario, it has been assumed that expenditure in this area will not change. Income under this heading is, in the main, confined to litter fines and pension deductions.

### 18.2.6 Street Cleaning

Street cleaning in the Connacht Ulster Region accounts for expenditure of €3.47 million, or 13% of the Connacht Ulster Region 2014 budget. Of this amount, €3.16 million, or 91%, is accounted for by the two Galway Councils.

Street cleaning activities include:

- Street and road sweeping, both by specialist vehicles and in some cases by street cleaning personnel;
- Cleaning of illegal dumping;
- Maintenance of urban centres, villages and housing estates;
- Clean-ups, on a repayable basis, after sporting and other events;

- Emptying of litter bins and disposal of waste;
- Repair/replacement of damaged litter bins;
- Monitoring and recording effectiveness of the street cleaning activities;
- Overhead costs such as depots and machinery yards; and
- Street washing.

Given Galway's status as the regional capital, litter management and street cleaning services are provided on a seven-day basis. These services are resource-intensive. Many local clean-ups and environmental initiatives continue to be carried out and the budgets include provision to support these groups. In addition to the Tidy Towns programme, significant and valuable work is undertaken through the Pride of Place initiatives in Galway. For the purpose of the counterfactual scenario at this time, it has been assumed that expenditure in this area will continue at current levels. Budgeted street cleaning income in the region is €0.07 million for 2014.

### 18.2.7 Waste Regulation, Monitoring and Enforcement

Waste regulation and monitoring activities cover the permitting of waste operators, waste recovery facilities and other waste facilities such as transfer stations and the monitoring and control of waste movement and producer responsibility obligations, such as Packaging, WEEE, Batteries and Accumulators and End-of-Life Vehicles. The Waste Enforcement Units within the councils seek to ensure compliance with Waste Management Regulations. For the purpose of the counterfactual scenario at this time, it has been assumed that expenditure in this area will remain at current levels. Income is generated by authorisation fees i.e. WFP and CoR application and review fees and enforcement visits.

### 18.2.8 Waste Management Plan

This covers the preparation and subsequent implementation of the regional waste management plan. For the purpose of the counterfactual scenario at this time, it has been assumed that expenditure in this area will remain at the same level in future years with the management and running of the regional waste office an ongoing cost over the planned period. Income is generally from inter-authority contributions.

### 18.2.9 Counterfactual Scenario – Summary

In summary, for the counterfactual scenario, it is not envisaged that there will be any change in local authority waste management activities in the foreseeable future. Given the relative stability of income-generating sources, no change in income is projected.

The regional funding requirement is shown in **Table 18-2**. In the counterfactual scenario, it is envisaged that expenditure will remain in the order of €26.37 million per annum for the period of the Plan. Income from user charges, specific grants,<sup>87</sup> pension deductions, etc. will remain at €8.58 million.

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<sup>87</sup> In this discussion, "specific grants" refer to grants that are provided for, and must be used for, specific purposes.

The funding requirement will remain at current levels, i.e. in the order of €17.79 million. This funding is provided from the councils' general income, such as commercial rates and the Local Property Tax.

**Table 18-2: Funding Requirement Summary**

	2014	2020	2021
	Budget €million	Projected €million	Projected €million
<b>Total Expenditure</b>	26.37	26.37	26.37
<b>Income from User Charges, Specific Grants, etc.</b>	8.58	8.58	8.58
<b>Funding required from other sources</b>	17.79	17.79	17.79

**Note:** Specific grants refer to grants that are provided for, and must be used for, specific purposes. Other sources of income, e.g. commercial rates and local property tax, provide the “funding required from other sources”.

### 18.3 COUNTERFACTUAL ANALYSIS

The counterfactual scenario shows the expenditure profile of the local authorities in the Connacht Ulster Region for 2014 to be as in **Table 18-3** below. No change from this profile is expected over the period to 2021.

**Table 18-3: Expenditure Profile by Activity – Current and Projected**

	2014 Budget €mn	2014 Budget	2020 Proj € mn	2020 Proj
<b>Landfill Operation and Aftercare</b>	10.07	38%	10.07	38%
<b>Recovery and Recycling</b>	3.55	13%	3.55	13%
<b>Waste to Energy</b>	0	0%	0.00	0%
<b>Waste Collection</b>	0.89	3%	0.89	3%
<b>Litter Management</b>	4.28	16%	4.28	16%
<b>Street Cleaning</b>	3.47	13%	3.47	13%
<b>Waste Regulation</b>	3.15	12%	3.15	12%
<b>Waste Management Plan</b>	0.96	4%	0.96	4%
<b>Total</b>	<b>26.37</b>	<b>100%</b>	<b>26.37</b>	<b>100%</b>

The largest single item of expenditure is Landfill Operations and Aftercare, which accounted for €10.07 million in 2014. This is 38% of the total expenditure for the region. This reflects the operations in two working landfill sites as well as the aftercare expenditures associated with a number of closed sites.

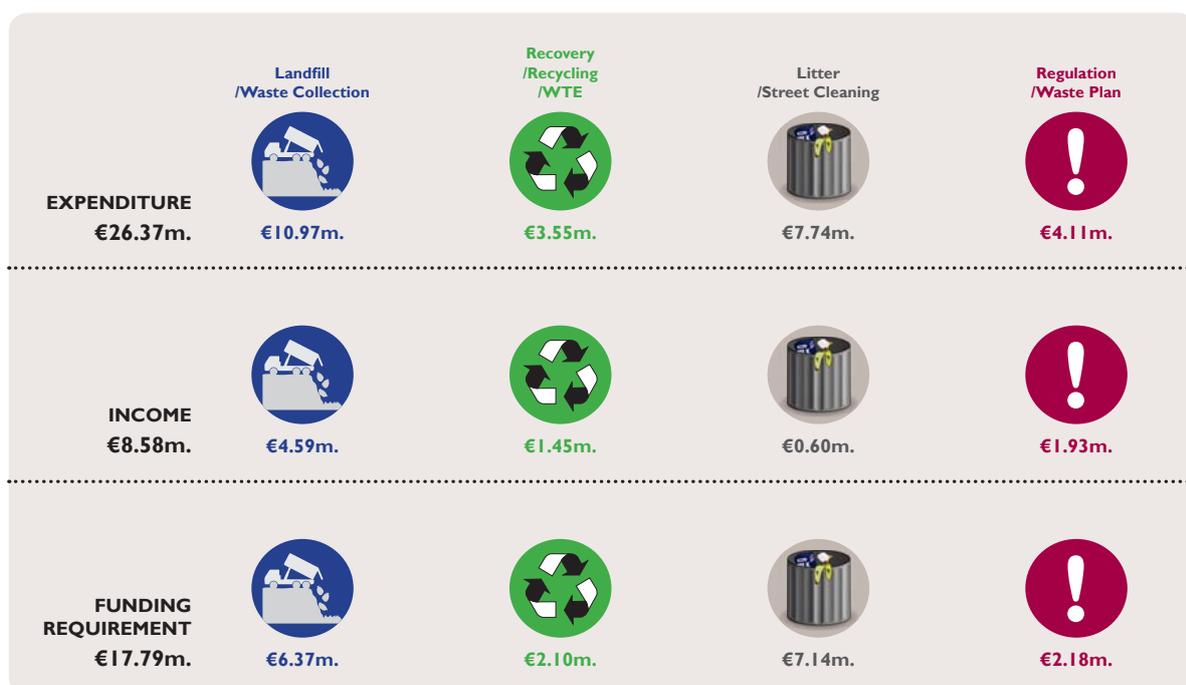
Litter Management, Recovery and Recycling, Waste Regulation and Enforcement and Street Cleaning are the next highest, in that order. However, if Street Cleaning and Litter Management are added together, given the similar nature of these activities, the combined expenditure comes to €7.74 million or 29% of the region's expenditure. This is a substantial commitment, for which there is no potential for cost recovery through user charges. Essentially, street cleaning and litter management

are activities that must be funded by general income such as commercial rates or the Local Property Tax. Income generation from litter fines is negligible.

In **Figure 18-1** the expenditure items as shown in the statutory tables have been grouped into categories to show the underlying nature of the expenditure more accurately. These groupings are as follows:

- Landfill and waste collection. This is in effect the entire waste collection and disposal activities. None of the regional councils is involved in waste collection at this stage, but there are some small legacy costs being incurred. There are just two operational landfill sites, hence much of the landfill costs is also legacy costs.
- Recovery, recycling and waste-to-energy. Waste-to-energy is classed as recovery, and there is no expenditure under this heading in the Connacht Ulster Region.
- Litter and Street Cleaning, given the close relationship between these two activities;
- Regulation, Monitoring and Enforcement.

The allocation of expenditure across these activities is shown in **Figure 18-1**.



**Figure 18-1 Expenditure, Income and Funding Requirement by Activity Group (2014)**

It can be seen that street cleaning, litter, waste collection and disposal activities, when combined, account for 71% of total budgeted expenditure in 2014. At present, as reflected in this counterfactual scenario, this proportion is expected to remain at the same level over the duration of this plan. Activities that are at a higher level in the waste hierarchy, such as recovery, recycling and waste regulation and enforcement, account for 29% of local authority expenditure.

While local authorities were key players in the early stages of the development of the existing waste management infrastructure in Ireland, the current expenditure profile in effect reflects the legacy of past local authority activities, particularly given the length of time required for landfill aftercare.

Landfill and litter-related expenditure will remain a very large proportion of expenditure in the region.

## 18.4 COUNTERFACTUAL FUNDING REQUIREMENT

It was noted previously that the requirement for funding from general sources, such as commercial rates and the Local Property Tax, for 2014 in the Connacht Ulster Region is €17.79 million. It was also noted that this is the funding that has to be provided after certain income, such as user charges, pension deductions and specific grants, has been included.

From **Figure 18-1** it is clearly evident that no group is financed fully from “principal” sources, i.e. user charges and/or specific grants. The smallest funding gaps in money terms are in recovery, recycling and thermal recovery; together with Waste Regulation and Enforcement where the funding gap is €4.28 million. Closing this gap may be problematic, as increasing user charges (for example at CAS) may deter consumers from following good environmental practice. Furthermore, as landfill volumes have been falling nationally, and plastic bag usage decreasing, income to the Environment Fund has been falling and hence grants have been pared back. It is difficult to see how this gap can be closed other than by some form of levy that is put in place in such a manner as not to change good consumer practice.

In respect of Waste Regulation, Monitoring and Enforcement, the funding gap appears small relative to other gaps. The potential to raise additional revenues should be reviewed as part of the plan. The funding required for the landfill, waste collection, street cleaning and litter activities is €13.51 million at present. Two main options should be reviewed here whether there is scope to reduce costs through operational efficiencies and the potential to reduce the levels of service required through, for example, litter awareness programmes and improved citizen behaviour, although these measures can take time to be effective.

## 18.5 PLAN SCENARIO

As noted previously, under the counterfactual scenario – i.e. assuming that there will be no regional waste plan - it is not envisaged that there would be any substantive change in local authority waste management activities or expenditures.

### 18.5.1 Potential Cessation of Existing Activities

While developing the waste plan, consideration was given to what potential exists to curtail or cease some current activities in the interests of operating and cost efficiency. In other words, the range of existing activities was considered to see if any opportunities for savings from these activities could be identified.

These discussions are summarised as follows:

- **Landfill operation and aftercare:** Expenditure under this activity heading is not discretionary. There is a range of statutory obligations under which aftercare is required, as well as other environmental, social and other considerations;
- **Recovery and Recycling activities** are in the first instance “higher order” waste management activities (and include prevention activities), and as such any curtailment or reduction in

these activities would require strong justification. Bring banks, bring centres and civic amenity centres in convenient locations are important pieces of waste infrastructure which facilitate the collection of a broad range of materials. These collection systems contribute towards the management of waste streams and Ireland achieving its EU mandated recovery and recycling targets, particularly in waste streams such as WEEE, where household or business collections are not feasible. Similarly, education in recycling and recovery is a substantial factor in promoting good environmental practice and hence any reduction in these activities would be likely to have negative environmental impacts.

- **Street cleaning and litter management** are key activities of all local authorities, especially urban authorities. Essentially, this is not an activity that can be reduced or eliminated. The effects on business, tourism and industrial development would be significant and would have a far greater economic cost than the financial savings from a cessation of these activities. There may be some opportunities for operational cost savings in particular instances, but no provision is made as these would have to be reviewed and the practical aspects of their implementation would need to be considered. Were change to be sought, it is essential that the effectiveness of current operations is would not be reduced, and if possible, it should be enhanced.
- **Waste Regulation and Enforcement** is a necessary function of local authorities. The costs of non-compliance with waste legislation can be substantial from a social, environmental, economic and financial perspective. These costs can range from the work needed to remedy pollution and other consequences up to substantial fines being levied by the European Court of Justice for non-compliance with EU legislation. There is no identifiable potential to reduce activity in this area.
- **Other areas of expenditure** are relatively small and while it is possible to consider reductions in some cases, such as, the assistance paid to low-income households in respect of household waste collection services, the savings would be modest in the context of overall local authority expenditure in the region.

In summary, there is no identifiable substantive opportunity to reduce current local authority expenditure in the region without creating potentially serious economic, social, environmental and financial risk.

## 18.6 FINANCIAL IMPLICATIONS FOR LOCAL AUTHORITIES

In developing the waste plan, the Region has prepared a range of policies and actions that should be implemented. These are detailed in **Chapter 19**. For the purpose of this financial appraisal, the relevant actions are shown in **Table 18-4**.

For the local authorities in the Connacht Ulster Region, the financial implications of the suite of proposed actions can be classified as being of two types, namely staff/resources and non-staff resources.

- **Staff**-A key factor is that the staff implications of the proposed actions are limited in the case of the Connacht Ulster Region to the provision of additional staff at the Regional Waste Management Office, some of whom may be provided through redeployment. For the Connacht Ulster Region, we estimate that the annual additional expenditure will be of the scale of €200,000 per annum.
- **Environmental Awareness Services**-As outlined in the actions, these activities will focus on specific areas and aspects of waste management such as targeting areas where collection

Table 18-4: Policy Actions with Financial Implications

Action	Summary Description	Activity Heading	Potential Funding Source(s)	Main Responsibility	Staffing Required (Over & above existing staff)	Additional Finances
B 1.1	Appoint or retain Environmental Awareness Officers (EAOs) to work on the implementation of the waste plan	Waste Management Plan	Local authority budgets	Local Authorities	Possibly none	Potentially
B 1.2	Ensure on-going financial allocation annual budgets for waste prevention related activities over and above staff costs and any grant aid.	Waste Management Plan	Local authority budgets	Local Authorities	None	Estimated €0.15€/inhabitant
B 2.1	Collaborate regionally on prevention initiatives and programmes targeting priority areas.	Waste Management Plan	Local authority budgets	Local Authorities	None	Funding required for implementation
B 2.2	Ensure existing documentation on sectoral waste prevention actions and programmes is catalogued, available and disseminated in region.	Waste Management Plan	Local authority budgets	Local Authorities	None	Funding required for implementation
B 2.3	Maintain the implementation of effective local prevention, awareness and education campaigns.	Waste Management Plan	Local authority budgets	Local Authorities	None	Funding required for implementation
B 2.4	Maintain, develop and integrate waste prevention measures and systems into all local authority offices and operations to best practice standards.	Waste Management Plan	Local authority budgets	Local Authorities	None	Funding required for implementation
B 4.1	Promote the prevention of hazardous wastes to households, communities and small businesses	Waste Management Plan	Local authority budgets	Local Authorities	None	Funding required for implementation
B 4.3	Collaborate with other national authorities and agencies delivering communication and information campaigns	Waste Management Plan	Local authority budgets	Local Authorities	None	Funding required for implementation
C 1.2	Review the operation of the CA Sites to facilitate the segregation of materials for reuse.	Recycling Activities	Permit Fees; Facility Fees; PRI Schemes	Lead Authority-Regional Office	None	Funding required to re-arrange sites
D 2.1	Establish Regional Waste Management Office (RWMO) and the requisite structures	Waste Management Plan	Environmental Fund	Lead Authority-Regional Office	RWMO in place	Some additional funding required
D 2.2	Establish Regional Co-Ordinator, Resource Efficiency Officer, Prevention Officer, Technical Officer and Administrative support	Waste Management Plan	Environmental Fund	Lead Authority-Regional Office	RWMO in place	Some additional funding required
F 1.1	Monitor Household compliance with segregation of waste	Waste Regulation Monitoring	Permit Fees	Local Authorities	None	Funding required
F 1.2	Monitoring apartment complexes to improve	Waste Regulation	Permit Fees	Local Authorities	None	Funding required

Action	Summary Description	Activity Heading	Potential Funding Source(s)	Main Responsibility	Staffing Required (Over & above existing staff)	Additional Finances
		Monitoring				
G 2.3	compliance with the segregation of waste	Landfill Aftercare Costs	DECLG	Local Authorities	None	Funding required
G 2.4	Prepare applications for high-risk landfill sites	Landfill Aftercare Costs	DECLG	Local Authorities	None	Funding required
G 4.1	Remediate high risk sites (subject to funding being available)	Environmental Awareness Services	Environmental Fund	Lead Authority-Regional Office	None	Funding required to cover the survey
G 4.2	Identify areas of low household waste collection coverage and determine the cause	Environmental Awareness Services	Environmental Fund	Local Authorities	None	Funding required for implementation
G 4.3	Design and implement a programme to regulate areas of low household waste collection coverage	Environmental Awareness Services	Environmental Fund	Lead Authority-Regional Office	None	Some funding implications for LAs
H 2.1	Engage with waste collectors to serve areas of low collection coverage	Recycling Activities	Range of Fees; LEOs; PRI Schemes	Lead Authority-Regional Office	None	Yes
H 2.2	Investigate viability of pilot scheme for farm chemicals reuse	Recycling Activities	Range of Fees; LEOs; PRI Schemes	Lead Authority-Regional Office	None	Yes
E3	Examine the expanding of reuse schemes for bulky or hazardous waste	Recycling Activities	Local authority budgets	Local Authorities	None	Yes
E5	Develop the existing networks for bringing infrastructure to facilitate Hazardous and Non-Hazardous wastes	Recycling Activities	Local authority budgets	Local Authorities	None	Yes
E7	Explore the possibility of accepting hazardous waste at existing CA facilities	Recycling Activities	Local authority budgets	Local Authorities	None	Yes
E11	Work with the EPA and others to support collection of hazardous farm waste	Recycling Activities	Local authority budgets	Local Authorities	None	Yes
	Consider the potential to develop activities at closed landfill sites	Other	Local authority budgets	Local Authorities	None	Yes

rates are low and targeting specific types of waste, such as hazardous waste from farms. No additional staff may be required, though a provision for an additional expenditure of €500,000 in the CU region is made. This is to provide for non-staff expenses in activities such as awareness campaigns and includes, but is not limited to, the per capita provision proposed in Chapter 19.

- **Recycling Activities**-The actions in respect of recycling are focused on improving recovery of waste for potential re-use; as well as collection of hazardous waste and the establishment of pilot schemes aimed at areas such as farm chemical re-use. We provide an expenditure of €0.75 million per annum for future years and propose that these activities be funded by a range of income sources, including assistance from producer responsibility compliance schemes; user charges for collection at the recycling centres and revenues from sales of recyclable materials. The detailed breakdown of these revenue opportunities cannot be determined until the relevant pilot schemes have been carried out. Should the schemes demonstrate that the environmental and financial objectives are not achievable, the cost and income projections may need revision.
- **Waste Regulation Monitoring**-The action plans in respect of waste regulation are focused on the compliance of households (houses and multi-storey dwellings) with regulatory requirements. Resource needs will be modest; additional staff are not required, hence we provide €150,000 per annum and propose that these costs be funded by increased permit fees. Improved source segregation should provide improved quality and quantity of recyclable wastes, which will in turn improve the revenues earned by waste collectors from the sale of recyclables to processors. This measure should enhance our overall recycling performance as well as improving financial returns.
- **Remediation of High-Risk Landfill Sites**-This is an activity that has a high priority, though at this stage the annual level of expenditure cannot be predicted or provided for with any degree of certainty. Landfill expenditure in the Connacht Ulster Region is currently of the order of €8.2 million per annum. The ultimate level of additional expenditure in respect of remediation of closed high risk sites will depend on the findings of the initial site surveys and the scale to which revenue raising activities such as resource mining can be carried out. There are 12 sites of this nature in the Connacht Ulster Region and the potential cost is between €11.58 million and €20.27 million. This is based on experience on existing sites in Ireland. We provide for expenditure of €2 million per annum from 2017 to 2021. This expenditure will be met to a substantial extent by DECLG/EPA funding together with any revenues that may be earned from resource mining and suchlike.

A summary of the expenditures and incomes provided for is shown in **Table 18-5****Error! Reference source not found.**. The incremental funding needs for local authorities arising from these Action Plans in the Connacht Ulster Region is estimated at €0.7 million per annum initially, rising to €1 million from 2017 onwards.

**Table 18-5: Summary of Additional Expenditure Needs**

	Expenditure per annum €	Income per annum €
Regional WMO	200,000	0
Environmental Awareness Services	500,000	0
Recycling Activities	750,000	750,000
Waste Regulation Monitoring	150,000	150,000
Remediation of High Risk-Landfill Sites from 2017	2,000,000	1,800,000
<b>Total</b>	<b>3,600,000</b>	<b>2,700,000</b>

## Policy

The review of local authority finances shows a considerable gap in funding requirement to maintain the current level of expenditure. A significant portion of existing expenditure is on lower tier activities which is reducing the available income for the implementation of higher activities related to prevention, reuse and recycling. The local authorities in the region are committed to reviewing the current level of expenditure across the tiers of the hierarchy to ensure that adequate funding is being diverted to activities which deliver the highest environmental outcome.

