eastern - midlands
waste region

Eastern - Midlands Region
Waste Management Plan 2015 - 2021

new region new vision

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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.
CCMA	County and City Manager's Association
Certificate of	An authorisation issued by a local authority to a facility for the transfer, storage or

Term	Explanation
Registration (CoR)	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_2	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 biowaste.

Term	Explanation
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.
Household waste managed (HWM)	Sum of the household waste collected at kerbside and the non-kerbside household waste collected.
IAS	Invasive alien species

Term	Explanation
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
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

Term	Explanation
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).
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.

Term	Explanation
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 "*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.
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".
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.

Term	Explanation
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.
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

Term	Explanation
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
SRWMO	Southern Region Waste Management Office
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.
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.

Term	Explanation
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 Eastern-Midlands 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 that 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 ongoing problem. This is necessary if we are to rethink 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 Eastern-Midlands 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 a resource.

The implementation of the Eastern-Midlands 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 Eastern-Midlands 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 Eastern-Midlands Region

The Eastern-Midlands 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 Eastern-Midlands Region.

The new region stretches from Dublin in the east, Louth to the north and Wicklow to the south and in total consists of 12 local authorities. The region has appointed Dublin City Council 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 21% of the land mass of the country, with a population of over 2.2 million people. The settlement patterns in the region show that the urban/rural population split is 81% -19%. The region is dominated by one city, Dublin, which has the largest population and the highest economic activity in the region and nationally.

Waste Region	Local Authorities
Eastern-Midlands Region	**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.

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 4.1 million tonnes (Mt) of waste (excluding agricultural wastes). The major streams managed in the region are household wastes, commercial wastes, construction wastes and industrial wastes. Some headline 2012 statistics which help to describe the current system are as follows:

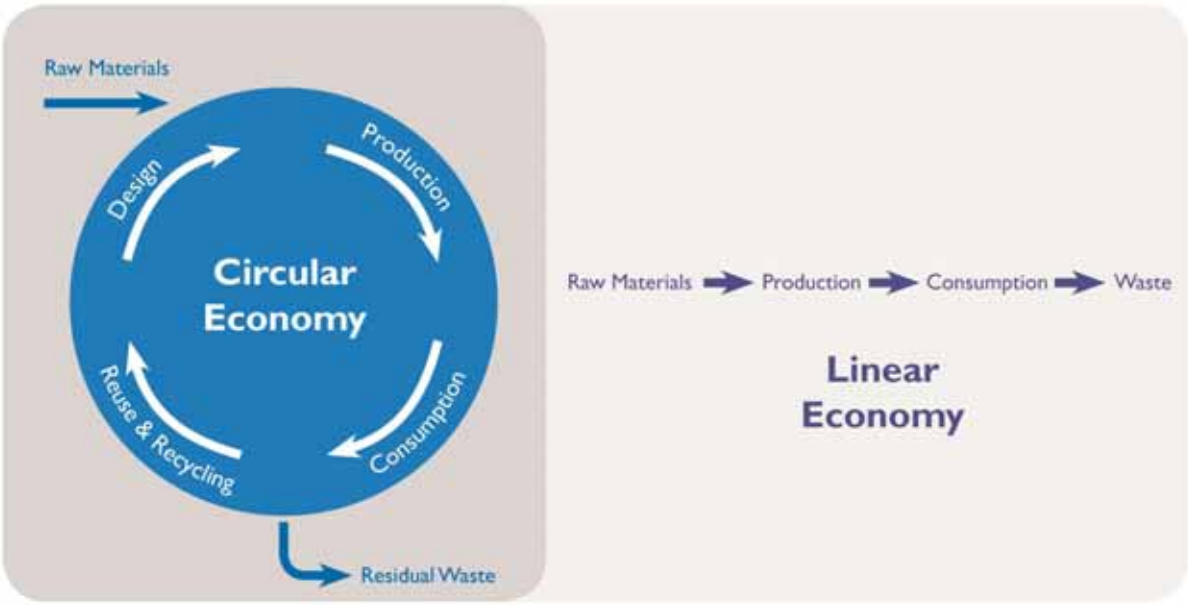
- 81% of households in the region were on a collection service, with 76% of managed household waste managed was sent for recovery (includes wastes sent for recycling and energy recovery);
- 9% of household waste generated, which was over 63,000 tonnes in the region, was unmanaged, i.e. not collected and possibly subject to backyard burning or illegal dumping;
- 46% 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 618 bring bank locations are in place in the region for the collections 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.