### Policy:

- G1. Ensure the highest environmental and human health benefits are achieved by prioritising the implementation of the upper tiers of the waste hierarchy and ensuring these actions are funded appropriately .

The local authorities in the region recognise the current funding requirement for waste activities in the region and the need to explore other potential funding sources. Over the course of the plan the local authorities will consider applying for funding, from both national and European authorities, for the financing of activities related to the implementation of the waste plans. Projects carried out under such funding will enhance waste resource management on a regional and national level which will bring associated environmental benefits.

### Policy:

- D4. Work with key stakeholders, including government and industry operators, on the funding of local authority waste activities in the region and co-ordinate applications for relevant national and European funding.

## 18.7 INVESTMENT IMPLICATIONS

For the local authorities in the Connacht Ulster Region, no capital investment requirements are foreseen.<sup>88</sup> For the Connacht Ulster Region specifically, regional investment that is anticipated includes additional biological treatment capacity to cater for municipal biowaste and additional biological treatment capacity to cater for agricultural waste. In addition, private sector investment in additional reprocessing, recycling and re-use infrastructure is anticipated.

Additional private sector investment is anticipated in the development of other recovery facilities to treat residual municipal wastes and also residual hazardous wastes; the latter need is identified by the EPA in the National Hazardous Waste Management Plan. The capacity need expressed in the plan for these types of treatment is on a national basis.

<sup>88</sup> Landfill capping and closure is shown on the local authority current accounts; and not the capital accounts; so this expected expenditure is taken into account in the counterfactual scenarios

As shown in **Table 18-6**, the investment in treatment infrastructure which will operate on a national basis is estimated at €260 million, while the investment for regional facilities is estimated at €35 million. These investments are to provide additional waste management capacity – nationally and regionally – and are those specified in this regional waste plan. It is anticipated that other investment in respect of pre-treatment, preparing for reuse, and reprocessing (of secondary wastes) is very likely to take place over the plan period.

Investment in reuse and preparing for reuse activities will be small by comparison to other waste mechanical processing and thermal recovery operations. These activities generally can operate out of small commercial spaces and are often quite resource-intensive operations relative to the tonnage of material handled. The job creation aspect is a clear benefit of these types of operations as well as the value which is typically added to the materials handled. Many of these activities take materials, which may or may not be waste, and through simple steps generate a material or product which can be recirculated into the economy and given a new life.

Investment in indigenous reprocessing of secondary waste materials is supported by the waste plan but quantifying the scale of investment is not possible. Developing these facilities depends on the availability and quality of the secondary waste material in question. Reprocessors depend on a consistent quality and feedstock of material, which, along with the availability of a robust technology, will be important factors prior to making any investment. The market development programme, RX3, has produced a number of reports<sup>89</sup> looking at different waste materials (paper, plastics, organics, bulky wastes) and the potential to grow markets in Ireland.

With respect to pre-treatment type operations there will almost certainly be investment on the part of the private operators that is driven by the need to replace obsolete plant or to install new processing lines. It is not possible to quantify the value of these investments in the context of the preparation of this plan. However, the investment being considered is generally of two types; firstly, investment in the replacement of existing infrastructure; and second, investment in new technologies. This private investment is driven primarily by existing treatment capacity, market share and competitive reasons and will not add, substantially, to regional capacity.

**Table 18-6: Anticipated Investment – Private Sector**

Infrastructure Element	Capacity (Tonnes)	Estimated Cost (€)
<b>National Treatment</b>		
Thermal Recovery	300,000	200 million
Hazardous Waste Thermal Recovery	50,000	60 million
<b>Total Investment</b>		<b>260 million</b>
<b>Regional Treatment</b>		
Biological Treatment-biowaste	40,000	15 million
Biological Treatment–agri-waste	Not quantified	20 million
Reuse; Reprocessing; Pre-Treatment		Not Quantified
<b>Total Investment</b>		<b>35 million</b>

<sup>89</sup> Refer to [www.rx3.ie](http://www.rx3.ie) to access the various reports.

## 18.8 SUMMARY OF FINANCIAL IMPLICATIONS

The counterfactual scenario, i.e. assuming no changes in current activities or plans, showed the projected financial scenario for the CUR given in **Table 18-7**.

**Table 18-7: Counterfactual Scenario – Funding Requirement**

	2014	2015	2016	2017	2018	2019	2020	2021
	Budget € m	Proj. € m						
<b>Total Expenditure</b>	26.37	26.37	26.37	26.37	26.37	26.37	26.37	26.37
<b>Income from User Charges, Specific Grants, etc.</b>	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.58
<b>Funding required from other sources</b>	17.79	17.79	17.79	17.79	17.79	17.79	17.79	17.79

It can be seen that the funding required from sources other than user charges or specific grants over the period of the plan, in real terms (i.e. no provision for inflation) remains at 2014 levels of €17.79 million.

**Table 18-8** shows the financial implications of the Regional Waste Strategy proposed. In summary, it is envisaged that the financial implications of the regional waste plan for the CUR are that:

- Local authorities in the region will incur additional current expenditure of €1.6 million in 2015, i.e. from the €26.37 million shown in the counterfactual case, **Table 18-7**, to €27.97 million shown for 2015 in the Regional Waste Plan scenario, **Table 18-8**. A similar increase is projected in 2016. The increase will rise to €3.6 million in 2017 and remain at that level thereafter. However, this estimate is highly dependent on the extent to which additional works on high-risk landfill site investigations and remedial works take place. This activity is funded to a significant extent by the DECLG and any variation will not have a significant impact on overall funding needs;
- The local authorities will generate additional income of €0.9 million in 2015 and 2016, rising to €2.7 million in 2017 onwards;
- The incremental funding required to be provided by local authorities from their own resources over and above the counterfactual scenario, is estimated at €0.7 million for 2015 and 2016, rising to €0.9 million from 2017 onwards;
- No additional local authority investment in the Connacht Ulster Region is anticipated as a consequence of this plan;
- Expected private sector investment over the Plan period is estimated at €260 million on national facilities and €35 million on regional facilities; with an unknown amount to be spent on replacement plant and new technology.

The funding required is higher than that shown in the counterfactual scenario, however, the increases are relatively modest.

**Table 18-8: Funding Requirement – Regional Waste Plan Scenario (Units = € million)**

	2014	2015	2016	2017	2018	2019	2020	2021
	Budget € m	Proj. € m						
<b>Total Expenditure</b>	26.37	27.97	27.97	29.97	29.97	29.97	29.97	29.97
<b>Income from User Charges, Specific Grants etc.</b>	8.58	9.48	9.48	11.28	11.28	11.28	11.28	11.28
<b>Funding required from other sources</b>	17.79	18.49	18.49	18.69	18.69	18.69	18.69	18.69

## 18.9 BENEFITS

It is difficult to estimate the range of social, economic and environmental benefits arising from the proposed regional waste plan. In the first instance, while the net costs to the local authorities in the Connacht Ulster Region may be small – and in effect will require the forgoing of some of the potential future savings from reductions in activities such as landfill aftercare – there are costs to the State as a whole; particularly the remediation of high-risk landfill sites, for which we can make just a provision at present. Below is a summary of the benefits resulting from the implementation of the waste plan:

- Job Creation**-No new direct job creation is expected on the part of the local authorities in the Connacht Ulster Region, except for some incremental staffing within the Regional Waste Office. Gross expenditure (i.e. ignoring incremental income from user charges etc.) over the counterfactual scenario during the period of the plan on the part of State organisations (incl. DECLG; EPA) is estimated at €17.6 million.<sup>90</sup> The job creation potential of landfill remediation is unknown, but if the “conversion rate” from expenditure to jobs created was the same as, say, construction, then the proposed work would create some 30 new jobs each year. If the job creation of the balance of the expenditure is considered, the plan may create of the order of 40 jobs per annum. This waste plan does not make any claim on the job creation potential of the private sector investment cited previously; and also it should be noted that many of the proposed actions within local authorities will be carried out by existing staff. Many activities will be staffed through the re-deployment of staff and thus there is a strong element of unquantified job maintenance in this waste plan.
- Waste Regulation**-While Ireland has achieved very high levels of waste recovery and recycling, there is scope for further improvement in certain areas. For example, the EPA National Waste Report 2012 shows that while recovery of paper, board and glass is of the order of 90%, the corresponding figures for more valuable materials such as plastics and aluminium are 78% and 55% respectively. If the increased emphasis on improved source segregation were to lead to a 4 percentage point increase in the recovery of these materials, i.e. from 78% to 82% for plastics and from 55% to 59% for aluminium, the value of the materials recovered would increase by €1.3 million nationally. While these increased revenues would accrue to waste collectors, from the perspective of the State as a whole, it can be seen that modest improvements in recycling volumes, arising from improved source segregation, would justify the costs of the plan. Source segregation would be a far more

<sup>90</sup> This assumes a continuation of the existing grants, the provision of grant aid towards the remediation of high risk landfill sites and potential contributions towards prevention and awareness campaigns.

effective means in terms of both technology and costs-of reducing the quantities of recyclable materials being consigned to landfill.

- **Recycling and Re-use** – It is more difficult to provide a quantitative estimate for the benefits of developing the re-use of particular waste items, such as WEEE. In 2012, 40,818 tonnes of WEEE was collected in Ireland (EPA NWR 2012). In Britain, a survey of WEEE deposited at various collection points by WRAP (Waste Resources Action Programme) found that 24% of the material is resalable immediately or after viable repair or refurbishment. Applying this ratio to WEEE collected in Ireland would give a resalable volume of just under 10,000 tonnes. If the value of re-used WEEE were similar to that of the UK, this would have a net value of the order of €15 million per annum nationally – after purchasing and repair costs had been accounted for. There are many variables between the UK and Ireland, but this example shows that the economic benefits of re-used WEEE could be substantial, relative to the additional costs involved. There is further confirmation of these benefits in the recent national study on bulky waste which reported that the 30,000 bulky items delivered to CAS have a potential reuse value of €60 million.

Certain activities such as historic landfill remediation are required so that Ireland is in compliance with various EU Directives and legislation, and the economic benefits are the avoidance of financial penalties that could be levied on the State in the event of on-going non-compliance. There are other areas where there is no basis that we are aware of that can be used to even illustrate the economic benefits, such as re-use of farm chemicals. This can only be determined by the pilot projects proposed. However, the examples shown do illustrate in our view, that the potential economic benefits of the actions proposed in this waste plan (as part of the transition to a circular economy) outweigh the costs. In addition, there are immeasurable environmental and social benefits in terms of quality of life and promotion of Ireland as a tourist and investment destination that are derived from many factors, including leading edge waste management strategies.

## 18.10 CONCLUSIONS

It is not possible to predict accurately the level of expenditure and income in future years, as a major portion of that estimate is dependent on the availability of funding from central government; and the financial capacity of the State – while improving – does not allow funding assumptions to be made with confidence. The overall thrust of the plan is to redefine waste activities in the context of existing budgetary limitations and staffing. The plan does not require additional funding over the current budget provisions. The impact can be substantial and justifies the fundamental approach.

The investment potential in waste management infrastructure is substantial. The proposed plan has a strong element of improving consumer behaviour, which should provide a stronger market base on which such investment can take place, which will in turn provide additional economic benefits.

## 19 POLICY ACTIONS AND TARGETS

The strategic vision for the CUR to 2021 is captured in **Section 5.2**, which describes the strategy and principles of the plan. The local authorities have set out the strategic objectives of the plan, which embody the strategic approach and covering eight policy areas (labelled A–H). The strategic objectives have been further expanded into policies which have been included and described at appropriate points throughout the plan. A full list of the plan policies is presented in **Appendix G**.

The CUR has 3 main overarching performance targets, these are detailed in **Section 5.4.2** and are summarised as follows:

- 1% reduction per annum in the quantity of household waste generated per capita over the period of the plan;
- Achieving a recycling rate of 50% of managed municipal waste by 2020; and
- Reducing to 0% the direct disposal of unprocessed<sup>91</sup> residual municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

These performance targets will be measured over the plan period along with the other actions and targets. In this chapter the policies of the plan are further expanded into implementable actions with associated timelines and measures of success. The delivery of these policies and actions will assist in the achievement of the overall performance targets of the plan. The policies relating to the provision and regulation of infrastructure are documented in **Chapter 16** and are primarily focused on the waste treatment infrastructure and operators in the market. These policies are of a different nature to other policies and are not directly expanded into measurable actions. However specific actions detailed in this chapter address some of the regulatory policies from Chapter 16.

In the course of the development of the policies and actions the local authorities have considered many factors. The findings of the evaluation reports, which examined the success of implementing previous plan policies, have been analysed and the recommendations made therein assisted the local authorities in the preparation of the policies and actions in this plan.

The formulation of the plan policies and actions has also taken account of European and national waste legislative requirements, targets and policy objectives. Local, regional and national waste issues outside of the legislative framework and the current status of waste management in the CUR have also been addressed in the plan policies and actions assigned where possible.

Finally, environmental impacts have been considered throughout the evolution of the plan from the evaluation reports to the preparation of the strategic objectives, policies and actions.

### 19.1 STRUCTURE OF POLICY ACTIONS

Each of the strategic objectives (A-H) described in **Section 5.3** of the plan has been referenced, as has each of the linked policies described throughout the plan (A1, A2, B1, etc.). The actions

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<sup>91</sup> Unprocessed residual waste means residual municipal waste collected at kerbside or deposited at landfills/CA sites/transfer stations that has not undergone appropriate treatment through physical, biological, chemical or thermal processes, including sorting.

developed to implement the plan policies are linked and referenced accordingly ( A.1.2, A.1.2, B.2.1, B.2.2, etc.). The numbering sequence for area A is:

- A: Strategic Objective;
- A.1 to A.4 : Policy;
- A.1.1, A.2.1, A.2.2, A.3.1 & A.4.1: Policy Actions.

All strategic policy objectives follow the structure described with the exception of the infrastructure policies i.e. objective E. This policy is recognisably different to the other areas with policies directed primarily towards waste market operators whereas the regional lead authorities and local authorities (with the region) are the primary lead in the other policy areas.

Each policy action has an associated target, an expected timeline, an indicator where relevant and identifies the **body with primary responsibility** which will be supported by other body/bodies listed for the implementation of the action. **Figure 19-1** describes how the policy actions are set out in the following chapters.



**Figure 19-1 Policy Actions & Targets Flow Diagram**

In the following sections the strategic objectives, policies and implementable actions are set out in full, starting with Strategic Objective A and finishing with H. Policies E are addressed in **Chapter 16**.

## 19.2 POLICY & LEGISLATION ACTIONS

### Strategic Objective A

The region will implement EU and national waste and related environmental policy, legislation, guidance and codes of practice to improve management of material resources and wastes.

**A.1 Policy** Take measures to ensure the best overall outcome by applying the waste hierarchy to the management of waste streams.

<b>A.1.1 Policy action</b>	<b>Move waste further up the hierarchy by eliminating the direct disposal of unprocessed residual municipal waste to landfill<sup>92</sup></b>
<b>Targets</b>	Consult with the EPA and recommend new collection permit conditions for issue to NWCPO
<b>Expected Timeline</b>	July 2016
<b>Indicator</b>	% residual municipal waste (unprocessed) delivered directly to landfill
<b>Responsibility</b>	<b>Lead Authority, EPA &amp; NWCPO</b>

<sup>92</sup> ECJ 323/13.

<b>SEA Mitigation Proposed</b>	Negative impacts associated with Policy A.1 and Policy Action A1.1 relate to possible impacts associated with siting of infrastructure. While it is acknowledged that the plan includes environmental protection criteria to reduce the negative effects of implementation, it is recommended that consideration be given to developing <i>Siting Guidelines</i> in due course to guide development of infrastructure in a sustainable manner which protects the environment and human health.
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**A.2 Policy** Implement the polluter pays principle across all waste services and regulatory activities in a manner appropriately reflecting the risk to the environment and human health.

<b>A.2.1 Policy action</b>	<b>Review the application fee structures related to regulatory activities for local authority facility authorisations</b>
<b>Targets</b>	Complete review and issue suggested changes to the DECLG
<b>Expected Timeline</b>	Q4 2016
<b>Indicator</b>	N/A
<b>Responsibility</b>	<b>Lead Authority</b> , DECLG, and local authorities
<b>SEA Mitigation Proposed</b>	Any review of fees and charges should take into account how they might indirectly encourage unsustainable waste management activities.
<b>A.2.2 Policy action</b>	<b>Review and implement (if appropriate) charging structures in place for wastes accepted at local authority civic amenity and other local authority waste facilities</b>
<b>Targets</b>	Complete review and implement appropriate charges
<b>Expected Timeline</b>	Q3 Annually
<b>Indicator</b>	N/A
<b>Responsibility</b>	<b>Local Authority</b> , lead authority

**A.3 Policy** Contribute to the improvement of management performance across all waste streams through the implementation of policy actions and monitor progress towards national targets.

<b>A.3.1 Policy action</b>	<b>Prepare an annual report on the progress of policy actions and the implementation of mandatory and waste plan performance targets (refer to Chapter 5)</b>
<b>Targets</b>	Prepare annual report and disseminate information
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	All statistical indicators & progress on policy actions
<b>Responsibility</b>	<b>Lead Authority</b> , EPA, NWCPO, PROs and local authorities
<b>SEA Mitigation Proposed</b>	The use of key performance indicators should be considered in the annual reporting

**A.4 Policy** Aim to improve regional and national self-sufficiency of waste management infrastructure for the reprocessing and recovery of particular waste streams, such as mixed municipal waste, in accordance with the proximity principle. The future application of any national economic or policy instrument to achieve this policy shall be supported.

<b>A.4.1 Policy action</b>	<b>Monitor and report on planned, authorised and utilised capacity on a regional and national basis (building on the work done for the waste plan)</b>
<b>Targets</b>	Establish, maintain and publish capacity database
<b>Expected Timeline</b>	Ongoing
<b>Indicator</b>	Not applicable
<b>Responsibility</b>	<b>Lead Authority</b> , local authority, NWCPO, EPA and DECLG

## 19.3 PREVENTION ACTIONS

### Strategic Objective B

Prioritise waste prevention through behavioural change activities to decouple economic growth and resource use.

**B.1 Policy** Local authorities in the region will ensure that the resources required to implement waste prevention activities are available through the lifetime of the plan.

<b>B.1.1 Policy action</b>	<b>Appoint, where the role does not exist, or retain the role of the local authority Environmental Awareness Officers (EAOs) on a whole time equivalent basis to work on activities including the implementation of the waste plan on a local and regional basis.</b>
<b>Targets</b>	Retain EAO staff and clarify role as needed
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	Number of EAO staff
<b>Responsibility</b>	<b>Local Authority</b> , Lead Authority
<b>B.1.2 Policy action</b>	<b>Ensure an on-going financial allocation is made in the local authority annual budgets to cover expenditure on waste prevention related activities over and above staff costs and any grant aid.</b>
<b>Targets</b>	A minimum of €0.15/inhabitant to be spent on local prevention projects to be reviewed annually
<b>Expected Timeline</b>	Q1 each year
<b>Indicator</b>	Total prevention/reuse budget per annum
<b>Responsibility</b>	<b>Local Authorities</b>

**B.2 Policy** 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.

<b>B.2.1 Policy action</b>	<b>Collaborate regionally on prevention initiatives and programmes targeting priority areas to raise awareness of the benefits of prevention and deliver campaigns with more impact and better value for money.</b>
<b>Targets</b>	Implement at least one regional campaign per annum
<b>Expected Timeline</b>	Q4 each year
<b>Indicator</b>	Number of regional campaigns per year
<b>Responsibility</b>	<b>Lead Authority</b> Local Authorities
<b>B.2.2 Policy action</b>	<b>Ensure existing documentation on sectoral waste prevention actions and programmes is catalogued, available and disseminated in region. New material on prevention will be produced to fill any sectoral needs or gaps identified.</b>
<b>Targets</b>	Review library of prevention documentation annually and explore sectoral gaps
<b>Expected Timeline</b>	Q4 each year
<b>Indicator</b>	Number of documents in the library database
<b>Responsibility</b>	<b>Lead Authority</b>
<b>B.2.3 Policy action</b>	<b>Maintain the implementation of effective local prevention, awareness and education campaigns targeting households, communities, schools and businesses.</b>
<b>Targets</b>	Improve waste management practices through behavioural change
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	Number of local events, workshops and campaigns
<b>Responsibility</b>	<b>Local Authorities</b>
<b>B.2.4 Policy action</b>	<b>Maintain, develop and integrate waste prevention measures and systems into all local authority offices and operations to best practice standards.</b>
<b>Targets</b>	Reduce the quantity of waste generated at local authority head office by 10% over the baseline year (2015) during the plan period
<b>Expected Timeline</b>	2020
<b>Indicator</b>	% reduction over baseline year and/or % reduction per employee
<b>Responsibility</b>	<b>Lead Authority</b> Local Authorities

**B.3 Policy** Build and maintain a strong partnership with the National Waste Prevention Programme (NWPP).

<b>B.3.1 Policy action</b>	<b>Establish regional and local structures and networks through the regional office to ensure effective, consistent and practical coordination and implementation of NWPP initiatives</b>
<b>Targets</b>	Set up a workable regional framework for implementing NWPP initiatives
<b>Expected Timeline</b>	Q4 2015
<b>Indicator</b>	N/A
<b>Responsibility</b>	<b>Lead Authority</b>

<b>B.3.2 Policy action</b>	<b>Work with the committee and management team of the NWPP to contribute to the development of the programme's initiatives and to report on the effectiveness of implementation and funding at regional and local levels.</b>
<b>Targets</b>	Engage with the EPA at least 3 times per annum on prevention issues
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	Number of meetings attended per annum
<b>Responsibility</b>	<b>Lead Authority</b> EPA

**B.4 Policy** 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).

<b>B.4.1 Policy action</b>	<b>Promote the prevention of hazardous wastes to households, communities and small businesses building on effective initiatives and disseminating best practice throughout the region</b>
<b>Targets</b>	Implement one campaign per annum on hazardous waste prevention
<b>Expected Timeline</b>	Q4 each year
<b>Indicator</b>	Number of campaigns on hazardous waste prevention
<b>Responsibility</b>	<b>Local authorities</b> Lead Authority
<b>B.4.2 Policy action</b>	<b>Work with manufacturers, designers, compliance schemes, and national authorities on the development of waste prevention measures for products and services.</b>
<b>Targets</b>	Meet annually with key stakeholders to discuss solutions to prevent waste
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	n/a
<b>Responsibility</b>	<b>Lead authority</b> EPA, Irish Water, DECLG, PROs ,Local Authorities
<b>B.4.3 Policy action</b>	<b>Collaborate with other national authorities and agencies delivering communication and information campaigns to include messaging on waste prevention and recycling.</b>
<b>Targets</b>	Communicate with relevant authorities annually to discuss upcoming campaigns and potential for collaboration
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	Number of householders to receive communication on waste issues
<b>Responsibility</b>	<b>Lead authority</b> Irish Water, Sustainable Energy Authority of Ireland, local authorities, other state agencies and government departments
<b>SEA Mitigation proposed</b>	Policy B.4.3 would benefit from messaging around the impact of waste on society and ecosystem services to raise awareness across the region of why waste prevention and proper management is vital to environment and human health.

## 19.4 RESOURCE EFFICIENCY AND CIRCULAR ECONOMY

### Strategic Objective C

The region will encourage the transition from a waste management economy to a green circular economy to enhance employment and increase the value recovery and recirculation of resources.

**C.1 Policy** Establish reuse, repair, and preparing for reuse activities and networks to recirculate and extend the lifespan of items.

<b>C.1.1 Policy action</b>	<b>Engage with and facilitate enterprises in the development of repair and preparing for reuse activities</b>
<b>Targets</b>	To engage with the sector to explore and develop possibilities
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	Number of reuse activities
<b>Responsibility</b>	<b>Lead Authority</b> Local Authorities
<b>SEA Mitigation Proposed</b>	A guidance note will be prepared for reuse and preparation for reuse activities at the local level to assist operators complying with relevant national regulations and delivering a positive sustainable service overall.
<b>C.1.2 Policy action</b>	<b>Review and amend (where appropriate) existing and/or condition the award of new local authority CA site contracts to facilitate the segregation of materials for reuse/preparing for reuse by social enterprises and similar organisations (WEEE will be considered subject to discussion and agreement with the compliance schemes).</b>
<b>Targets</b>	Aim to reuse or prepare for reuse of up to 10% of non-residual waste at local authority CA sites
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	Tonnage of materials reused/prepared for reuse at local authority CA sites
<b>Responsibility</b>	<b>Lead Authority</b> Local Authorities
<b>C.1.3 Policy action</b>	<b>Engage with the Community Reuse Network Ireland (CRNI) and other similar networks to develop a network of reuse/upcycling activities and promotional events.</b>
<b>Targets</b>	To promote reuse and upcycling in communities.
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	Number of activities/events
<b>Responsibility</b>	<b>Lead Authority,</b> Local Authorities

**C.2 Policy** 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.

<b>C.2.1 Policy action</b>	<b>Review/introduce presentation of waste bye-laws, across the region, to maximise the quantity and quality of recyclable waste collected and amend/replace/introduce new bye-laws if appropriate.</b>
<b>Targets</b>	Review existing bye-laws.
<b>Expected Timeline</b>	Q4 2018
<b>Indicator</b>	Number of waste bye-laws reviewed or introduced
<b>Responsibility</b>	<b>Lead Authority</b> , Local Authorities, Elected Members
<b>C.2.2 Policy action</b>	<b>Produce a code of practice for local authority authorised facilities to maximise the quantity and quality of material produced.</b>
<b>Targets</b>	To produce the code of practice in consultation with the EPA
<b>Expected Timeline</b>	Q4 2017
<b>Indicator</b>	Code of practice completed
<b>Responsibility</b>	<b>Lead Authority</b> , Local Authorities, EPA
<b>SEA Mitigation proposed</b>	The code of practice referenced in C2.2 should include reference to site management for the protection of human health and the environment with particular focus on pathways to groundwater and surface water from storage of segregated materials

**C.3 Policy** Identify and promote the growth of secondary material markets and enterprises in the region through regional and local supports.

<b>C.3.1 Policy action</b>	<b>Liaise with and support Economic Development Departments of local authorities in the identification of enterprises and potential clusters of enterprises for the development of secondary material markets</b>
<b>Targets</b>	Meet with economic development departments and promote awareness regarding rethinking raw materials for new and established enterprises
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	To be confirmed following discussion with economic development department
<b>Responsibility</b>	<b>Lead Authority, Local Authority</b>

**C.4 Policy** Contribute to the greening of public procurement in local authorities through the inclusion of resource efficient criteria in all tendering processes related to waste plan activities.

<b>C.4.1 Policy action</b>	<b>Prepare resource efficiency criteria for local authority waste related contracts.</b>
<b>Targets</b>	Review existing contractors and develop new criteria for resource efficiency
<b>Expected Timeline</b>	Q4 2016
<b>Indicator</b>	Number of contracts containing resource efficiency criteria as a % of total contracts issued
<b>Responsibility</b>	<b>Lead Authority</b> , Local Authorities

<b>C.4.2 Policy action</b>	<b>Implement a systematic engagement with local or regional local authority procurement officers and the Office of Government Procurement (OGP) to ensure the inclusion of resource efficiency criteria in contracts.</b>
<b>Targets</b>	To meet with local or regional procurement officers and relevant staff of the OGP at least every six months.
<b>Expected Timeline</b>	Annually from Jan 2016 onwards
<b>Indicator</b>	Number of meetings with procurement officers or staff of OGP
<b>Responsibility</b>	<b>Lead Authority</b> , Local Authorities

**C.5 Policy** Work with and through business support agencies and the National Waste Prevention Programme to encourage businesses and industry to implement resource efficiency principles including the use of clean technologies and preventing waste at source.

<b>C.5.1 Policy action</b>	<b>Encourage SMEs (including micro-enterprises) and industry to realise the environmental and economic benefits of resource efficiency.</b>
<b>Target</b>	Promote the concept of resource efficiency among business support agencies
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	To be confirmed following discussion with business support agencies
<b>Responsibility</b>	<b>Lead Authority</b> , Local Authorities

## 19.5 COORDINATION ACTIONS

### Strategic Objective D

Coordinate the activities of the regions and work with relevant stakeholders to ensure the effective implementation of objectives.

**D.1 Policy** The lead authority on behalf of the region will participate in the national waste coordination committee for waste management planning (NCCWMP) and other national groups relevant to the implementation of the waste management plan.

<b>D.1.1 Policy action</b>	<b>Participate in relevant national groups to formulate waste policy and practice</b>
<b>Targets</b>	Attend all relevant meetings
<b>Expected Timeline</b>	Annually over duration of the plan
<b>Indicator</b>	Number of meetings attended
<b>Responsibility</b>	<b>Lead Authority</b> , local authorities

**D.2 Policy** The lead authority and local authorities will work together on the structures required to implement the waste plan, capacity building, training and knowledge share on delivering waste management activities.

<b>D.2.1 Policy action</b>	<b>Establish and/or maintain funded regional waste management office and the requisite structures (including administrative, technical &amp; communication) to implement national and regional policy</b>
<b>Targets</b>	Ensure a funded regional office is maintained over the life of the plan
<b>Expected Timeline</b>	Mid 2015
<b>Indicator</b>	Operational office in place
<b>Responsibility</b>	<b>Lead Authority</b> , DECLG, local authorities
<b>D.2.2 Policy action</b>	<b>Establish or maintain a Regional Co-Ordinator, Regional Resource Efficiency Officer, Regional Prevention Officer, Technical Officer and administrative support.</b>
<b>Targets</b>	Ensure roles are in place or maintained
<b>Expected Timeline</b>	Mid 2015
<b>Indicator</b>	Number of staff.
<b>Responsibility</b>	<b>Lead Authority</b> , Local Authorities
<b>D.2.3 Policy action</b>	<b>Identify training needs and coordinate future shared training to develop knowledge and expertise at regional &amp; local level</b>
<b>Targets</b>	Meet the training needs of the region
<b>Expected Timeline</b>	End 2016
<b>Indicator</b>	Number of training events
<b>Responsibility</b>	<b>Lead Authority</b> , Local Authorities

**D.3 Policy** Foster links and activities with relevant stakeholders including businesses and industry groups, NGOs and other relevant networks (including cross-border networks) to extend the reach of the plan.

<b>D.3.1 Policy action</b>	<b>Establish partnerships to build knowledge capacity and to promote higher order waste activities (prevention, reuse, resource efficiency and recycling).</b>
<b>Targets</b>	On-going
<b>Expected Timeline</b>	Over lifetime of Plan
<b>Indicator</b>	Number of partnerships and networks established, research & pilot projects undertaken
<b>Responsibility</b>	<b>Lead Authority</b> , local authorities, EPA, DECLG & all relevant network partners and stakeholders

**D.4 Policy** Work with key stakeholders, including government and industry operators, on the funding of local authority waste activities in the region and coordinate applications for relevant national and European funding.

<b>D.4.1 Policy Action</b>	<b>Review European and national calls for funding in waste, resource and research areas to identify opportunities and partners in the region and make appropriate applications</b>
<b>Targets</b>	Monitor and apply for funding calls
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	Number of funding applications
<b>Responsibility</b>	<b>Lead Authority</b> , local authorities & relevant stakeholders

## 19.6 INFRASTRUCTURE PLANNING

### Strategic Objective E

The region will promote sustainable waste management treatment in keeping with the waste hierarchy and the move towards a circular economy and greater self sufficiency.

The context and policies addressing infrastructure planning are presented in **Chapter 16** and are primarily aimed at market operators and regulatory authorities. Environmental protection criteria guiding the siting of future facilities and the development of existing facilities are also included in this chapter.

## 19.7 ENFORCEMENT AND REGULATION ACTIONS

### Strategic Objective F

The region will implement a consistent and coordinated system for the regulation and enforcement of waste activities in cooperation with other environmental regulators and enforcement bodies.

This strategic objective and associated policy actions will be the responsibility of the lead authority for waste enforcement in the region

**F1 Policy** 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.

<b>F.1.1 Policy action</b>	<b>Allocate resources to the systematic monitoring of household compliance with the segregation of waste with a particular focus on prioritising the reduction of contamination.</b>
<b>Targets</b>	To increase the level of monitoring and inspection at household levels.
<b>Expected Timeline</b>	Annually (Resource allocation and target monitoring numbers to be set out in annual RMCEI)
<b>Indicator</b>	Number of inspections at household level as per RMCEI.
<b>Responsibility</b>	<b>Local Authorities</b> , Lead Authority for waste enforcement
<b>F.1.2 Policy action</b>	<b>Allocate resources to the systematic monitoring of apartment complexes to improve compliance with the segregation of waste prioritising the reduction of contamination.</b>
<b>Targets</b>	To engage with all relevant stakeholders including management companies, collectors and the residents and target 5% of the number of apartments/flats in purpose built complexes in city/highly populated areas and 10% in all other areas per local authority per year
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	Number of apartment blocks targeted
<b>Responsibility</b>	<b>Local Authorities</b> , Lead Authority for waste enforcement
<b>F.1.3 Policy action</b>	<b>Allocate resources to the national systematic monitoring of waste collectors including on-site audits of waste collection data and random roadside checks for compliance with permit conditions.</b>
<b>Targets</b>	To conduct at least one strategic review meeting with each major household waste collector a region annually and to complete at least one waste collection permit audit per county annually.
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	Number of visits
<b>Responsibility</b>	<b>Local Authorities</b> , Lead Authority for waste enforcement and NWPCO
<b>F.1.4 Policy action</b>	<b>Allocate resources to monitor the schedule for the roll-out of brown bins to households in accordance with the European Union (household food waste and Bio-Waste) Regulations 2013</b>
<b>Targets</b>	To engage with the waste industry and NWPCO to provide the requisite data to monitor adherence to the time schedule as per the regulations
<b>Expected Timeline</b>	Timeline as per regulations
<b>Indicator</b>	% of households served in scheduled agglomeration
<b>Responsibility</b>	<b>Local Authorities</b> , Lead Authority for waste enforcement and NWPCO

**F.2 Policy** Enforce all waste regulations through increased monitoring activities, and enforcement actions for non-compliance with authorisations and regulatory obligations.

<b>F.2.1 Policy action</b>	<b>Prepare a regional RMCEI plan to prioritise enforcement actions and activities across the region taking account of the national enforcement priorities laid down by the EPA, DECLG and PROs.</b>
<b>Targets</b>	To improve enforcement through greater regional coordination, information sharing, and prioritisation of enforcement activities
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	Regional RMCEI Plan
<b>Responsibility</b>	<b>Lead Authority for waste enforcement</b> , local authorities
<b>SEA Mitigation Proposed</b>	Results on monitoring should be documented annually in the RMCEI plan and the use of KPIs should be considered in reporting of the monitoring results. The RMCEI should contain specific criteria to address the management of waste which in turn should inform the inspections.
<b>F.2.2 Policy action</b>	<b>Work in partnership with the compliance schemes and other bodies to address on-going regulatory obligations</b>
<b>Targets</b>	To identify on-going issues
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	Number of meetings held
<b>Responsibility</b>	<b>Local Authorities</b> , local authorities, lead authority for waste enforcement, PROs
<b>F.2.3 Policy action</b>	<b>Maintain high level of site inspections of existing local authority waste authorisations and ensure that these are reflected in the RMCEI</b>
<b>Targets</b>	Prioritise the inspections in accordance with the risk
<b>Expected Timeline</b>	As per RMCEI plan annual review
<b>Indicator</b>	Number of Inspections -as per RMCEI
<b>Responsibility</b>	<b>Lead Authority</b> , Lead Authority for waste enforcement, Local Authorities
<b>F.2.4 Policy action</b>	<b>Audit waste arisings from non-household waste premises (commercial and similar premises) to determine compliance with relevant regulations including commercial food waste regulations as reflected in the RMCEI</b>
<b>Targets</b>	To increase the level of annual inspections
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	No of inspections
<b>Responsibility</b>	<b>Local Authorities</b> ; Lead Authority for waste enforcement

**F.3 Policy** Take measures to prevent and cease unauthorised waste activities by way of investigation, notifications, remediation requests or legal action as appropriate.

<b>F.3.1 Policy action</b>	<b>Identify and maintain the role of Environmental Complaints Coordinator to manage an unauthorised waste activity database based on complaints received and monitoring undertaken.</b>
<b>Targets</b>	Establish and maintain consistent database of unauthorised waste activities consistent across the region
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	Maintain an up to date database
<b>Responsibility</b>	<b>Lead authority for waste enforcement, local authorities</b>
<b>F.3.2 Policy action</b>	<b>Carry out investigations and issue notifications, as required, as dictated by the unauthorised waste activity database and as directed by the EPA.</b>
<b>Targets</b>	Increased investigation and prevention of unauthorised waste activities
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	% of unauthorised waste complaints investigated
<b>Responsibility</b>	<b>Local Authorities, Lead Authority for waste enforcement</b>
<b>F.3.3 Policy action</b>	<b>Prepare action plan (subject to AA screening) to deal with the prevention and management of waste from significant unauthorised activities and waste arisings from other criminal activities. Coordination required between the regions.</b>
<b>Target</b>	Prevent and address unauthorised activities in the region
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	Prepare and publish the action plan
<b>Responsibility</b>	<b>Lead Authority for waste enforcement, Local Authorities</b>
<b>SEA Mitigation Proposed</b>	The proposed action plan to address waste arising from criminal activity should be prepared in consultation with various stakeholders including the NPWS, GSI, Gardaí etc. Responsibilities for implementing the action plan and monitoring requirements to assess its implementation will be critical to its success

**F.4 Policy** Improve the consistency of local authority waste authorisations and conditions issued to waste collectors and facility operators.

<b>F.4.1 Policy action</b>	<b>Work with NWCPO to standardise Waste Collection Permit conditions with standard mandatory conditions and local discretionary conditions</b>
<b>Targets</b>	To meet with NWCPO when required
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	N/A
<b>Responsibility</b>	<b>NWCPO, Lead Authority for waste enforcement and Local Authorities</b>

<b>F.4.2 Policy action</b>	<b>Move to standardise conditions for Waste Facility Permit/COR conditions with standard mandatory conditions and local discretionary conditions</b>
<b>Targets</b>	To improve consistency of enforcement, reporting, assigning EWCs, and capacity authorisations of facility permit/CoRs conditions and to provide a level playing field for facility operators
<b>Expected Timeline</b>	Q1 2017
<b>Indicator</b>	Issue standard class specific templates
<b>Responsibility</b>	<b>Lead Authority for waste enforcement</b> , local authorities, EPA and the DECLG
<b>SEA Mitigation Proposed</b>	Standard mandatory conditions and local discretionary conditions should consider inclusion of screening in relation to both EIA and AA processes

## 19.8 PROTECTION ACTIONS

### Strategic Objectives G

Apply the relevant environmental and planning legislation to waste activities in order to protect the environment, in particular European sites, and human health against adverse impacts of waste generated.

**G.1 Policy** Ensure the highest environmental and human health benefits are achieved by prioritising the implementation of the upper tiers of the waste hierarchy and ensuring these actions are funded appropriately.

<b>G.1.1 Policy action</b>	<b>Review local authority expenditure on lower waste order activities to determine if there is scope to deliver a more cost effective service and balance expenditure across the hierarchy.</b>
<b>Targets</b>	Carry out an initial review with a view to increasing expenditure on prevention, reuse and recycling.
<b>Expected Timeline</b>	Q3 2015 (initial review), Q3 2016 (complete review)
<b>Indicator</b>	% change in budget for prevention, reuse and recycling activities
<b>Responsibility</b>	<b>Lead authority</b> , local authority

**G.2 Policy** Rollout the plan for remediating historic closed landfills, prioritising actions to those sites that are the highest risk to the environment and human health.

<b>G.2.1 Policy action</b>	<b>Each region is to rank the class A high risk historic unregulated landfill sites (1977–1996).</b>
<b>Targets</b>	To rank 100% of Class A sites
<b>Expected Timeline</b>	Q4 2015
<b>Indicator</b>	% sites ranked
<b>Responsibility</b>	<b>Lead Authority</b>

<b>G.2.2 Policy action</b>	<b>Each region is to develop and agree a road map prioritising for investigation and remediation the ranked landfills (taking into account the scale of risk and impacts on the environment)</b>
<b>Targets</b>	Prepare roadmap
<b>Expected Timeline</b>	Q4 2016
<b>Indicator</b>	Roadmap in place
<b>Responsibility</b>	<b>Lead Authority</b> , Local authorities, DECLG, EPA
<b>G.2.3 Policy action</b>	<b>Prepare authorisation applications to the EPA for landfill sites identified in accordance with the roadmap during the lifetime of the plan (subject to Department funding being available)</b>
<b>Targets</b>	Prepare and apply for authorisation to the EPA
<b>Expected Timeline</b>	Q1 2021
<b>Indicator</b>	Number of applications submitted
<b>Responsibility</b>	<b>Local authorities</b> Lead authorities, DECLG, Landowners, EPA
<b>G.2.4 Policy action</b>	<b>Remediate high risk sites in accordance with the plan agreed in the EPA authorisation and in accordance with the requirements of the EU Habitats Directive &amp; Water Framework Directive (subject to Department funding being available)</b>
<b>Targets</b>	Remediation all authorised sites
<b>Expected Timeline</b>	Q1 2021
<b>Indicator</b>	Number of authorised sites remediated
<b>Responsibility</b>	<b>Local authorities</b> , lead authorities, DECLG, Landowners, EPA
<b>SEA Mitigation Proposed</b>	AA Screening should be undertaken for all Tier 1, 2 and 3 Risk Assessments. The lead authority shall liaise with relevant stakeholders (including the EPA and NPWS) to ensure appropriate measures are in place for control of the spread of IAS in relation to remediating historic closed landfills.

**G.3 Policy** Ensure there is a consistent approach to the protection of the environment and communities through the authorisation of locations for the treatment of wastes.