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.*

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%.

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 present in the region no local authorities remain in waste collection and three landfills remain open all of which are operated privately. 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 Eastern-Midlands Region will rest with the 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 office will establish the necessary administrative structures and regional working groups to tackle specific issues in the region.

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 Eastern-Midlands 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.emwr.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 the 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 upcoming 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 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 Eastern-Midlands Region, serving a population of 2,249,603, includes the administrative areas of the following local authorities - Dublin City Council, Dún Laoghaire-Rathdown County Council, South Dublin County Council, Fingal County Council, Wicklow County Council, Kildare County Council, Laois County Council, Offaly County Council, Westmeath County Council, Longford County Council, Meath County Council and Louth 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 THE SEA / AA

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 are 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 EMR Region carried out an SEA which informed the plan. The SEA of the EMR Waste Management Plan 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 EMR 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 the EMR RWMP through close integration of all stages of the plan making, as illustrated in **Figure 1-3**.

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 and the Waste Management (Planning) regulations 1997. 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 October 2013 indicating the intention of the lead authority to prepare a new Waste Plan for the region and inviting submissions for consideration. In total 27 submissions were received. As a part of the consultative process a national briefing/consultation meeting was held with key stakeholders in Mullingar on 9 April 2014, refer to **Appendix A** for pre-draft submission & stakeholder meeting attendance details.

Submissions and meetings provided constructive suggestions, numerous ideas and initiatives for consideration in the preparation of the Draft Regional Waste Management Plan. Common concerns included the planning/permit process, prevention/awareness measures, waste regulation and enforcement, charging systems, movement of waste, infrastructure/facilities and the availability of accurate projections/statistics.

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 of the information 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 Environment, Community and Local Government (DECLG);
- Department of Arts, Heritage and the Gaeltacht (DAHG);
- Department of Communications, Energy and Natural Resources (DCENR);