<b>G.3.1 Policy action</b>	<b>Prepare siting guidelines for waste facilities and review general environmental protection criteria as set down in the waste plan.</b>
<b>Targets</b>	Determine if the general environmental protection criteria are appropriate and put siting guidelines in place
<b>Expected Timeline</b>	Siting guidelines to be prepared in 2015 & all documents reviewed every 2 years
<b>Indicator</b>	n/a
<b>Responsibility</b>	<b>Lead authority</b> , local authorities, DECLG, An Bord Pleanála, EPA
<b>SEA Mitigation Proposed</b>	The application of siting criteria will offset the potential shorter term temporary construction impacts associated with infrastructure. It is recommended that consideration be given to developing <i>Siting Guidelines</i> in due course to guide development of infrastructure in a sustainable manner which protects the environment and human health

<b>G.3.2 Policy Action</b>	<b>Undertake a risk assessment of all waste disposal sites in coastal and estuarine areas to identify those at risk from coastal erosion in the short, medium and long term.</b>
<b>Targets</b>	To ensure climate proofing measures are implemented at sites identified as being of high risk to prevent impacts on the environment
<b>Expected Timeline</b>	Lifetime of the plan
<b>Indicator</b>	n/a
<b>Responsibility</b>	Lead authority, local authorities, DECLG, An Bord Pleanála, EPA

**G.4 Policy** Implement a coordinated approach to address unmanaged waste and the potential impact to the environment and human health.

<b>G.4.1 Policy action</b>	<b>Identify areas of low collection coverage and survey householders who are currently not availing of a household waste collection service to determine the cause.</b>
<b>Targets</b>	Report on surveys of low coverage areas and the causes in cooperation with the authorised household waste collectors
<b>Expected Timeline</b>	End 2016
<b>Indicator</b>	Number of surveys issued
<b>Responsibility</b>	<b>Lead Authorities</b> , Local authorities and waste collectors
<b>G.4.2 Policy action</b>	<b>Design and implement a programme to regulate, enforce and communicate in areas with low collection coverage, including the negative health and environmental impacts of burning/illegal dumping</b>
<b>Targets</b>	Implement programme of communication and carry out follow-up enforcement inspections
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	Number of households with a kerbside collection service Quantity of unmanaged waste
<b>Responsibility</b>	<b>Local authorities</b> Lead authority
<b>G.4.3 Policy action</b>	<b>Engage with authorised waste collectors to design solutions to serve communities or areas of low collection coverage and implement the solutions</b>
<b>Targets</b>	Complete review and identify solutions and implement
<b>Expected Timeline</b>	Q4 2017
<b>Indicator</b>	Number of households with a kerbside collection service, Quantity of unmanaged waste
<b>Responsibility</b>	<b>Lead authority</b> , Local authorities, private waste collectors

**G.5 Policy** Ensure that the implementation of the regional waste management plan does not prevent achievement of the conservation objectives of sites afforded protection under the EU Habitats and Birds Directives.

<b>G.5.1 Policy Action</b>	<b>As part of the statutory review process under the relevant waste regulations, the local authorities will examine relevant waste authorisations requiring local authority consent to determine if AA screening is required. In addition, the local authorities will prioritise reviews of waste authorisations and requirements for AA screening, in advance of any scheduled review, based on the proximity to or potential pathway of the permit holder to European Sites.</b>
<b>Targets</b>	To ensure relevant existing development consents relating to waste activities and infrastructure have been screened for AA and ensure NIS is provided by the applicant/operator where considered appropriate.
<b>Expected Timeline</b>	Ongoing
<b>Indicator</b>	No of AA screenings completed
<b>Responsibility</b>	For AA Screening: <b>Local Authorities</b> ; Lead Authority, Lead Authority for waste enforcement, applicant/operator For NIS: <b>Applicant/Operator</b> ;

## 19.9 OTHER WASTE STREAMS ACTIONS

### Strategic Objective H

The region will establish policy measures for other waste streams not subject to EU and national waste management performance targets.

**H.1 Policy** 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.

<b>H.1.1 Policy action</b>	<b>To engage with Irish Water in relation to national planning and management of wastewater treatment plant sludge and water treatment plant sludge.</b>
<b>Targets</b>	Lead authorities to meet with Irish Water once per annum regarding their plan objectives and the associated treatment options for sludge waste.
<b>Expected Timeline</b>	Q4 Annually
<b>Indicator</b>	Number of meetings held with Irish Water
<b>Responsibility</b>	<b>Lead Authority</b> Irish Water and local authorities

<b>H.1.2 Policy action</b>	<b>To engage with the water pollution teams of the local authorities to ensure that environmental legislation and national guidelines are being implemented, including the inspection plan for the management of domestic wastewater treatment systems, and to review the management options for the disposal of septic tank sludge.</b>
<b>Targets</b>	To meet with Local Authorities to review inspections and outcomes once per annum
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	Quantity of septic tank collected per annum
<b>Responsibility</b>	<b>Local Authorities</b> , EPA and lead authority
<b>H.1.3 Policy action</b>	<b>To engage with the NWCPO regarding specific conditions for private waste collectors collecting septic tank waste</b>
<b>Targets</b>	To meet with NWCPO regarding specific conditions for septic tank collectors
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	Conditions in place
<b>Responsibility</b>	<b>Lead Authority</b> , Local Authorities & NWCPO

**H.2 Policy** 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).

<b>H.2.1 Policy action</b>	<b>To investigate the viability of running a pilot scheme for the management of farm chemicals</b>
<b>Targets</b>	To consult with the relevant industry and examine the practicalities of developing a management scheme for farm chemicals . Rollout a scheme in 1-3 local authorities where high volumes of the waste stream are available and expand if successful and practical.
<b>Expected Timeline</b>	Q4 2016 (investigate) Q4 2017 (roll-out)
<b>Indicator</b>	Quantity of farm chemicals collected through the scheme
<b>Responsibility</b>	<b>Lead Authority</b> , Local Authorities
<b>H.2.2 Policy action</b>	<b>Examine the possibility of expanding existing reuse schemes in place throughout the region</b>
<b>Targets</b>	Grown existing reuse schemes for specific wastes in the region
<b>Expected Timeline</b>	Q4 2017
<b>Indicator</b>	Quantity of stream reused/recycled
<b>Responsibility</b>	<b>Lead Authority</b> & local authorities
<b>SEA Mitigation Proposed</b>	Guidelines will be developed by the Regional Prevention Officer and applied to all such schemes to ensure protection of human health and the environment. In addition, waste prevention should be the overarching aim of any pilot scheme introduced.

<b>H.2.3 Policy action</b>	<b>To transfer knowledge and skills on the successful schemes to all local authorities in all Regions</b>
<b>Targets</b>	To organise a minimum of 1 networking event per region per year to educate lead authorities and local authorities on the successful management of a new scheme
<b>Expected Timeline</b>	Annually
<b>Indicator</b>	Number of attendees at the event
<b>Responsibility</b>	<b>Lead Authority &amp; Local Authorities</b>

**H.3 Policy** Cooperate and input into the setting up of new national producer responsibility schemes (statutory or voluntary) for waste streams to ensure the role of local authorities is clear and can be practically achieved.

<b>H.3.1 Policy action</b>	<b>Participate in working groups for setting up of new national producer responsibility schemes.</b>
<b>Targets</b>	Ensure at least one representative on behalf of the three regional lead authorities participates in each working group established by the DECLG
<b>Expected Timeline</b>	On-going
<b>Indicator</b>	Not applicable
<b>Responsibility</b>	<b>Lead Authority, DECLG and EPA</b>
<b>H.3.2 Policy action</b>	<b>To ensure better segregation of hazardous waste and non-hazardous wastes at the point of collection from households and small businesses.</b>
<b>Targets</b>	Ensure that all local authority waste management websites provide up to date information on locations for the collection of hazardous wastes for households, farms and small businesses
<b>Expected Timeline</b>	Q4 2015
<b>Indicator</b>	Number of websites with the info included Quantity of household hazardous wastes collected at CAs/Recycling Centres
<b>Responsibility</b>	<b>Local Authorities</b> Lead Authority

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## 20 MONITORING AND REPORTING

The plan reflects national policy and will monitor how such policy will be implemented over the course of the plan. Monitoring and reporting of the plan implementation is a continuous process that requires regular review and refinement. This will ensure that the implementation programme continues to be relevant, as well as assessing progress towards meeting targets. This chapter outlines the proposed monitoring and reporting system which will form the foundations of implementation. In order to ensure effective implementation, all waste data must be quantified, used consistently and reported in order to assess progress towards meeting EU targets.

### 20.1 ANNUAL REPORT

There will be an annual review of performance under each policy heading detailed in **Chapter 19** prepared by the regional waste office. An Annual Report will be prepared focusing on the progress of the implementation of the plan across the region, taking account of the findings of the annual waste data reports and bulletins from the EPA. There is also a need for municipal waste characterisation data for the annual report highlighting the on-going national need for characterisation studies for waste reporting. The report will be prepared by the end of Q4 every year based on data for the previous calendar year with a summary of key waste statistics provided. The annual report will amalgamate information from each local authority in the region using existing available data sources and thereby limiting additional data requests. Recommendations for any policy failures will be made and a particular focus will be placed on performance in relation to:

- Key performance indicators specified below;
- National treatment and recovery capacity;
- Prevention/minimisation and associated waste awareness activities;
- Delivery of the main collection systems, facilities and infrastructure required by the plan;
- Regulation and enforcement activities;
- Reporting any difficulties or challenges emerging in plan implementation; and
- Review of financial performance and implementation of the polluter pays principle, including for example a review of the charging mechanisms for waste services.

### 20.2 ENGAGEMENT AS PART OF ANNUAL REPORT

The regional office recognises the need for the ongoing input of stakeholders to the implementation of this plan. It is proposed to provide stakeholders with an opportunity to provide feedback on the implementation of the plan, and to bring forward new proposals or innovations as they arise. Preparation of an annual report gives an opportunity for two-way communication with relevant sectors including the waste management industry, community and voluntary sectors. The private waste sector has significant responsibility in the plan for collecting waste and developing facilities, both of which require significant investment. Proposed stakeholders are identified as:

- Waste holders/producers – households, businesses, institutions, and industry;
- Organisations handling or managing waste – private waste companies and charity sector;
- Voluntary and NGOs;
- Representative groups (Repak);
- Regulators, policy makers, public sector (EPA, DECLG);

- Local authorities in the region; and
- Other relevant stakeholders.

This engagement will be developed through workshops which will enable better partnership to be developed with the sector in the coming years and will provide an opportunity to consult with and coordinate activities with other local authorities regarding prevention, recovery, collection and disposal.

## 20.3 STATISTICAL INDICATORS

The regions have improved data collection and collation with the assistance of the local authorities, the EPA and the NWCPO. In addition to the policy action indicators, a series of primary and secondary statistical indicators known as key performance indicators (KPIs) have been developed: see **Tables 20-1 to 20-5**. These are chosen to represent the main categories of waste streams and categories of activities/events addressed in the plan.

Using these KPIs will prove a useful tool in benchmarking performance with other regions, both nationally and internationally. They will also demonstrate real progress to other stakeholders, including the public. These indicators will form the basis of the statistical section of the annual report. The annual report will include a series of tables which will outline progress in the following areas:

- Primary household waste indicators and plan performance indicators;
- Primary municipal waste indicators;
- Priority waste indicators;
- Secondary waste indicators; and
- Environmental indicators.

**Table 20-1: Primary Household Waste Indicators**

Indicator	Unit
Household Waste Managed (HWM)/inhabitant	tonnes/inhabitant
HWM-Directed to recycling/recovery per inhabitant	tonnes/inhabitant
HWM - Disposed per inhabitant	Tonnes/inhabitant
Kerbside HWM/household served	Tonnes/household served
Total residual kerbside household waste collected/household served	tonnes/household served
Total non-residual kerbside household waste collected destined for recycling ("Destination Recycling" (DREC))/household served	tonnes/household served
Non-kerbside HWM/inhabitant	tonnes/inhabitant
Unmanaged household waste (estimate)/inhabitant	tonnes/inhabitant
Reduction in Household Waste Generated Per Capita	%
Managed Municipal Waste Recycling Rate	%
Unprocessed Residual Municipal Waste Sent Direct to Landfill	%

**Table 20-2: Primary Municipal Waste Indicators**

Indicator	Unit
Municipal waste managed/inhabitant	tonnes/inhabitant
Managed municipal waste disposed inhabitant	tonnes/inhabitant
Municipal waste destined for recycling (Destination Recycling(DREC)) per inhabitant	Tonnes/inhabitant
Commercial (municipal non-household) waste managed per inhabitant	tonnes/inhabitant
Commercial (municipal non-household) waste recovered per inhabitant	tonnes/inhabitant
Commercial (municipal non-household) waste disposed per inhabitant	tonnes/inhabitant

**Table 20-3: Priority Waste Indicators**

Indicator	Unit
<b>Packaging Waste:</b>	
Packaging waste managed/inhabitant (estimate)	tonnes/inhabitant
Packaging waste recovered/inhabitant (estimate)	tonnes/inhabitant
<b>C&amp;D:</b>	
Total C&D waste collected	tonnes
Soil & stone waste collected	tonnes
Contaminated soils collected	tonnes
<b>WEEE:</b>	
Total Household WEEE (Compliance Scheme) Collected for Recovery	tonnes
Household WEEE (Compliance Scheme) Collected for Recovery/per inhabitant	kgs/inhabitant
Household WEEE (Compliance Scheme) Collected at Retailers	tonnes
Household WEEE (Compliance Scheme) Collected at Recycling Centres/CAS	tonnes
Household WEEE (Compliance Scheme) Collected at one off collection events	tonnes
<b>Batteries:</b>	
Separately Collected (Portable only)(Compliance Scheme) for Recovery	tonnes
Separately Collected (Portable only) (Compliance Scheme) for Recovery/per inhabitant	g/inhabitant
<b>ELVs:</b>	
Quantity of ELVs accepted at ATFs within the Region	tonnes/year/region
Certificates of Destructions (CODs) issued	number
<b>Waste Tyres:</b>	
Quantity of waste tyres collected	tonnes
<b>Farm Plastics:</b>	
Quantity of farm plastics collected	tonnes
Number of farmers who availed of the collection service	number
<b>Other:</b>	
Healthcare waste collected	tonnes
Waste oils collected	tonnes
PCBs collected	tonnes

**Table 20-4: - Secondary Waste Indicators**

<b>Waste Prevention &amp; Minimisation:</b>
Number and type of prevention awareness events held annually
Number of Local Authority Prevention Network (LAPN) projects
Number of green business site visits
Number of waste minimisation events
<b>Green Schools/Green Flags:</b>
Number of schools in the region
Number of schools registered with Green Schools
% of schools registered with Green Schools Programme
% of schools participating in Green Schools Programme
Number of schools with green flag
% of schools with green flag
<b>BeGreen Programme:</b>
Number of business engaging with the green business programme
Number of green hospitality award members
Number of hospitals/healthcare facilities that had green healthcare audits
<b>Household Refuse Collection Service:</b>
Number of households with a waste collection service
% of households with a waste collection service
Number of households with a residual collection service ONLY
% of households with a residual collection service ONLY
Number of households with a residual & MDR collection service
% of households with a residual & MDR collection service
Number of households with an organic collection service
% of households with an organic collection service
Number of households with a glass collection service
% of households with an glass collection service
<b>Recycling Centres/Civic Amenity Sites (CAS):</b>
Number of recycling centres/CAS (Public & private operators)
Number of recycling centres/CAS per 50,000 inhabitants
Tonnage of waste collected at recycling centres/CAS
Tonnage of waste collected at recycling centres/CAS per inhabitant
<b>Bring Banks:</b>
Number of bring banks
Number of bring banks/50,000 inhabitants
Tonnage of waste collected at bring banks

**Table 20-5: Environmental Indicators**

Indicator	Sources & Responsibilities
The status of protected habitats and species as reported to the EU (report due every six years, first report in 2007).	The Status of EU Protected Habitats and Species in Ireland report. Published every 6 years, National Parks & Wildlife Service (NPWS)
Audit of progress in the implementation of mitigation measures two years post adoption of the plan and at completion of the plan period.	Lead Authority, local authorities SEA mitigation measures proposed in relation to policy actions
Total prevention/reuse budget per annum in each Local Authority as a % of total spend on waste management.	Financial Returns/Annual budget for local authorities to be reported to the Lead Authority
Number of households in the region on a kerbside collection. Quantity of unmanaged waste in the region.	Waste statistics data from Local authorities, private waste collectors, Lead authority National Waste Report/Bulletin, published annually, Environmental Protection Agency (EPA)
Number of authorisations granted for sites to be remediated. Number of authorised sites remediated in the region.	Historic Unregulated Landfill Sites Register held by Local Authorities Historic Unregulated Landfill Sites Certificate of Authorisation Register published by the Environmental Protection Agency (EPA)
Status of water bodies as reported by the EPA. Number of authorisations granted for sites to be remediated. Number of authorised sites remediated in the region.	Water quality in Ireland report, Environmental Protection Agency (EPA) Historic Unregulated Landfill Sites Register held by Local Authorities Historic Unregulated Landfill Sites Certificate of Authorisation Register published by the Environmental Protection Agency (EPA)
Number of exceedances relating to air quality and noise at waste licensed facilities. Quantity of unmanaged waste.	Focus on Environmental Enforcement Report in Ireland, covering a 3 year period, published every 3 years, Environmental Protection Agency (EPA) RMCEI plans. Local authority, Lead authorities for waste enforcement. Waste statistics data from Local authorities, private waste collectors, Lead authority for waste enforcement
Quantity of household waste generated per capita (measured nationally). % municipal waste recycled (measured nationally). Quantity of residual kerbside household waste sent for disposal. Number of strategic flood risk assessments completed for waste related infrastructure within the region.	Waste statistics data from Local authorities, private waste collectors, Lead authority for waste enforcement National Waste Report/Bulletin, published annually, Environmental Protection Agency (EPA) Strategic Flood Risk Assessment Reports, Local Authorities
Application of siting guidelines through the planning process.	Authorisation of locations in planning application files, Lead authority, local authorities, DECLG, An Bord Pleanála, EPA

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Indicator	Sources & Responsibilities
Quantity of residual waste exported annually (Quantified nationally).	National Waste Report/Bulletin, published annually, Environmental Protection Agency (EPA)
Quantity of household waste generated per capita (measured nationally). % municipal waste recycled (measured nationally). Quantity of residual kerbside household waste sent for disposal.	Waste statistics data from Local authorities, private waste collectors, Lead authority for waste enforcement National Waste Report/Bulletin, published annually, Environmental Protection Agency (EPA)

## **APPENDIX A**

### **Consultation Information**

**Table A1: List of Submissions Received Pre-Draft Plan**

No	Name of Waste Contractor
1	Big Bin
2	Clean Ireland
3	Country Clean Recycling
4	Greenstar
5	Indaver
6	MacElvaneys Waste and Recycling
7	Stream Bio-Energy
8	An Taisce
9	Limerick Institute of Technology (Thurles Campus)
10	EPA
11	Cement Manufacturers Ireland (CMI)
12	Cré
13	Irish Business and Employers Confederation (IBEC)
14	Irish Motor Vehicles Recyclers Association
15	Irish Waste Management Association (IWMA)
16	WEEE Ireland
17	Leitrim Community Forum

**Table A2: List of Attendees at stakeholders workshop**

<b>Organisation</b>	<b>Attendee</b>
DECLG	Philip Nugent
DECLG	Eoin Deegan
DECLG	Jeannine Dunne
DECLG	Brendan O'Neill
DECLG	Jean Clarke
DECLG	Nuala Bannon
Southern Region	Philippa King
Southern Region	Liam Bergin
Southern Region	Carol Sweetnam
Connacht Ulster Region	Kevin Swift
Connacht Ulster Region	Martin Keating
Connacht Ulster Region	Killian Farrell
Eastern Midlands Region	Evelyn Wright
Eastern Midlands Region	Damian Drumm
Eastern Midlands Region	Declan Wallace
Eastern Midlands Region	Sandra Smith
Eastern Midlands Region	Emma Cassin
Eastern Midlands Region	Maria Douglas
NWCPO	Leo Duffy
EPA	Jonathan Derham
EPA	Joe O'Reilly
RPS	Warren Phelan
RPS	Antonia Gaughran
Smile Exchange	Michelle Green
CIWM - Chartered Institutes of Wastes Management	Enda Kiernan
CEWEP - Confederation of European Waste to Energy Plants/IWMA Indaver	Claire Downey
IWMA - Irish Waste Management Association - Oxigen	Brian Moylan
IWMA - Irish Waste Management Association - Wiser	Colm O'Brian
IWMA - Irish Waste Management Association - Greenstar	Malcolm Dowling
IWMA - Irish Waste Management Association - Country Clean	Flor Crowley
IWMA - Irish Waste Management Association - BNM	John Connolly
IWMA - Irish Waste Management Association - Clean Ireland	Paddy Hedigan
IWMA - Irish Waste Management Association - Panda	John Dunne
IWMA - Irish Waste Management Association - Rilta	Padraig Duggan
IWMA - Irish Waste Management Association - Secretary	Conor Walsh
IWMA - Irish Waste Management Association - Mulleady's	Niall Mulleady

<b>Organisation</b>	<b>Attendee</b>
IWMA - Irish Waste Management Association - Donegal Contractors	Mick Quinlivan
IWMA - Irish Waste Management Association - Barna Waste	Cormac O'Donnell
IWMA - Irish Waste Management Association - McElvaney Waste and Mr. Binman	Hugh McElvaney
IWMA - Irish Waste Management Association - Curland	Brendan Keane
IWMA - Irish Waste Management Association - AGB Ltd (Knockharley and Ballynagran Landfills)	Geoff Bailey
IWMA - Irish Waste Management Association - KMK Metals	Amy Jackson
REPAK	Bill Dolan
Westmeath County Council	Greg Duggan
WEEE Ireland	Laurence Kieran
IFFPG	Liam Moloney
ERP	Martin Tobin
IBEC	Morgan Baker
IRBEA - IrishBioenergy Association	Noel Gavigan
Cré	Percy Foster
Greyhound	Richard Darcy
CRNI	Joanne Rourke
CRNI	John Scally
RGDATA	Tara Buckley

**Table A3: Post Draft Submissions**

<b>No</b>	<b>Organisation/Member of the Public</b>
1	Duncan Laurence
2	Brian Gilmore
3	Patricia Kelly
4	Rita Shah
5	Bernie Guinan
6	Mandy Govan
7	Joan Mulvaney
8	Charlotte Cullen
9	Emer Cloharty
10	Michael Kilroy
11	Cllr Thomas Healy
12	Gus & Mary Hamilton
13	Patricia Feeny & Mary Geelan
14	Inland Fisheries Ireland
15	Geological Survey of Ireland
16	Malcolm Dowling
17	Jim O'Sullivan
18	Cavan County Council
19	Eddie McGurrin
20	Clean Ireland Recycling
21	Irish Concrete Federation
22	Morgan Baker
23	Community Reuse Network
24	Derek Milton
25	The Irish Charity Shops Association
26	The Chartered Institute of Wastes Management
27	Chris Green
28	Caroline Conmy
29	Local Authority Prevention Network
30	Gas Networks Ireland
31	Irish Water Usice Eireann
32	WEEE Ireland
33	Indaver Ireland
34	Department Of Arts, Heritage & Gaeltacht

No	Organisation/Member of the Public
35	EPA Environmental Protection Agency
36	Wicklow County Council
37	Boomerang Recycling
38	Composting & Anaerobic Digestion Assoc of Ireland
39	An Taisce
40	Clean Technology Centre
41	Rehab Group
42	Voice
43	Irish Waste Management Assoc
44	Department OF Environment Community & Local Government
45	Soil Recovery Association
46	Stream Bioenergy
47	Repak
48	Department of the Environment Northern Ireland
49	Frank Harrington
50	Irish Farmers Association
51	Country Clean Recycling
52	Environmental Pillar
53	Bord na Mona
54	John McAvoy
55	John Ryan
56	Joe Howley
57	Technology Centre Biorefining Bioenergy
58	Imelda Ryan Jones
59	Mary Ewing
60	Cork Environmental Forum
61	Vincent Sherlock
62	Vlad Yatseno

## **APPENDIX B**

### **List of Legislation**

<b>List of European Legislation</b>
Directive on Batteries and Accumulators (2013/56/EC)
Commission Directive 2013/28/EU amending Directive 2000/53/EC on End of Life Vehicles
Commission Delegated Directive 2012/51/EU amending Annex III of EU Directive 2011/65/EU
Commission Delegated Directive 2012/50/EU amending Annex III of EU Directive 2011/65/EU
Directive on Restriction of Use of Hazardous Substances in WEEE 2011/65/EU
Directive on Waste Electrical and Electronic Equipment (WEEE) (2012/19/EU)
Commission Regulation (EU) No 493/2012 of 11 June 2012 laying down, pursuant to Directive 2006/66/EC of the European Parliament and of the Council, detailed rules regarding the calculation of recycling efficiencies of the recycling processes of waste batteries and accumulators
Commission Regulation (EU) No 142/2011 implementing Regulation (EC) No 1069/2009 of the European Parliament and of the Council laying down health rules as regards animal by-products not intended for human consumption and implementing Council Directive 97/78/EC as regards certain samples and items exempt from veterinary checks at the border under that Directive.
Commission Regulation (EU) 757/2010 amending Regulation (EC) No 850/2004 of the European Parliament and of the Council on persistent organic pollutants as regards Annexes I and III
Commission Regulation (EU) 756/2010 amending Regulation (EC) No 850/2004 of the European Parliament and of the Council on persistent organic pollutants as regards Annexes IV and V
Directive on Industrial Emissions (2010/75/EU)
Commission Regulation (EC) No 1069/2009 of the European Parliament and of the Council of 21 October 2009 laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) No 1774/2002
Directive (2009/28/EC) on the promotion of the use of energy from renewable sources
Waste Framework Directive (2008/98/EC)
Directive on the Management of Waste from the Extractive Industries (the Mining Waste Directive) (2006/21/EC)
Directive on Batteries and Accumulators (2006/66/EC)
Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste
Regulation (EC) No. 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste, as amended.
Directive on Packaging and Packaging Waste (2005/20/EC) amending Directive 94/62/EC
Commission Decision of 24 January 2005 (2005/63/EC) amending Annex II to Directive 2000/53/EC
Commission Decision of 10 June 2005 (2005/438/EC) amending Annex II to Directive 2000/53/EC
Council Decision of 20 September 2005 (2005/673/EC) amending Annex II of Directive 2000/53/EC
Directive 2005/64/EC on the type-approval of motor vehicles with regard to their reusability, recyclability and recoverability
Directive on Packaging and Packaging Waste (2004/12/EC) amending Directive 94/62/EC
Regulation (EC) No 850/2004 on Persistent Organic Pollutants
Directive (2004/35/EC) on environmental liability with regard to the prevention and remedying of environmental damage
Directive 2003/4/EC on public access to environmental information

Directive (2003/35/EC) providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment, amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC
Council Decision (2003/33/EC) establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC
Directive (2003/30/EC) on the promotion of the use of biofuels or other renewable fuels for transport
Directive (2003/87/EC) establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC
Commission Decision of 27 June 2002 (2002/525/EC) amending Annex II of Directive 2000/53/EC
Directive (2001/42/EC) on the assessment of the effects of certain plans and programmes on the environment (Strategic Environmental Assessment Directive)
Directive on End of Life Vehicles (ELV) (2000/53/EC)
Directive on the incineration of waste (2000/76/EC)
Directive 2000/53/EC on End of Life Vehicles
Commission Decision 2000/532/EC establishing a list of wastes
Directive on the Landfill of Waste (1999/31/EC)
Directive 96/59/EC on the disposal of PCBs/PCTs
Directive on Packaging and Packaging Waste (94/62/EC)
Directive 92/112/EEC on procedures for harmonising programmes for the reduction and eventual elimination of pollution caused by the titanium dioxide industry
Directive on the conservation of wild fauna and flora and of natural habitats (92/43/EEC)
Directive on Sewage Sludge (86/278/EEC)
Directive on the assessment of the effects of certain public and private projects (85/337/EEC) as amended by Directive 97/11/EC
Directive 82/883/EEC on procedures for the surveillance and monitoring of environments concerned by waste from the titanium dioxide industry
Directive on waste from the titanium dioxide industry (78/176/EEC ) as amended by Council Directive 83/29/EEC

<b>List of National Legislation</b>
S.I. No 320 of 2014 Waste Management (Facility Permit and Registration)(Amendment) Regulations 2014
S.I. No 546 of 2014 Waste Management (Facility Permit and Registration)(Amendment) Regulations 2014
S.I. No. 149/2014 European Union (Waste Electrical and Electronic Equipment) Regulations, 2014
S.I. No. 281/2014 European Union (End-of-Life Vehicles) Regulations, 2014
S.I. No. 282/2014 European Union (Packaging) Regulations, 2014
S.I. No. 283/2014 European Union (Batteries and Accumulators) Regulations, 2014
S.I. No. 148/2013 European Union (Waste Incineration Plants & Waste Co-Incineration Plants) Regulations, 2013
S.I. No. 138/2013 European Union (Industrial Emissions) Regulations, 2013
S.I. No. 137/2013 Environmental Protection Agency (Industrial Emissions) (Licensing) Regulations, 2013
S.I. No. 124/2013 Statistics (Waste Generation) Order, 2013
S.I. No. 251/2013 European Union (Household Food Waste and BioWaste) (Amendment) Regulations, 2013
S.I. No. 71/2013 European Union (Household Food Waste and Bio-Waste) Regulations, 2013
S.I. No. 194/2013 Waste Management (Landfill Levy) (Amendment) Regulations, 2013
S.I. No. 504/2013 Waste Management (Prohibition of Waste Disposal by Burning) (Amendment) Regulations, 2013
S.I. No. 515/2012 European Union (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment) (Amendment) (No. 2) Regulations, 2012
S.I. No. 514/2012 European Union (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment) (Amendment) (No. 1) Regulations, 2012
S.I. No. 513/2012 European Union (Restriction of Certain Hazardous Substances in Electrical and Electronic Equipment) Regulations, 2012
S.I. No. 221/2012 Waste Management (Landfill Levy) (Amendment) Regulations, 2012
S.I. No. 324/2011 European Communities (Shipment of Hazardous Waste exclusively within Ireland) Regulations, 2011
S.I. No. 434/2011 Waste Management (Landfill Levy) Regulations, 2011
S.I. No. 477/2011 European Communities (Birds and Natural Habitats) Regulations 2011
S.I. No. 323/2011 European Communities (Waste Directive) (No. 2) Regulations, 2011
S.I. No. 126/2011 European Communities (Waste Directive) Regulations, 2011
S.I. No. 662/2011 European Communities (Access to Information on the Environment) (Amendment) Regulations 2011
Environment (Miscellaneous Provisions) Act, 2011
S.I. No. 201/2011 Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations, 2011
S.I. No. 200/2011 European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations, 2011
S.I. No. 31/2010 Waste Management (Landfill Levy) (Amendment) Regulations, 2010
S.I. No. 32/2010 Waste Management (Registration of Sewage Sludge Facility) Regulations, 2010
S.I. No. 235/2010 Persistent Organic Pollutant Regulations, 2010

S.I. No. 350/2010 Waste Management (Licensing) (Amendment) Regulations, 2010
S.I. No. 286/2009 Waste Management (Prohibition of Waste Disposal By Burning) Regulations, 2009
S.I. No. 508/2009 Waste Management (Food Waste) Regulations, 2009
S.I. No. 566/2009 Waste Management (Management of Waste From the Extractive Industries) Regulations, 2009
S.I. No. 252/2008 European Communities (Transmissible Spongiform Encephalopathies & Animal By-Products) Regulations 2008
S.I. No. 86/2008 Waste Management (Facility Permit and Registration) (Amendment) Regulations, 2008
S.I. No. 87/2008 Waste Management (Collection Permit) (Amendment) Regulations, 2008
S.I. No. 113/2008 Waste Management (Registration of Brokers and Dealers) Regulations, 2008
S.I. No. 524/2008 Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations, 2008
S.I. No. 547/2008 European Communities (Environmental Liability) Regulations, 2008
S.I. No. 62/2007 Waste Management (Environmental Levy) (Plastic Bag) Order, 2007
S.I. No. 167/2007 Waste Management (Environmental Levy) (Plastic Bag) (Amendment) (No. 2) Regulations, 2007
S.I. No. 419/2007 Waste Management (Shipments of Waste) Regulations, 2007
S.I. No. 664/2007 Waste Management (Tyres and Waste Tyres) Regulations, 2007
S.I. No. 133/2007 European Communities (Access to Information on the Environment) Regulations 2007
S.I. No. 820/2007 Waste Management (Collection Permit) Regulations 2007
S.I. No. 821/2007 Waste Management (Facility Permit and Registration) Regulations, 2007
S.I. No. 435/2004 European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations, 2004
S.I. No. 436/2004 Planning and Development (Strategic Environmental Assessment) Regulations, 2004
S.I. No. 395/2004 Waste Management (Licensing) Regulations, 2004
S.I. No. 478/2003 Waste Management (Environment Fund) (Prescribed Payments) Regulations 2003
Protection of the Environment Act, 2003
S.I. No. 267/2001 Waste Management (Use of Sewage Sludge in Agriculture) (Amendment) Regulations, 2001
S.I. No. 341/2001 Waste Management (Farm Plastics) Regulations, 2001
S.I. No. 605/2001 Waste Management (Environmental Levy) (Plastic Bag) Regulations, 2001
Waste Management (Amendment) Act, 2001
S.I. No. 73/2000 Waste Management (Hazardous Waste) (Amendment) Regulations, 2000
S.I. No. 185/2000 Waste Management (Licensing) Regulations, 2000
S.I. No. 146/1998 Waste Management (Amendment of Waste Management Act, 1996) Regulations, 1998
S.I. No. 148/1998 Waste Management (Use of Sewage Sludge in Agriculture) Regulations, 1998
S.I. No. 164/1998 Waste Management (Miscellaneous Provisions) Regulations, 1998
S.I. No. 166/1998 European Communities (Amendment of Waste Management Act, 1996) Regulations, 1998
S.I. No. 137/1997 Waste Management (Planning) Regulations, 1997
S.I. No. 192/1996 Waste Management Act, 1996 (Commencement) Order, 1996.
Waste Management Act, 1996

## **APPENDIX C**

### **Household Waste Data by Local Authority**

**Table C1: Details of Household Waste Managed (HWM), per Local Authority, within the Connacht Ulster Region 2010**

2010										
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR
Household Waste Managed (HWM)	19774	26332	25257	52868	6052	40707	15168	18769	16255	221182
Household Waste Managed/ inhabitant	0.270	0.163	0.334	0.302	0.190	0.312	0.251	0.293	0.249	0.264
HWM - Destination recycling/recovery	8361	8821	15289	25823	2481	13919	6121	8037	6860	95712
HWM - Destination recycling/recovery per inhabitant	0.114	0.055	0.202	0.147	0.078	0.107	0.101	0.125	0.105	0.114
% HWM - Destination recycling/recovery	42.284	33.500	60.533	48.845	40.991	34.193	40.358	42.820	42.202	43.273
HWM disposed	11688	17511	9966	27056	3751	26829	9203	10739	9544	126287
HWM disposed/ inhabitant	0.160	0.109	0.132	0.154	0.118	0.205	0.152	0.168	0.146	0.151
% HWM disposed	59.108	66.499	39.458	51.176	61.981	65.907	60.673	57.217	58.717	57.096

**Table C2: Details of Household Waste Managed (HWM), per Local Authority, within the Connacht Ulster Region 2011**

2011										
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR
Household Waste Managed (HWM)	20394	22695	25156	59281	6188	42393	15107	19057	16561	226831
Household Waste Managed/ inhabitant	0.279	0.141	0.333	0.339	0.195	0.325	0.250	0.297	0.253	0.271
Destination recycling/recovery	8148	9494	14931	26487	2848	14957	5239	7025	4899	93414
HWM Destination recycling/recovery per inhabitant	0.111	0.059	0.198	0.151	0.090	0.114	0.087	0.110	0.075	0.112
% HWM - Destination recycling/recovery	39.955	41.833	59.351	44.681	46.020	35.281	34.679	36.865	29.580	41.182
HWM disposed	12246	13202	12140	34338	3326	27436	9875	12032	11090	135684
HWM disposed/ inhabitant	0.167	0.082	0.161	0.196	0.105	0.210	0.163	0.188	0.170	0.162
% HWM disposed	60.048	58.171	48.258	57.924	53.741	64.718	65.367	63.138	66.964	59.817

**Table C3: Details of Household Waste Managed (HWM), per Local Authority, within the Connacht Ulster Region 2012**

2012										
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR
Household Waste Managed (HWM)	19681	22177	23470	47728	7406	41434	16966	15479	15193	209533
Household Waste Managed/ inhabitant	0.269	0.138	0.311	0.273	0.233	0.317	0.281	0.242	0.232	0.250
HWM - Destination recycling/recovery	10022	11459	17633	24007	4274	18979	9733	7410	7507	111025
HWM -Destination recycling/recovery per inhabitant	0.137	0.071	0.233	0.137	0.134	0.145	0.161	0.116	0.115	0.133
% HWM - Destination recycling/recovery	50.923	51.672	75.134	50.300	57.712	45.806	57.366	47.873	49.410	52.987
HWM disposed	7743	11278	12867	18626	4496	16689	8290	6526	7125	93640
HWM disposed/ inhabitant	0.106	0.070	0.170	0.106	0.141	0.128	0.137	0.102	0.109	0.112
% HWM disposed	39.342	50.856	54.823	39.026	60.700	40.279	48.864	42.163	46.897	44.690

**Table C4: Details of Kerbside Household Waste Managed (KHWMM), per Local Authority, within the Connacht Ulster Region 2010**

2010											
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR	
Kerbside Household Waste Managed	11768	20529	20315	42072	4717	33461	12646	15592	12782	173882	
Kerbside Household Waste Managed/household served	1.002	0.921	0.775	1.151	0.618	1.186	0.908	1.616	1.048	1.033	
Residual kerbside household waste collected	9087	17255	10053	29524	3381	25685	8946	11758	10969	126658	
Residual kerbside household waste collected/household served	0.773	0.774	0.383	0.808	0.443	0.911	0.642	1.219	0.900	0.752	
Residual kerbside household waste disposed	9087	17048	9870	25072	3381	24912	8946	10244	9194	117753	
Residual kerbside household waste destined for recycling/energy recovery	0	207	183	4452	0	773	0	1514	1775	8904	
MDR household waste collected at kerbside	2572	3274	4824	11376	1336	7192	3279	3731	1788	39372	
MDR household waste collected at kerbside/household served	0.219	0.147	0.184	0.311	0.175	0.255	0.235	0.387	0.147	0.234	
Organic kerbside household waste collected (tonnes)	109	0	5438	1172	0	579	421	103	25	7847	
Organic household waste collected at kerbside /household served	0.009	0.000	0.207	0.032	0.000	0.021	0.030	0.011	0.002	0.047	
Source segregated household glass waste collected at kerbside	0.000	0.000	0.000	0.000	0.000	5.000	0.000	0.000	0.000	5.000	

**Table C5: Details of Kerbside Household Waste Managed (KHWWM), per Local Authority, within the Connacht Ulster Region 2011**

2011											
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR	
Kerbside Household Waste Managed	13563	17702	20046	47528	4696	33326	13359	13367	13736	177323	
Kerbside Household Waste Managed/household served	0.935	0.821	0.782	1.320	0.587	1.212	0.938	1.393	0.942	1.033	
Residual kerbside household waste collected	11166	13755	10084	32023	3158	25167	9706	10249	11664	126972	
Residual kerbside household waste collected/household served	0.770	0.638	0.393	0.890	0.395	0.915	0.682	1.068	0.800	0.740	
Residual kerbside household waste disposed	10710	12984	10083	34125	3132	23999	9650	10249	11090	126021	
Residual kerbside household waste destined for recycling/energy recovery	456	771	1	1356	26	1168	56	0	0	3835	
MDR household waste collected at kerbside	2361	3947	4680	13543	1538	7294	3242	2604	2000	41209	
MDR household waste collected at kerbside/household served	0.163	0.183	0.182	0.376	0.192	0.265	0.228	0.271	0.137	0.240	
Organic household waste collected at kerbside	36	0	5004	1962	0	865	411	514	72	8864	
Organic household waste collected at kerbside /household served	0.002	0.000	0.195	0.054	0.000	0.031	0.029	0.054	0.005	0.052	
Source segregated household glass waste collected at kerbside	0	0	278	0	0	0	0	0	0	278	

**Table C6: Details of Kerbside Household Waste Managed (KHWWM), per Local Authority, within the Connacht Ulster Region 2012**

2012										
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR
Kerbside Household Waste Managed	13949	17834	20351	42484	5440	32345	13231	11557	11906	169097
Kerbside Household Waste Managed/household served	1.078	0.800	0.794	1.154	0.618	1.203	0.831	1.062	0.846	0.971
Residual kerbside household waste collected	10417	14073	9813	29266	4415	23426	9398	8753	9807	119368
Residual kerbside household waste collected/household served	0.805	0.632	0.383	0.795	0.502	0.871	0.590	0.804	0.697	0.685
Residual kerbside household waste disposed	6491	11173	12861	18455	4412	13484	7982	5459	7060	87377
Residual kerbside household waste sent for energy recovery	1346	2317	2667	3827	915	2796	1655	1132	1464	18118
Residual kerbside household waste destined for recycling/energy recovery	664	1144	1316	1889	452	1380	817	559	723	8944
Residual kerbside household waste destined for further treatment	366	631	726	1041	249	761	450	308	398	4931
MDR household waste collected at kerbside	3345	3761	4969	10710	1024	7853	3165	2377	1990	39193
MDR household waste collected at kerbside/household served	0.258	0.169	0.194	0.291	0.116	0.292	0.199	0.218	0.141	0.225
Organic household waste collected at kerbside	187	0	5254	2439	1	1064	668	427	109	10150
Organic household waste collected at kerbside /household served	0.014	0.000	0.205	0.066	0.000	0.040	0.042	0.039	0.008	0.058
Source segregated household glass waste collected at kerbside	0.000	0.000	315.000	69.000	0.000	2.770	0.000	0.000	0.000	386.770

**Table C7: Details of Non -Kerbside Household Waste Managed, per Local Authority, within the Connacht Ulster Region 2010, 2011, 2012**

2010										
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR
Non-Kerbside Household Waste Managed (HWM)	8006	5803	4942	10796	1335	7246	2522	3177	3473	47300
Non-Kerbside HWM/ inhabitant	0.109	0.036	0.065	0.062	0.042	0.055	0.042	0.050	0.053	0.056

2011										
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR
Non-Kerbside Household Waste Managed (HWM)	6831	4993	5110	11753	1492	9067	1748	5690	2825	49508
Non-Kerbside HWM/ inhabitant	0.093	0.031	0.068	0.067	0.047	0.069	0.029	0.089	0.043	0.059

2012										
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR
Non-Kerbside Household Waste Managed (HWM)	5732	4343	3118	5244	1966	9089	3735	3922	3287	40435
Non-Kerbside HWM/ inhabitant	0.078	0.027	0.041	0.030	0.062	0.070	0.062	0.061	0.050	0.048

**Table C8: Details of Civic Amenity Sites and Bring Banks per Local Authority, within the Connacht Ulster Region 2010**

2010										
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR
Number of Recycling Centres /CAS (Public & private operators)	3	6	1	7	2	2	2	5	3	31
Number of Recycling Centres/CAS per 50,000 inhabitants	2.050	1.862	0.662	1.999	3.145	0.765	1.653	3.902	2.294	1.851
Tonnage of Waste Collected at Recycling Centres/CAS	5109	1278	6091	1426	485	4683	1479	2202	1847	24600
Tonnage of Waste Collected at Recycling Centres/CAS/inhabitant	0.070	0.008	0.081	0.008	0.015	0.036	0.024	0.034	0.028	0.305
Number of Bring Banks	30	58	12	86	39	100	29	40	47	441
Number of Bring Banks/5,000 inhabitants	2.050	1.800	0.794	2.455	6.132	3.827	2.397	3.122	3.594	2.633
Tonnage of Waste Collected at Bring Banks	1903	2532	2184	2980	590	2009	1111	843	1228	15380
Tonnage of Waste Collected at Bring Banks/inhabitant	0.026	0.016	0.029	0.017	0.019	0.015	0.018	0.013	0.019	0.018

**Table C9: Details of Civic Amenity Sites and Bring Banks per Local Authority, within the Connacht Ulster Region 2011.**

2011										
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR
Number of Recycling Centres /CAS (Public & private operators)	3	6	1	7	2	2	2	5	3	31
Number of Recycling Centres/CAS per 50,000 inhabitants	2.050	1.862	0.662	1.999	3.145	0.765	1.653	3.902	2.294	1.851
Tonnage of Waste Collected at Recycling Centres/CAS	3193	1218	5968	1227	566	5449	802	3364	1312	23099
Tonnage of Waste Collected at Recycling Centres/CAS/inhabitant	0.044	0.008	0.079	0.007	0.018	0.042	0.013	0.053	0.020	0.028
Number of Bring Banks	30	65	12	85	39	101	31	40	40	443
Number of Bring Banks/5,000 inhabitants	2.050	2.017	0.794	2.427	6.132	3.866	2.563	3.122	3.058	2.645
Tonnage of Waste Collected at Bring Banks	2233	2592	1908	3088	694	2451	1087	866	1386	16305
Tonnage of Waste Collected at Bring Banks/inhabitant	0.031	0.016	0.025	0.018	0.022	0.019	0.018	0.014	0.021	0.019

**Table C10: Details of Civic Amenity Sites and Bring Banks per Local Authority, within the Connacht Ulster Region 2012**

2012										
Local Authority	Cavan	Donegal	Galway City	Galway	Leitrim	Mayo	Monaghan	Roscommon	Sligo	CUR
Number of Recycling Centres /CAS (Public & private operators)	3	9	1	7	2	2	2	5	3	34
Number of Recycling Centres/CAS per 50,000 inhabitants	2.050	2.793	0.662	1.999	3.145	0.765	1.653	3.902	2.294	2.030
Tonnage of Waste Collected at Recycling Centres/CAS	3207	813.556	1338.903	1669.32	475.38	4979	1900.645	2238.842	1021	17643
Tonnage of Waste Collected at Recycling Centres/CAS/inhabitant	0.044	0.005	0.018	0.010	0.015	0.038	0.031	0.035	0.016	0.021
Number of Bring Banks	30	62	12	86	39	100	28	40	40	437
Number of Bring Banks/5,000 inhabitants	2.050	1.924	0.794	2.455	6.132	3.827	2.315	3.122	3.058	2.609
Tonnage of Waste Collected at Bring Banks	2126.3	2707.89	1681.12	3020.69	563	2361	1083.57	861.71	1283	15688
Tonnage of Waste Collected at Bring Banks/inhabitant	0.029	0.017	0.022	0.017	0.018	0.018	0.018	0.013	0.020	0.019

## **APPENDIX D**

### **Inventory of Local Authority Authorised Sites**

## Appendix D

Local authority authorised facilities and capacity data table (units = tonnes)

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
1	WFP	Eco Tyre Tread Solutions Ltd	WFP-CN-10-0007-01	Cavan Co Co	Class 10	Tyre Recycling	Group 1	50,000	210
2	WFP	Lakeland Dairies Limited	WFP-CN-11-0005-01	Cavan Co Co	Class 7	Recovery of Inert Waste	Group 1	25,000	12,060
3	WFP	Mr Ronan Smith	WFP-CN-10-0002-01	Cavan Co Co	Class 11	Farm Plastic Recovery	Group 1	50,000	2,494
4	WFP	Pallet Supplies Limited	WFP-CN-10-0003-01	Cavan Co Co	Class 10	Wood & Plastic Packing Recovery	Group 1	50,000	1,909
5	WFP	Polyfab Plastics Limited	WFP-CN-10-0004-01(1)	Cavan Co Co	Class 10	Plastic, Paper & Carboard Recovery	Group 1	50,000	2,672
6	WFP	Reilly Metals Recovery Limited	WFP-CN-12-0003-01	Cavan Co Co	Class 10	Paper, Plastics & Card recycling	Group 1	50,000	287
7	WFP	Anthony Gannon	WFP-CN-11-0001-01	Cavan Co Co	Class 2, 12	ELV & Commercial Vehicle Dismantling / Recovery Facility	Group 2	-	791
8	WFP	Euro Breakers Limited	WFP-CN-11-0002-01	Cavan Co Co	Class 12	ELV & Commercial Vehicle Dismantling / Recovery Facility	Group 2	-	<100
9	WFP	Felix Gormley	WFP-CN-10-0006-01	Cavan Co Co	Class 2,4 10	Scrap Metal & ELV Dismantling /	Group 2	50,000	8,861

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
						Recovery			
10	WFP	John Mee	WFP-CN-12-0002-01	Cavan Co Co	Class 12	ELV's Recovery	Group 2	-	0
11	WFP	Martin Cahill Limited	WFP-CN-11-0004-01	Cavan Co Co	Class 12	ELV & Commercial Vehicle Dismantling / Recovery Facility	Group 2	-	284
12	WFP	Victor Fegan t/a Cavan Car Parts	WFP-CN-11-0003-01	Cavan Co Co	Class 2 ,12	ELV & Commercial Vehicle Dismantling / Recovery Facility	Group 2	-	128
13	WFP	Wilton Waste Recycling Ltd	WFP-CN-10-0005-01(1)	Cavan Co Co	Class 2, 4, 10, 12	Waste Transfer Station C&D ,Commercial, Household, ELV's &Scrap Metal Recovery	Group 2	73,200	51,622
14	WFP	Gerry & Rita Sweeney	WFP-CN-12-0001-01	Cavan Co Co	Class 2	ELV Recovery	Group 2a	50,000	22
15	CoR	Anthony Smith	COR-CN-11-0004-01	Cavan Co Co	Class 6	Soil and Stone Recovery	Group 4	10,000	-
16	WFP	Dolans Environmental & Plant Hire	WFP-CN-09-0003-01(1)	Cavan Co Co	Class 6	Soil and Stone Recovery	Group 4	25,000	200
17	CoR	P&S Civil Works Ltd	COR-CN-13-0003-01	Cavan Co Co	Class 5	Soil and Stone Recovery	Group 4	25,000	-
18	CoR	Sean Kelly Quarry Limited	COR-CN-13-0002-01	Cavan Co Co	Class 5	Soil and Stone Recovery	Group 4	25,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
19	CoR	Bryson Recycling Ltd	COR-DL-13-046-01	Donegal Co Co	Class 10	CAS	Group 1	1,000	-
20	CoR	Bryson Recycling Ltd.	COR-DL-12-030-01	Donegal Co Co	Class 10	CAS	Group 1	1,000	120
21	CoR	Bryson Recycling Ltd.	COR-DL-12-031-01	Donegal Co Co	Class 10	CAS	Group 1	1,000	120
22	CoR	Bryson Recycling Ltd.	COR-DL-12-032-01	Donegal Co Co	Class 10	CAS	Group 1	1,000	120
23	CoR	Bryson Recycling Ltd.	COR-DL-13-047-01	Donegal Co Co	Class 10	CAS	Group 1	1,000	-
24	CoR	Bryson Recycling Lyd.	COR-DL-13-048-01	Donegal Co Co	Class 10	CAS	Group 1	1,000	-
25	WFP	Carl Mc Daid Recycling	WFP-DL-10-022-01	Donegal Co Co	Class 7, 10, 12	ATF/MSW/C&D	Group 1	57,500	-
26	CoR	Charles Gallagher	COR-DL-12-043-01	Donegal Co Co	Class 10	Tyres	Group 1	38	-
27	WFP	Danny Kearney	WFP-DL-12-021-01	Donegal Co Co	Class 7	C&D	Group 1	1,000	1,048
28	WFP	Davey Transport Ltd.	WFP-DL-09-0115-01	Donegal Co Co	Class 7	C&D	Group 1	57,500	1,966
29	WFP	Duffy Tyre Recycling Ltd.	WFP-DL-10-0118-01	Donegal Co Co	Class 10	Tyre Recycling	Group 1	50,000	830
30	CoR	Edenmore Farm Meats Ltd	COR-DL-13-045-01	Donegal Co Co	Class 7	C&D	Group 1	10,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
31	WFP	Ferry Refuse Collection Ltd.	WFP-DL-13-068-01	Donegal Co Co	Class 7, 10	MMW	Group 1	7,500	7,042
32	WFP	Hugh Barr	WFP-DL-12-020-01	Donegal Co Co	Class 7, 10,12	MMW/Skips/ELV's	Group 1	7,500	-
33	WFP	Laghey Waste Ltd.	WFP-DL-09-0002-01	Donegal Co Co	Class 10	MSW/Skips	Group 1	7,500	643
34	CoR	Liam Mc Sheffery	COR-DL-13-051-01	Donegal Co Co	Class 10	Tyres	Group 1	38	-
35	CoR	Martin Murray	COR-DL-13-052-01	Donegal Co Co	Class 7	C&D	Group 1	35,000	-
36	CoR	Michael Mc Laughlin	COR-DL-11-029-01	Donegal Co Co	Class 10	Tyres	Group 1	1,575	1,575
37	WFP	Patrick Logan & Sons Ltd.	WFP-DL-09-0114-01	Donegal Co Co	Class 10	MSW/Skips	Group 1	7,500	-
38	WFP	Paul McLaughlin	WFP-DL-12-010-03	Donegal Co Co	Class 10	MMW	Group 1	7,500	2,434
39	WFP	PT Recycling Paul Tully	WFP-DL-13-013-01	Donegal Co Co	Class 10	Tyres	Group 1	50,000	-
40	WFP	Shaun Mc Bride, TA Mc Bride Skip Hire	WFP-DL-13-028-01	Donegal Co Co	Class 7, 10	MMW	Group 1	7,500	1,001
41	WFP	Shaun Molloy & Sons	WFP-DL-10-009-01	Donegal Co Co	Class 7, 10	Store/transfer of waste	Group 1	7,500	5,238
42	WFP	Sidney McDauid	WFP-DL-10-006-01	Donegal Co Co	Class 10 and 12	MSW/SKIP/ATF	Group 1	7,500	5,377

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
43	WFP	United Shredding Ltd	WFP-DL-11-099-01	Donegal Co Co	Class 10	Paper	Group 1	50,000	-
44	WFP	Charlie Mc Laughlin	WFP-DL-12-080-02	Donegal Co Co	Class 12	ELV's (ATF)	Group 2	-	91
45	WFP	Daniel Lynch	WFP-DL-10-043-01	Donegal Co Co	Class 12	ATF	Group 2	-	-
46	WFP	Denis Mc Callion	WFP-DL-12-056-01	Donegal Co Co	Class 12	ELV's (ATF)	Group 2	-	-
47	CoR	Erin Recyclers Ltd.	COR-DL-11-023-01	Donegal Co Co	class 4 and 12	Scrap metals	Group 2	1,000	-
48	CoR	Erin Recyclers Ltd.	COR-DL-11-024-01	Donegal Co Co	class 4 and 12	Scrap metals	Group 2	1,000	-
49	CoR	Erin Recyclers Ltd.	COR-DL-11-025-01	Donegal Co Co	class 4 and 12	Scrap metals	Group 2	1,000	-
50	CoR	Erin Recyclers Ltd.	COR-DL-11-026-01	Donegal Co Co	class 4 and 12	Scrap metals	Group 2	1,000	-
51	CoR	Erin Recyclers Ltd.	COR-DL-11-027-01	Donegal Co Co	class 4 and 12	Scrap metals	Group 2	1,000	-
52	CoR	Erin Recyclers Ltd.	COR-DL-12-033-01	Donegal Co Co	class 4 and 12	Scrap metals	Group 2	1,000	-
53	CoR	Erin Recyclers Ltd.	COR-DL-12-034-01	Donegal Co Co	class 4 and 12	Scrap metals	Group 2	1,000	-
54	CoR	Green Vehicle Recycling Ltd.	COR-DL-12-037-01	Donegal Co Co	class 4 and 12	Scrap Metals	Group 2	1,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
55	CoR	Green Vehicle Recycling Ltd.	COR-DL-12-038-01	Donegal Co Co	class 4 and 12	Scrap Metals	Group 2	1,000	-
56	CoR	Green Vehicle Recycling Ltd.	COR-DL-12-039-01	Donegal Co Co	class 4 and 12	Scrap Metals	Group 2	1,000	-
57	WFP	Green Vehicle Recycling Ltd.	WFP-DL-10-0061-01	Donegal Co Co	Class 12	ATF	Group 2	-	4,866
58	WFP	Joseph Mc Cann	WFP-DL-10-0003-01	Donegal Co Co	Class 4	Metals	Group 2	8,500	251
59	WFP	Kevin Harrold	WFP-DL-11-084-01	Donegal Co Co	Class 4, 12	Scrap metals/ATF	Group 2	-	-
60	WFP	Martin O' Donnell	WFP-DL-10-069-01	Donegal Co Co	Class 12	ATF	Group 2	-	168
61	WFP	Raymond Mc Daid	WFP-DL-10-008-01	Donegal Co Co	Class 12	ATF	Group 2	-	-
62	WFP	Terence Howard	WFP-DL-11-094-01	Donegal Co Co	Class 4, 12	Scrap metals/ATF	Group 2	-	262
63	WFP	Thomas Mongan	WFP-DL-11-007-01	Donegal Co Co	Class 4, 12	Scrap metal	Group 2	-	-
64	WFP	Moyle Plant Ltd	WFP-DL-10-042-01	Donegal Co Co	Class 7	C&D	Group 4	150,000	-
65	CoR	Seamus Lafferty	COR-DL-09-002-01	Donegal Co Co	Class 5,7	Land improvement	Group 4	35,000	10
66	WFP	Bert Galbraith	WFP-DL-11-071-01	Donegal Co Co	Class 8	Sludges	Group 5	10,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
67	WFP	Enviro Grind Ltd.	WFP-DL-11-004-01	Donegal Co Co	Class 8	Composting	Group 5	10,000	11,125
68	CoR	Eunan Mc Intyre	COR-DL-10-010-01	Donegal Co Co	Class 12	Composting Plant	Group 5	50	-
69	WFP	Marine Harvest	WFP-DL-10-016-01	Donegal Co Co	Class 8	Composting Plant	Group 5	10,000	427
70	WFP	D&M Environmental Services Ltd	WFP-DL-11-019-01	Donegal Co Co	Class 11	MMW/Skips	Group 7	7,500	5,084
71	WFP	H. Mc Laughlin & Sons Ltd.	WFP-DL-09-0015-01	Donegal Co Co	Class 11	MSW/Skips	Group 7	7,500	-
72	WFP	JML Recycling Ltd	WFP-DL-11-018-01	Donegal Co Co	Class 11	MSW/Skips	Group 7	7,500	949
73	WFP	OCS, One Complete Solution	WFP-DL-11-0100-01	Donegal Co Co	Class 11	Sanitary Waste	Group 7	7,500	5
74	WFP	Pauric Meehan	WFP-DL-09-0027-01	Donegal Co Co	Class 11	MSW/Skips	Group 7	7,500	-
75	WFP	Sharkey Waste Recycling Ltd.	WFP-DL-09-0029-01	Donegal Co Co	Class 11	MSW/Skips	Group 7	7,500	-
76	CoR	Donegal Farm Relief Services	COR-DL-10-021-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	41
77	CoR	Irish Farm Film Plastic Group	COR-DL-10-014-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	111
78	CoR	Irish Farm Film Plastic Group	COR-DL-10-015-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	68

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
79	CoR	Irish Farm Film Plastic Group	COR-DL-10-016-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	0
80	CoR	Irish Farm Film Plastic Group	COR-DL-10-017-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	67
81	CoR	Irish Farm Film Plastic Group	COR-DL-10-018-01	Donegal Co Co	Class 2	Farm film Plastics	Group 8	1,000	116
82	CoR	Irish Farm Film Plastics Group	COR-DL-10-012-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	75
83	CoR	Irish Farm Film Plastics Group	COR-DL-10-013-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	31
84	CoR	Irish Farm Film Plastics Group	COR-DL-11-022-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	-
85	CoR	Irish Farm Film Plastics Group	COR-DL-13-049-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	16
86	CoR	Irish Farm Film Plastics Group	COR-DL-13-050-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	37
87	CoR	Irish Farm Film Producers Group	COR-DL-10-011-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	22
88	CoR	Sean & Dawn Kernan	COR-DL-12-040-01	Donegal Co Co	Class 2	Farm film Plastics	Group 8	1,000	2
89	CoR	Sean and Dawn Kernan	COR-DL-10-003-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	6
90	CoR	Sean and Dawn Kernan	COR-DL-10-004-01	Donegal Co Co	Class 2	Farm Film Plastics	Group 8	1,000	20

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
91	WFP	Galway Vehicle Recycling Centre Ltd.	WFP-GC-11-0001-01	Galway City Co	Class 2,4, 12	Storage Facility for end-of-life vehicles and ATF for recovery and storage of end-of-life vehicles	Group 2	-	56
92	WFP	Galway Harbour Company	WFP-GC-12-0001-01	Galway City Co	Class 5	Reclamation of lands by importing inert material. Stockpiling of material.	Group 4	66,375	0
93	CoR	Martin McGrath, C/O Arthur Ward, Carnacon, Tullinadaly Road, Tuam, Galway	COR-GC-11-0002-01	Galway City Co	Class 5, 6	Reclamation of lands by importing inert material for agricultural purposes.	Group 4	25,000	60
94	WFP	Sanserv Ltd.	WFP-GC-10-0002-01	Galway City Co	Class 11	Storage of sealed containers and disposal of hygiene bin liners.	Group 7	7,500	16
95	WFP	Connacht Timber Products	WFP-G-11-0004-01	Galway Co Co	PI Class 10, PII Class 13	Timber processing	Group 1	50,000	10,000
96	WFP	Connacht Waste Recycling	WFP-G-10-0005-01	Galway Co Co	Class 3, 9 10	Paper & card recycling	Group 1	50,000	-
97	WFP	East Galway Waste Disposal Ltd	WFP-G-11-0002-01	Galway Co Co	Class 7, 10	Store/transfer of waste incl. MSW	Group 1	50,000	-
98	WFP	Frylite Ireland LTD	WFP-G-10-0007-01	Galway Co Co	Class 10	Cooking oil	Group 1	50,000	-
99	WFP	HBF Biofuels	WFP-G-09-0004-01	Galway Co Co	Class 10	Waste oil reuse	Group	50,000	5

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
							1		
100	WFP	Mitchell Eco Fuels LTD	WFP-G-10-0006A-01	Galway Co Co	Class 10	Store/transfer waste	Group 1	500	-
101	WFP	Quitmann O'Neill Packaging Ltd	WFP-G-13-0001-01	Galway Co Co	Class 10	Timber processing	Group 1	50,000	700
102	WFP	Roadstone Wood Ltd (RWL)	WFP-G-11-0006-01	Galway Co Co	PII Class 7	Store/transfer waste	Group 1	50,000	-
103	WFP	Walsh Waste Craughwell	WFP-G-10-0003-01	Galway Co Co	PI Class 10 PII Class 11,13	Store/transfer waste	Group 1	50,000	-
104	WFP	Walsh Waste Oranmore	WFP-G-10-0009-01	Galway Co Co	PII Class 13 (Incorrect Class 10)	Not used for waste	Group 1	50,000	-
105	WFP	Wheeley Environmental Refuse Services	WFP-G-09-0002-01	Galway Co Co	Class 7, 10	Store/transfer waste	Group 1	50,000	-
106	WFP	Brendan Higgins	WFP-G-10-0002-01	Galway Co Co	PI Class 2,4 PII Class 2,4	ELV's - car dismantlers	Group 2	200	200
107	WFP	Forde Dismantlers	WFP-G-09-0005-01	Galway Co Co	PI Class 2,4 PII Class 2,4	ELV's - car dismantlers	Group 2	480	-
108	WFP	Galway Metal Company Ltd	WFP-G-11-0005-01	Galway Co Co	Class 1,2,3,4,9,12	ATF	Group 2	10,000	-
109	WFP	Headford Road Car Dismantlers	WFP-G-10-0004-01	Galway Co Co	PI Class 2,4,9 PII Class 2,4	ELV's - car dismantlers	Group 2	420	260
110	WFP	Martin Nohilly	WFP-G-10-0001-01	Galway Co Co	PI Class 2,4 PII Class 2,4	ELV's - car dismantlers	Group 2	200	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
111	WFP	Mongan Dismantlers Ltd	WFP-G-10-0008-01	Galway Co Co	PI Class 2,4,9 PII Class 2,4	ELV's - car dismantlers	Group 2	400	-
112	CoR	Rehab Recycle	COR-G-14-0001-01	Galway Co Co	Class 4	WEEE, Batteries	Group 3	-	-
113	CoR	Action Tuam	COR-G-10-0007-01	Galway Co Co	Class 5	Land improvement	Group 4	25,000	-
114	CoR	Billy Walsh	COR-G-10-0004-01	Galway Co Co	Class 5	Land improvement	Group 4	25,000	-
115	CoR	Coffey Plant Ltd	COR-G-11-0005-01	Galway Co Co	Class 5	Land improvement	Group 4	25,000	-
116	CoR	Fintan Hayes	COR-G-11-0003-01	Galway Co Co	Class 5	Land improvement	Group 4	25,000	-
117	CoR	Frank Mortimer	COR-G-10-0002-01	Galway Co Co	Class 5	Land improvement	Group 4	25,000	-
118	CoR	Gailf Cumann Bearna Teoranta, c/o Mr. Pat Donnellan	COR-G-13-0001-01	Galway Co Co	Class 5	Land improvement	Group 4	25,000	-
119	CoR	JFC Manufacturing LTD	COR-G-10-0009-01	Galway Co Co	Class 5	Land improvement	Group 4	25,000	-
120	CoR	John O'Toole	COR-G-10-0003-01	Galway Co Co	Class 5	Land improvement	Group 4	25,000	-
121	CoR	Martin Geoghegan	COR-G-10-0001-01	Galway Co Co	Class 5	Land improvement	Group 4	25,000	11,500
122	CoR	Michael Callaghan	COR-G-11-0001-01	Galway Co Co	Class 5	Land improvement	Group 4	25,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
							4		
123	CoR	Michael Mannion	COR-G-11-0004-01	Galway Co Co	Class 5, 10	Land improvement	Group 4	25,000	-
124	WFP	Vincent Cannon	WFP-G-10-0006-01	Galway Co Co	Class 5	C&D site - land reclamation	Group 4	50,000	-
125	WFP	OCS Tuam	WFP-G-11-0003-01	Galway Co Co	Class 11	Non-haz-&-CFC	Group 7	7,500	200
126	WFP	Noel Hannon Glenwood Environmental Ltd.	WFP-LM-09-001-01	Leitrim Co Co	Class 10	Store/transfer waste	Group 1	50,000	166
127	WFP	Desmond Rooney	WFP-LM-11-001-01	Leitrim Co Co	Class 2,4,9, 12	Metals and ELVs	Group 2	-	2,324
128	WFP	Wilton Waste Recycling Limited	WFP-LM-10-001-02	Leitrim Co Co	Class 2,4, 12	Metals and ELVs	Group 2	-	1,348
129	WFP	Bourke Waste Removal Ltd.	WFP-MO-08-0004-02	Mayo Co Co	Class 1,7,9,10,11	Store/transfer waste	Group 1	50,000	-
130	WFP	Dominic O'Reilly Transport Services Ltd.,	WFP-MO-11-0018-01	Mayo Co Co	Class 10	Store/transfer waste	Group 1	50,000	-
131	WFP	Dooniver Plant Hire Ltd.	WFP-MO-10-0013-01	Mayo Co Co	Class 10	Store/transfer waste	Group 1	50,000	-
132	WFP	Edward Mooney	WFP-MO-11-0020-01	Mayo Co Co	Class 10	Store/transfer waste	Group 1	50,000	-
133	WFP	Feoil Freight Ltd., T/A Sweeney Recycling	WFP-MO-11-0019-01	Mayo Co Co	Class 4, 10,11	Store/transfer waste	Group 1	50,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
134	WFP	G & N Loftus Recycling & Sons Ltd.	WFP-MO-11-0017-02	Mayo Co Co	Class 7, 10	Store/transfer waste	Group 1	50,000	-
135	CoR	Gibbons Building & Civil Eng Ltd	COR-MO-13-0021-01	Mayo Co Co	Class 7	Store/transfer waste	Group 1	12,000	10,500
136	WFP	McGrath Industrial Waste Ltd.	WFP-MO-08-0002-02	Mayo Co Co	Class 1, 4,7,9,10,11	Store/transfer waste	Group 1	50,000	-
137	WFP	McGrath Industrial Waste Ltd.	WFP-MO-10-0015-02	Mayo Co Co	Class 7, 10	Store/transfer waste	Group 1	50,000	-
138	WFP	McGrath Industrial Waste Ltd.	WFP-MO-13-0030-01	Mayo Co Co	Class 1,4,7,9,10,11	Store/transfer waste	Group 1	50,000	-
139	WFP	V.K. Agri Recycling Ltd.	WFP-MO-10-0009-01	Mayo Co Co	Class 10	Store/transfer waste	Group 1	50,000	-
140	WFP	Ballinrobe Waste Disposal Ltd.	WFP-MO-12-MO-0024-01	Mayo Co Co	Class 4,7,10,11	Metals and ELVs	Group 2	-	-
141	WFP	Jackson Engineering (Castlebar) Ltd.,	WFP-MO-12-MO-0023-01	Mayo Co Co	Class 2,3,4,10,12	Metals and ELVs	Group 2	-	-
142	WFP	John Dempsey T/A Dempseys Car & Van Spares	WFP-MO-10-0215-01	Mayo Co Co	Class 12	Metals and ELVs	Group 2	-	-
143	WFP	Joseph Hoade	WFP-MO-10-0010-02	Mayo Co Co	Class 12	Metals and ELVs	Group 2	-	-
144	WFP	Kevin McNamara T/A McNamara's Car Dismantlers & Co.	WFP-MO-11-0016-01	Mayo Co Co	Class 12	Metals and ELVs	Group 2	-	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
145	WFP	Michael Devaney T/A Shamrock Metal Recyclers	WFP-MO-10-0008-01	Mayo Co Co	Class 12	Metals and ELVs	Group 2	-	-
146	WFP	Sean Naughton	WFP-MO-12-0025-01	Mayo Co Co	Class 11 (INCORRECT 12)	Metals and ELVs	Group 2	-	-
147	WFP	Eirtrade Aviation Ireland Ltd	WFP-MO-12-0026-01	Mayo Co Co	Class 2,4, 10	Aircraft Dismantling	Group 2a	-	-
148	CoR	B.Byrne & Son Ltd.,	COR-MO-11-0009-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	24,000	17,800
149	CoR	Bourke Waste Removals Ltd.	COR-MO-12-0013-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	11,450	9,714
150	CoR	Cathal Gilmartin	COR-MO-12-0017-01	Mayo Co Co	Class 5	Land improvement	Group 4	10,000	0
151	CoR	Cathal Gilmartin	COR-MO-13-0031-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	19,500	19,500
152	CoR	Dominic Mulchrone	COR-MO-11-0012-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	25,000	24,606
153	CoR	Fahy Rovers AFC & Fahy Community Development Ltd.	COR-MO-13-0024-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	25,000	22,998
154	CoR	Fiona Ruane	COR-MO-10-0008-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	24,000	-
155	CoR	Fiona Ruane	COR-MO-12-0015-02	Mayo Co Co	Class 5, 6	Land improvement	Group 4	12,000	12,000

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
156	CoR	J.P. Bell	COR-MO-12-0018-01	Mayo Co Co	Class 5	Land improvement	Group 4	25,000	25,000
157	CoR	John Moore	COR-MO-13-0026-01	Mayo Co Co	Class 5	Land improvement	Group 4	25,000	25,000
158	CoR	Michael Cannon	COR-MO-13-0028-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	9,000	9,000
159	CoR	Michael Lavelle	COR-MO-13-0025-01	Mayo Co Co	Class 5	Land improvement	Group 4	25,000	-
160	CoR	Michael S Togher	COR-MO-13-0030-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	12,000	12,000
161	WFP	Paddy Joe Barrett	WFP-MO-12-0022-01	Mayo Co Co	Class 5	Land improvement	Group 4	88,000	25,000
162	CoR	Pat King	COR-MO-13-0022-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	25,000	22,093
163	WFP	Pat Walsh	WFP-MO-13--0028-01	Mayo Co Co	Class 5,6	Land improvement	Group 4	80,000	70,000
164	CoR	Rice College Secondary School	COR-MO-13-0029-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	15,000	-
165	WFP	Sean & Majella Mulchrone	WFP-MO-13-0029-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	95,000	90,000
166	CoR	Sean & Majella Mulchrone	COR-MO-12-0014-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	25,000	201
167	CoR	Straide & Foxford United	COR-MO-13-0027-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	25,000	25,000

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
168	CoR	Westport United Soccer Club Ltd	COR-MO-13-0020-01	Mayo Co Co	Class 5, 6	Land improvement	Group 4	25,000	1,500
169	WFP	Padraig & Donal Horan	WFP-MO-09-0007-02	Mayo Co Co	Class 10, 11	Non haz packaging	Group 7	-	-
170	WFP	ADN Materials Limited	WFP-MN12-0001-01	Monaghan Co Co	Class 10	Plastic Recycling	Group 1	50,000	1,093
171	WFP	Blue Dolphin Environmental Limited	WFP-MN-11-0009-01	Monaghan Co Co	Class 7,10,11	Transfer Station	Group 1	50,000	509
172	WFP	Greenleaf Tyre Recycling	WFP-MN-12-0003-01	Monaghan Co Co	Class 10	End of Life Tyres	Group 1	50,000	-
173	WFP	Sean Kerwan t/a Polygon Recycling	WFP-MN13-0001-01	Monaghan Co Co	Class 10	Farm plastics storage	Group 1	50,000	-
174	WFP	Shabra Recycling Limited	WFP-MN-08-0022-01	Monaghan Co Co	Class 10	Plastic Bottles & Other materials recycling facility	Group 1	50,000	13,280
175	WFP	Charlie Byrne	WFP-MN-10-0004-01	Monaghan Co Co	Class 4, 12	ELVs	Group 2	2,520	879
176	WFP	Eugene Conlon t/a Sragh Dismantlers Limited	WFP-MN-10-0006-01	Monaghan Co Co	Class 12	End of Life Vehcles	Group 2	250	336
177	WFP	Ken Atkison and Son Limited	WFP-MN-10-0002-01	Monaghan Co Co	Class 12	ELVs	Group 2	80	6
178	WFP	Kevin McKernan	WFP-MN-09-0005-01	Monaghan Co Co	Class 4, 12	ELVs Scrap metal	Group 2	500	0

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
179	WFP	Patrick Mc Quaid	WFP-MN-11-0008-01	Monaghan Co Co	Class 12	ELVs	Group 2	2,520	70
180	WFP	Ted Brennan Motors Limited	WFP-MN-11-0003-01	Monaghan Co Co	Class 12	ELVs	Group 2	2,520	12
181	WFP	Truck Dismantler Ireland	WFP-MN-10-0001-01	Monaghan Co Co	Class 2, 12	ELVs	Group 2	-	550
182	WFP	Eamon Mc Kenna, t/a Scanbitz Limited	WFP-MN-11-0011-01	Monaghan Co Co	Class 2	ELVs	Group 2a	18,000	-
183	WFP	DPT Mixed Use Developments Limited	WFP-MN-12-0002-01	Monaghan Co Co	Class 5,6	Soil and Stone	Group 4	100,000	17,622
184	CoR	Eamon Mc Cabe	COR-MN-11-0001-01	Monaghan Co Co	Class 5, 6	Soil, Stone, concrete, bricks	Group 4	25,000	2,500
185	CoR	Hugh Mc Kenna	COR-MN-11-0012-01	Monaghan Co Co	Class 5,6	Soil and Stone	Group 4	25,000	24,999
186	CoR	James Hackett	COR-MN-11-0007-01	Monaghan Co Co	Class 5,6	Soil and Stone	Group 4	25,000	-
187	CoR	James Shelvin	COR-MN-11-0002-01	Monaghan Co Co	Class 5,6	Soil, stone, concrete, bricks	Group 4	25,000	1,080
188	CoR	Patrick J McCabe	COR-MN-10-0005-01	Monaghan Co Co	Class 5, 6	Soil & Stone	Group 4	25,000	150
189	CoR	Patrick Mc Crarren	COR-MN-11-0010-01	Monaghan Co Co	Class 5,6	Soil and Stone	Group 4	25,000	-
190	CoR	Tom Treanor	COR-MN-11-0006-01	Monaghan Co Co	Class 5,6	Soil and Stone	Group	25,000	3,000

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
							4		
191	WFP	Terralift	WFP-MN-11-0004-01	Monaghan Co Co	Class 8	Composting	Group 5	10,000	200
192	WFP	Arigna Fuels	WFP-RN-09-0003-01	Roscommon Co Co	Class 10	Waste for energy recovery	Group 1	1,200	1,200
193	WFP	BioCore Environmental AD1 Ltd	WFP-RN-11-0002-01	Roscommon Co Co	Class 10	Biogas plant	Group 1	19,000	0
194	WFP	Farm Relief Services	WFP-RN-09-0002-01	Roscommon Co Co	Class 10	Farm plastic waste recycling transfer station	Group 1	2,000	2,000
195	WFP	Hannons Poultry Exporting Co. Ltd	WFP-RN-10-0002-01	Roscommon Co Co	Class 10	Sewage sludge processing	Group 1	20,000	0
196	WFP	James Fitzgerald	WFP-RN-09-0004-01	Roscommon Co Co	Class 9, 10,11	Farm plastic & agriwaste recycling transfer station	Group 1	5,345	2,375
197	WFP	OCR Waste Management Ltd	WFP-RN-10-0001-01	Roscommon Co Co	Class 7, 10	C&D Recovery	Group 1	11,000	3,746
198	CoR	Roscommon County Council,	R02648-01	Roscommon Co Co	Class 7	Inert waste recovery facility (use by RCC only)	Group 1	10,000	1,000
199	CoR	Roscommon County Council,		Roscommon Co Co	Class 7	Inert waste recovery facility (use by RCC only)	Group 1	5,000	1,000
200	CoR	Roscommon County		Roscommon Co Co	Class 7	Inert waste recovery	Group	5,000	1,000

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
		Council,				facility (use by RCC only)	1		
201	WFP	Castlereagh ELV Recycling Ltd	WFP-RN-11-0001-01	Roscommon Co Co	Class 2, 4, 12	ATF for ELVs	Group 2	1,000	300
202	WFP	Christy Connolly, C&H Motors	WFP-RN-14-0001-01	Roscommon Co Co	Class 2, 4, 12	ATF for ELVs	Group 2	500	0
203	CoR	Connor Hannon	COR-RN-09-0012-01	Roscommon Co Co	Class 5	Soil and Stone recovery facility	Group 4	2,000	16
204	CoR	Joe McNamara	COR-RN-11-0002-01	Roscommon Co Co	Class 5	Soil and stone recovery facility	Group 4	2,000	1,000
205	CoR	Patrick Gaynor & Sons Ltd	COR-RN-09-0013-01	Roscommon Co Co	Class 5	Soil and Stone Recovery Facility	Group 4	2,000	3,000
206	CoR	Tom Connolly	COR-RN-10-0001-01	Roscommon Co Co	Class 5	Soil and stone recovery facility	Group 4	4,980	1,000
207	CoR	Marlow, Ballymote. Closed landfill, Council Facility.	R02543-01	Sligo Co Co	Class 7	Temporary storage excavated waste by LA.	Group 1	5,000	-
208	CoR	Seamus Watters. Council Facility.	R2342	Sligo Co Co	Class 7	Temporary storage excavated waste by LA.	Group 1	4,900	-
209	WFP	David McNulty T/A North West Car & Parts	WFP-SO-13-001-03	Sligo Co Co	Class 2, 4, 12	ATF	Group 2	435	435
210	WFP	Erin Recyclers Ltd.	WFP-SO-11-003-03	Sligo Co Co	Class 2, 4, 12	Metals and ELVs	Group 2	25,490	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity TPA	2012 Waste Intake
211	WFP	Quinn Body Repairs Ltd.	WFP-SO-11-04-02	Sligo Co Co	Class 12	ATF	Group 2	300	300
212	WFP	Willie McGinley	WFP-SO-09-001-01	Sligo Co Co	Class 4,9	Scrap Metal Facility.	Group 2	1,000	-
213	CoR	Harrington Concrete Sligo	COR-SO-12-002-01	Sligo Co Co	Class 5, 6, 7	Land improvement	Group 4	7,400	7,400
214	CoR	Robert, Union Wood. Council Facility.	R766	Sligo Co Co	Class 5	Land improvement	Group 4	5,000	-
215	CoR	Vincent Melvin	COR-SO-09-001-01	Sligo Co Co	Class 5	Land improvement	Group 4	25,000	34,288
216	CoR	Ballisodare, Green Compost Facility	R1474	Sligo Co Co	Class 12	Composting	Group 5	1,000	358
217	CoR	Old Jail, skip. Council Facility.	R02631-01	Sligo Co Co	Class 2	Unused	Group 8	854	-

## **APPENDIX E**

### **Inventory of EPA Waste Licenced Sites**

## Appendix E

EPA authorised facilities and capacity data table. Data was provided by the EPA from PRTR and national waste report datasets in June & July 2014.

The Waste Licenses have lapsed for facilities Nos. 1 & 2 – these facilities are mapped but are not included in the capacity analysis.

Map Label No	Facility Name	Licence Number	Operational Status	Local authority	Principal R/D code	Class of activity	Authorised capacity TPA	Waste Sent off site for 2012 Tonnes	2012 Waste undergoing final treatment Tonnes
1	Marley Compost Ltd	W0118-01	Lapsed - Not Counted	Monaghan County Council	R3	Composting	9,000	-	-
2	Kabeyun Ltd	W0121-01	Lapsed - Not Counted	Monaghan County Council	R3	Composting	15,600	-	-
3	Mohill Landfill	W0065-01	Closed	Leitrim County Council	D1	Landfill	72,500	3,650	-
4	Carrick On Shannon Landfill	W0064-01	Closed	Leitrim County Council	D1	Landfill	10,000	3,650	-
5	Scotch Corner Landfill	W0020-02	Active	Monaghan County Council	D1/D5	MSW Landfill	39,500	68,826	13,298
6	Derrinmera Landfill	W0021-02	Closed	Mayo County Council	D1/D5	Landfill	40,000	77,864	11,232
7	BNM Srahmore Peat Deposition	W0199-02	Closed	Mayo County Council	D1	Inert Landfill	75,000	867	57,794
8	Pollboy Landfill Facility	W0027-02	Closed	Ballinasloe Town Council	D5	Landfill	120,000	143	-

Map Label No	Facility Name	Licence Number	Operational Status	Local authority	Principal R/D code	Class of activity	Authorised capacity TPA	Waste Sent off site for 2012 Tonnes	2012 Waste undergoing final treatment Tonnes
9	Roscommon Landfill	W0073-01	Closed	Roscommon County Council	D1	Landfill	20,000	3,633	-
10	Balbane Landfill	W0090-01	Inactive	Donegal County Council	D1	Landfill	77,500	-	-
11	Bailieborough Landfill	W0091-01	Closed	Cavan County Council	D1	Landfill	88,650	-	-
12	Ballyjamesduff Landfill	W0093-01	Inactive	Cavan County Council	D1	Landfill	55,000	-	-
13	Glenalla Landfill	W0125-01	Closed	Donegal County Council	D1	Landfill	46,000	3,615	-
14	Muckish Landfill	W0126-01	Closed	Donegal County Council	D1	Landfill	40,000	2,921	-
15	Belturbet Landfill	W0092-01	Inactive	Cavan County Council	D1	Landfill	45,000	-	-
16	Churchtown Landfill	W0062-01	Inactive	Donegal County Council	D1	Landfill	11,000	-	-
17	Carrowbrowne Landfill	W0013-01	Closed	Galway City Council	D1	Landfill	18,000	-	-
18	Meenaboll Landfill	W0215-01	Not commenced	Donegal County Council	D5	Landfill	25,500	-	-
19	Ballaghaderreen Landfill	W0059-03	Closed	Roscommon County Council	D5	Landfill	45,000	26,785	-

Map Label No	Facility Name	Licence Number	Operational Status	Local authority	Principal R/D code	Class of activity	Authorised capacity TPA	Waste Sent off site for 2012 Tonnes	2012 Waste undergoing final treatment Tonnes
20	Rathreeen Landfill	W0067-02	Active	Mayo County Council	D1	MSW Landfill	44,600	67,616	40,501
21	Greenstar East Galway Landfill	W0178-02	Closed	Galway County Council	D5	Landfill	127,320	53,180	94,476
22	Ballynacarrick Landfill	W0024-04	Closed	Donegal County Council	D5	Landfill	35,000	59,103	19,022
23	Corranure Landfill	W0077-04	Closed	Cavan County Council	D5	Landfill	48,100	33,131	-
24	Drumabodan Landfill	W0063-02	Inactive	Donegal County Council	D1	Landfill	40,000	-	-
25	Lennon Quarries Ltd	W0256-02	Active	Mayo County Council	R5	Soil Recovery	90,000	-	37,289
26	Greenstar Ltd	W0058-01	Active	Sligo County Council	D13	Waste Transfer	100,000	19,201	-
27	Bruscar Bhearna Teoranta	W0106-02	Active	Galway City Council	D15	Waste Transfer	166,000	75,503	1,045
28	Cavan Waste Disposal Ltd	W0207-01	Active	Cavan County Council	R12	Waste Transfer	24,990	20,767	-
29	McGrath Industrial Waste Ltd	W0143-01	Active	Mayo County Council	D14	Waste Transfer	95,000	-	-
30	City Bin Co Ltd	W0148-01	Active	Galway County Council	D13	Waste Transfer	130,000	32,575	-

Map Label No	Facility Name	Licence Number	Operational Status	Local authority	Principal R/D code	Class of activity	Authorised capacity TPA	Waste Sent off site for 2012 Tonnes	2012 Waste undergoing final treatment Tonnes
31	Bergin Waste Disposal Ltd	W0163-01	Active	Roscommon County Council	D13	Waste Transfer	19,700	20,683	-
32	Barna Waste	W0216-01	Active	Leitrim County Council	D13	Waste Transfer	24,990	13,846	-
33	Galway Corporation Depot	W0166-01	Active	Galway City Council	R12	Waste Transfer	24,000	6,186	-

## **APPENDIX F**

### **Legacy and Historic Landfill**

Site ID	LocalAuthority	SiteName	SiteRisk
S22-02575	Cavan County Council	Kingscourt dumping ground	A
S22-02566	Cavan County Council	Ballyconnell dumping ground	B
S22-02571	Cavan County Council	Bellananagh dumping ground	B
S22-02574	Cavan County Council	Kilnaleck dumping ground	B
S22-02579	Cavan County Council	Cootehill dumping ground	B
S22-02604	Cavan County Council	Gowna dumping ground	B
S22-02562	Cavan County Council	Blacklion dumping ground	C
S22-02567	Cavan County Council	Dowra dumping ground	C
S22-02569	Cavan County Council	Swanlinbar dumping ground	C
S22-02570	Cavan County Council	Arvagh dumping ground	C
S22-02573	Cavan County Council	Mount Nugent dumping ground	C
S22-02577	Cavan County Council	Shercock dumping ground	C
S22-02586	Cavan County Council	Mullagh dumping ground	C
S22-02610	Cavan County Council	Virginia dumping ground	C
S22-02696	Cavan County Council	Tanderagee Bailieborough	C
S22-02354	Donegal County Council	Buncrana town dump	A
S22-02382	Donegal County Council	Dunkineely town dump	A
S22-02301	Donegal County Council	Bundoran town dump	B
S22-02347	Donegal County Council	Ballyshannon Town Dump	B
S22-02348	Donegal County Council	Carrick town dump	B
S22-02349	Donegal County Council	Cloughfinn Dump	B
S22-02350	Donegal County Council	Ramelton town dump	B
S22-02355	Donegal County Council	Corkey dump	B
S22-02373	Donegal County Council	Carndonagh town dump	B
S22-02345	Donegal County Council	Meenderryowan 1	C
S22-02346	Donegal County Council	Derrycassen	C
S22-02351	Donegal County Council	Pettigo town dump	C
S22-02352	Donegal County Council	Ardara town dump	C
S22-02353	Donegal County Council	Aranmore dump	C
S22-02356	Donegal County Council	Portnoo town dump	C
S22-02357	Donegal County Council	Ballyrattan dump	C
S22-02358	Donegal County Council	Knocknafaugher dump	C
S22-02359	Donegal County Council	Dungloe town dump	C
S22-02368	Donegal County Council	Island Roy 1	C
S22-02369	Donegal County Council	Tory island	C
S22-02370	Donegal County Council	Rathmullan Dump	C

Site ID	LocalAuthority	SiteName	SiteRisk
S22-02371	Donegal County Council	Mountain road dump	C
S22-02372	Donegal County Council	Fergasons site	C
S22-02374	Donegal County Council	Rossbracken	C
S22-02376	Donegal County Council	Glenties town dump	C
S22-02378	Donegal County Council	Loughanure town dump	C
S22-02380	Donegal County Council	Falcarragh town dump	C
S22-02383	Donegal County Council	Mouncharles town dump	C
S22-02375	Donegal County Council	Lough agher	
S22-02377	Donegal County Council	Glenties dump	
S22-02379	Donegal County Council	Meenagroby	
S22-02381	Donegal County Council	Meenawillgen	
S22-02384	Donegal County Council	Ballymagan dump	
S22-02385	Donegal County Council	Errigal Eisc Dump	
S22-02529	Donegal County Council	Meenderryowan 2	
S22-02593	Galway City Council	Southpark	A
S22-02236	Galway County Council	Gort	A
S22-02242	Galway County Council	New inn	A
S22-02244	Galway County Council	Glenamaddy	A
S22-02246	Galway County Council	Tuam-Rinkippen	A
S22-02676	Galway County Council	Portumna - Shannon Road	A
S22-02238	Galway County Council	Headford	B
S22-02241	Galway County Council	Oughterard	B
S22-02243	Galway County Council	Ballygar	B
S22-02245	Galway County Council	Dunmore	B
S22-02365	Galway County Council	Inis Mor - Cill Ronain	B
S22-02671	Galway County Council	Athenry - Ballydavid	B
S22-02672	Galway County Council	Athenry - Rockfield	B
S22-02673	Galway County Council	Clifden - Shore Road	B
S22-02237	Galway County Council	Clifden - Tullyvoheen	C
S22-02239	Galway County Council	Portumna - Capira	C
S22-02240	Galway County Council	Woodford	C
S22-02366	Galway County Council	Clonbur	C
S22-02674	Galway County Council	Loughrea - Tullah	C
S22-02675	Galway County Council	Loughrea - Ballagasty	C
S22-02493	Leitrim County Council	Manorhamilton (Whitakers Bridge)	B
S22-02494	Leitrim County Council	Kiltyclogher	B

Site ID	LocalAuthority	SiteName	SiteRisk
S22-02496	Leitrim County Council	Ballinamore	B
S22-02497	Leitrim County Council	Drumshanbo	B
S22-02492	Leitrim County Council	Manorhamilton (Cornastalk)	C
S22-02495	Leitrim County Council	Drumkeeran	C
S22-02587	Mayo County Council	Swinford Closed Landfill	B
S22-02588	Mayo County Council	Claremorris Closed Landfill	B
S22-02704	Mayo County Council	Bourke Waste Removal Ltd PER 263	B
S22-02719	Mayo County Council	G&N Loftus Recycling & Sons Ltd Per 241	B
S22-02581	Mayo County Council	Ballyhaunis Closed Landfill	C
S22-02583	Mayo County Council	Charlestown Closed Landfill	C
S22-02585	Mayo County Council	Foxford Closed landfill	C
S22-02689	Mayo County Council	Trevor Ruane	C
S22-02700	Mayo County Council	Pat Loftus PER 222	C
S22-02702	Mayo County Council	Cathal Gilmartin PER 252	C
S22-02703	Mayo County Council	Tommy Brennan PER 259	C
S22-02706	Mayo County Council	Derrynadivva Windfarm Ltd COR-MO-08-0001-01	C
S22-02707	Mayo County Council	Tom Bennett COR-MO-08-0002-01	C
S22-02708	Mayo County Council	Coffey Construction Ltd COR-MO-09-0005-01	C
S22-02713	Mayo County Council	Conor O'Malley Per 89	C
S22-02701	Mayo County Council	Sean Naughton PER 225	
S22-02705	Mayo County Council	Padraig & Donal Horan, P&D Horan	
S22-02714	Mayo County Council	Leonard Moran Per 210	
S22-02715	Mayo County Council	Michael Kelly Per 211	
S22-02716	Mayo County Council	Gerry Gilllard Per 214	
S22-02717	Mayo County Council	John Dempsey Dempsey Car & Van Spares	
S22-02718	Mayo County Council	kevin mcnamara mcnamara's car dismantlers	
S22-02720	Mayo County Council	Michael Cawe Per 219	
S22-02721	Mayo County Council	Christopher Kinhart Per 255	
S22-02722	Mayo County Council	Noel Judge Per 254	
S22-02723	Mayo County Council	Michael Flannery Per 231	
S22-02724	Mayo County Council	Cathal Gilmartin Per 224	
S22-02725	Mayo County Council	Cathal Gilmartin Per 245	
S22-02726	Mayo County Council	Michael O'Malley Per 235	

Site ID	LocalAuthority	SiteName	SiteRisk
S22-02727	Mayo County Council	Nathy Neary Per 238	
S22-02728	Mayo County Council	Edward Ruane Per 239	
S22-02729	Mayo County Council	Eamonn Padden Per 246	
S22-02730	Mayo County Council	Sean McGuinness Per 233	
S22-02731	Mayo County Council	Seamus Regan Contractors Per 232	
S22-02732	Mayo County Council	James Noel Kenny Per 223	
S22-02733	Mayo County Council	John Kirrane Per 226	
S22-02734	Mayo County Council	JJ Sweeney Feoil Freight Ltd Per 228	
S22-02735	Mayo County Council	Joe Horan Per 207	
S22-02736	Mayo County Council	McGrath Industrial Waste Ltd	
S22-02737	Mayo County Council	JJ Sweeney Per 248	
S22-02739	Mayo County Council	nnn	
S22-02740	Mayo County Council	Kieran Mulvey Per 257	
S22-02741	Mayo County Council	Ballinrobe Waste Disposal Ltd Per 244	
S22-02296	Monaghan County Council	Killycronaghan county council landfill	A
S22-02297	Monaghan County Council	Mcnallys site	A
S22-02455	Monaghan County Council	Coleman island	A
S22-02524	Monaghan County Council	Carrickmacross town dump - Tiragarvan	A
S22-02528	Monaghan County Council	Castleblayney town dump 2	A
S22-02298	Monaghan County Council	Old scotch corner landffill	B
S22-02300	Monaghan County Council	Dromore quarry	B
S22-02781	Monaghan County Council	Aidan Fox Site	B
S22-02299	Monaghan County Council	Town dump ballybay	C
S22-02454	Monaghan County Council	Ballybay tannery	
S22-02423	Roscommon County Council	Castlerea landfill site	A
S22-02421	Roscommon County Council	Strokestown landfill site	B
S22-02553	Roscommon County Council	Frenchpark	B
S22-02422	Roscommon County Council	Boyle landfill site	C
S22-02623	Sligo County Council	Finisklin	A
S22-02628	Sligo County Council	Marlow	B
S22-02712	Sligo County Council	Tubbercurry Closed Landfill	C

## **APPENDIX G**

### **Index of Waste Plan Policies**

## APPENDIX G

### Policy A1 Section 3.1.6

#### Policy:

- A1. Take measures to ensure the best overall environmental outcome by applying the waste hierarchy to the management of waste streams.

### Policy A2 Section 3.1.6

#### Policy:

- A2. Implement the polluter pays principle across all waste services and regulatory activities in a manner appropriately reflecting the risk to the environment and human health.

### Policy A3 Section 3.3

#### Policy:

- A3. Contribute to the improvement of management performance across all waste streams through the implementation of policy actions and monitor progress towards national targets.

### Policy A4 Section 4.3

#### Policy:

- A4. Aim to improve regional and national self-sufficiency of waste management infrastructure for the reprocessing and recovery of particular waste streams, such as mixed municipal waste, in accordance with the proximity principle. The future application of any national economic or policy instrument to achieve this policy shall be supported.

### **Policy B1 Section 8.2.3**

#### **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.

### **Policy B2 Section 8.2.3**

#### **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.

### **Policy B3 Section 8.4.6**

#### **Policy:**

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

### **Policy B4 Section 8.4.6**

#### **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).

### Policy C1 Section 8.3.3

#### Policy:

- C1. Establish reuse, repair, and preparing for reuse activities and networks to recirculate and extend the lifespan of items.

### Policy C2 Section 12.2.1

#### 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.

### Policy C3 Section 12.2.1

#### Policy:

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

### Policy C4 Section 4.4

#### Policy:

- C4. Contribute to the greening of public procurement in local authorities through the inclusion of resource efficient criteria in all tendering processes related to waste plan activities.

#### Policy C5 Section 17.2.8

##### Policy:

- C5. Work with and through business support agencies and the National Waste Prevention Programme to encourage business and industry to implement resource efficiency principles including the use of clean technologies and preventing waste at source.

#### Policy D1 Section 17.2.1

##### Policy:

- D1. The lead authority on behalf of the region will participate in the national coordination committee for waste management planning and other national groups relevant to the implementation of the waste management plan.

#### Policy D2 Section 17.2.1

##### Policy:

- D2. The Lead authority and local authorities will work together on the structures required to implement the waste plan, capacity building, training and knowledge share on delivering waste management activities.

#### Policy D3 Section 17.9

##### Policy:

- D3. Foster links and activities with relevant stakeholders including businesses and Industry Groups, NGOs and other relevant networks (including cross-border networks) to extend the reach of the plan.

#### **Policy D4 Section 18.6**

##### **Policy:**

- D4. Work with key stakeholders, including government and industry operators, on the funding of local authority waste activities in the region and co-ordinate applications for relevant national and European funding.

#### **Policies E1 & E2 Section 16.4.1**

##### **Policies:**

- E1. Future authorisations by the local authorities, the EPA and An Bord Pleanála of pre-treatment capacity in the region must take account of the authorised and available capacity in the market while being satisfied the type of processing activity being proposed meets the requirements of policy E2.
- E2. The future authorisation of pre-treatment activities by local authorities over the plan period will be contingent on the operator demonstrating that the treatment is necessary and the proposed activities will improve the quality and add value to the output materials generated at the site.

### Policies:

- E3a. The local authorities in the region will maintain and develop their existing networks of bring infrastructure (e.g. civic amenity facilities, bring banks) to facilitate the recycling and recovery of hazardous and non-hazardous municipal wastes.
- E3b. The Plan supports the development by the private sector of public bring infrastructure (e.g. civic amenity facilities, bring banks) subject to appropriate statutory approvals and in line with appropriate environmental protection criteria.
- E4. The local authorities may include as a condition of planning that developers of commercial and large-scale residential developments provide bring facilities to serve occupants and residents.
- E5. Local authorities will explore the possibility of accepting hazardous waste at existing civic amenity facilities from small businesses, which is similar in nature to household hazardous wastes currently received. A charge may be introduced for such a service.
- E6. The local authorities may require waste developers seeking a waste facility permit to develop a Class 10 waste treatment activity, as defined by the Third Schedule: Part I of the Waste Management (Facility Permit and Registration) Regulations 2007 (as amended), to provide bring facilities for the acceptance of non-hazardous wastes from members of the public and businesses.
- E7. The local authorities in the region will continue to work with the EPA and other key stakeholders to support the collection of hazardous farm waste from designated bring centres e.g. marts.

### Policies:

- E8. The waste plan supports the development of disposal capacity for the treatment of hazardous and non-hazardous wastes at existing landfill facilities in the region subject to the appropriate statutory approvals being granted in line with the appropriate environmental protection criteria.
- E9a. The on-going availability of disposal facilities for non-hazardous municipal residual wastes in the region will be required during the plan period. The local authorities consider there is no need to provide additional disposal facilities for residual wastes over and above the existing authorised (i.e. operational, inactive or uncommenced) facilities in place.
- E9b. The waste plan supports the need for on-going disposal capacity to be developed for on-site generated non-hazardous/hazardous industrial waste over the plan period.
- E10. The waste plan recognises the need for on-going disposal capacity to be available in response to events which pose a risk to the environment and/or health of humans & livestock. The local authorities of each region will monitor available contingency capacity annually.
- E11. The plan supports the consideration of appropriate alternative future land uses at authorised inactive landfills (un-commenced; permanently-closed; or temporarily-closed) - subject to amendments of existing approvals being put in place. Any development proposals shall be subject to Appropriate Assessment Screening in accordance with the requirements of the EU Habitats Directive to ensure protection and preservation of the Natura 2000 Network.

#### Potential activities include:

- Waste treatment activities including pre-treatment, thermal recovery, biological treatment, reprocessing or preparing for re-use;
  - On-site temporary storage of waste and materials;
  - Co-location of utility services such as wind farms or other energy generating activities;
  - Development of public and recreational amenities;
  - Co-locating recycling / reuse waste enterprises on site; and
  - Resource mining;
  - Contingency capacity for crisis events such as risks to the environment and to the health of humans and livestock
- E12. The waste plan supports the repatriation of residual waste illegally disposed in Northern Ireland to licensed disposal facilities appointed to a framework set up on behalf of the State by the National Trans Frontier Shipment Office.

#### Policies E13-E14 Section 16.4.4

##### Policies:

- E13. Future authorisations by the local authorities, the EPA and An Bord Pleanála must take account of the scale and availability of existing back filling capacity.
- E14. The local authorities will co-ordinate the future authorisations of backfilling sites in the region to ensure balanced development serves local and regional needs with a preference for large restoration sites ahead of smaller scale sites with shorter life spans. All proposed sites for backfilling activities must comply with environmental protection criteria set out in the plan.

#### Policies E15a-E16 Section 16.4.5

##### Policies:

- E15a. The waste plan supports the development of up to 300,000 tonnes of additional thermal recovery capacity for the treatment of non-hazardous wastes nationally to ensure there is adequate active and competitive treatment in the market and the State's self sufficiency requirements for the recovery of municipal waste are met. This capacity is a national treatment need and is not specific to the region. The extent of capacity determined reflects the predicted needs of the residual waste market to 2030 at the time of preparing the waste plan. Authorisations above this threshold will only be granted if the applicant justifies and verifies the need for the capacity, and the authorities are satisfied it complies with national and regional waste policies and does not pose a risk to future recycling targets. All proposed sites for thermal recovery must comply with the environmental protection criteria set out in the plan.
- E15b. The waste plan supports the need for thermal recovery capacity to be developed specifically for the on-site treatment of industrial process wastes and where justifiable the treatment of such wastes at merchant thermal recovery facilities.
- E16. The waste plan supports the development of up to 50,000 tonnes of additional thermal recovery capacity for the treatment of hazardous wastes nationally to ensure that there is adequate active and competitive treatment in the market to facilitate self-sufficiency needs where it is technically, economically and environmentally feasible. The capacity is a national treatment need and is not specific to the region. All proposed sites for thermal recovery must comply with the environmental protection criteria set out in the plan.

#### **Policies E17-E18 Section 16.4.6**

##### **Policies:**

- E17. The waste plan supports the development of at least 40,000 tonnes of additional biological treatment capacity in the region for the treatment of bio-wastes (food waste and green waste) primarily from the region to ensure there is adequate active and competitive treatment in the market. The development of such treatment facilities needs to comply with the relevant environmental protection criteria in the plan.
- E18. The waste plan supports the development of biological treatment capacity in the region in particular anaerobic digestion; to primarily treat suitable agri-wastes and other organic wastes including industrial organic waste. The development of such treatment facilities needs to comply with the relevant environmental protection criteria in the plan.

#### **Policy E19 Section 16.4.7**

##### **Policies:**

- E19. The waste plan supports the development of indigenous reprocessing and recycling capacity for the treatment of non-hazardous and hazardous wastes where technically, economically and environmentally practicable. The relevant environmental protection criteria for the planning and development of such activities need to be applied.

#### **Policy E20 Section 16.4.8**

##### **Policies:**

- E20. The waste plan supports the development of repair and preparing for reuse enterprises in the region as part of the transition to a more resource focused management approach and will provide technical, regulatory and financial guidance to operators active on this tier of the hierarchy.

#### **Policy E21 Section 16.4.9**

##### **Policies:**

E21. The Local Authorities will review the approach to authorising waste treatment facilities requiring a waste facility permit or certificate of registration having regard to the need to achieve consistency of approach between planning approval and operational capacity.

#### **Policy E22a-E22b Section 16.4.10**

##### **Policies:**

E22a. The plan supports the primacy of kerbside source segregated collection of household and commercial waste as the best method to ensure the quality of waste presented.

E22b. The plan also supports the use of authorised civic amenity facilities and bring centres as part of the integrated collection system.

#### **Policy E23 Section 16.4.10**

##### **Policy:**

E23. In the absence of kerbside source segregated collection services and where the proximity of the civic amenity facilities and bring centres is prohibitive the plan supports localised collection solutions such as community drop-off points or pay-to-use systems subject to compliance with the household waste collection regulations.

**Policy E24 Section 16.4.10**

**Policy:**

E24. The plan supports the appropriate management of international catering waste under the Animal By-products Regulations (EC) No. 1069/2009.

**Policy E25 Section 16.4.10**

**Policy:**

E25. The plan supports the improvement of existing PRIs and the development of new PRIs or similar industry/voluntary schemes for specific waste streams including but not limited to human and farm chemicals and medicines, paints, newspapers, magazines and bulky waste.

**Policy F1 Section 9.2.5**

**Policy:**

F1. 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.

**Policy F2 Section 14.2.2**

**Policy:**

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

#### Policy F3 Section 14.2.2

##### Policy:

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

#### Policy F4 Section 16.3

##### Policy:

- F4. Improve the consistency of local authority waste authorisations and conditions issued to waste collectors and facility operators.

#### Policy G1 Section 18.6

##### Policy:

- G1. Ensure the highest environmental and human health benefits are achieved by prioritising the implementation of the upper tiers of the waste hierarchy and ensuring these actions are funded appropriately .

#### Policy G2 Section 13.4.1

##### 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.

#### Policy G3 Section 16.5

##### Policy:

- G3. Ensure there is a consistent approach to the protection of the environment and communities through the authorisation of locations for the treatment of wastes.

#### Policy G4 Section 9.4

##### Policy:

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

#### Policy G5 Section 16.5

##### Policy:

- G5. Ensure that the implementation of the regional waste management plan does not prevent achievement of the conservation objectives of sites afforded protection under the EU Habitats and Birds Directive.

#### Policy H1 Section 7.1.16

##### 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.

### Policy H2 Section 7.1.16

#### 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).

### Policy H3 Section 17.2.1

#### Policy:

- H3. Co-operate and input into the setting up of new national producer responsibility schemes (statutory or voluntary) for waste streams to ensure the role of local authorities is clear and can be practically achieved.