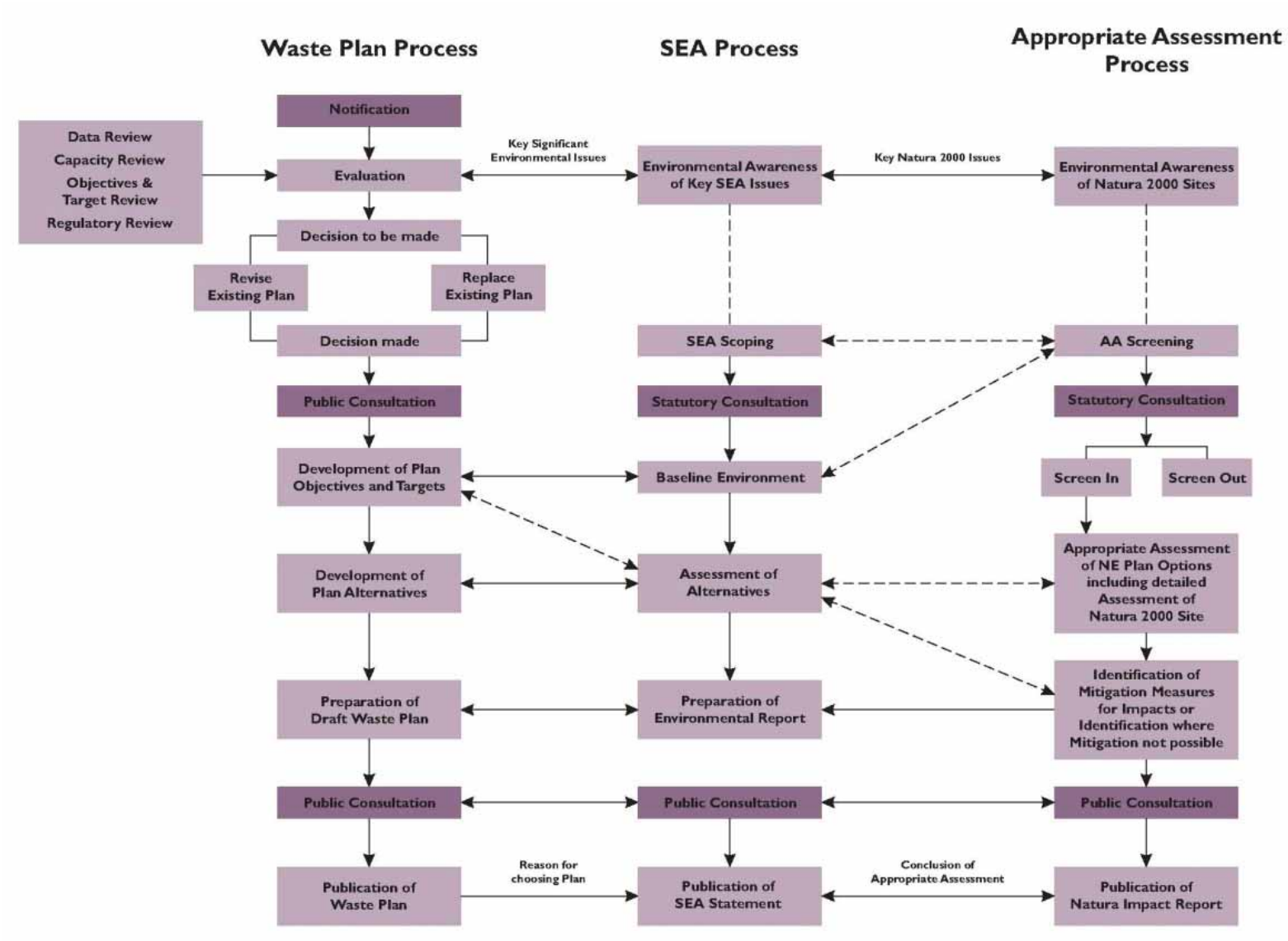


Figure 1-3 Integration of Processes

- Department of Agriculture, Food and the Marine (DAFM); and
- Northern Ireland Environment Agency (NIEA).

In addition a period of public consultation (4 June to 4 July 2014) was applied to the SEA Scoping Document. Some 28 submissions were received and given due consideration in advance of the environmental assessment of the Plan.

1.4.2 Draft Plan Consultation

Launch of Draft Plan

The Eastern-Midlands Draft Regional Waste Management Plan 2015 -2021 was launched on the 18 November 2014, in Galway City Council offices, as part of a national launch of the three Draft Regional Plans. The Chief /Deputy Chief Executives of the waste management planning lead authorities jointly launched the draft regional WMPs along with the associated Natura Impact Report and Strategic Environmental Assessment (SEA) Environmental Report. The event was also attended by public representatives, members of the Waste Management Planning National Coordinating Committee, members of the Regional Waste Steering Groups, EPA, Department of Environment Community & Local Government, staff from the Eastern-Midlands Regional Waste Management Office (EMRWMO), national and local press as well as the consultants RPS who assisted the three regions, in the preparation of the draft plan.

Newspaper Notice

Coinciding with the joint launch of the three Draft Plans and associated Natura Impact Reports and SEA Environmental Reports a newspaper notice was published on the 18 November 2014 in the following national papers – *Irish Examiner, Irish Independent and The Irish Times*, in accordance with Section 23 of the Waste Management Act and the Waste Management (Planning) Regulations 1997.

The newspaper notice provided details on where the Draft Plan and associated documents were available (www.emwr.ie), the procedure for submitting written submissions/observations and the deadline for submissions (4pm on the 30 January 2015).

Prescribed Bodies

In accordance with Section 23 of the Waste Management Act and the Waste Management (Planning) Regulations 1997 a letter was forwarded to the following parties informing them of the publication of the Draft Plan along with associated documents and details of the procedure for submitting written submissions/observations and the deadline for submissions:

- Chief Executives of the local authority areas which adjoin the EMR;
- Minister for Arts, Heritage and the Gaeltacht;
- Minister for Agriculture, Food & the Marine;
- An Taisce;
- Fáilte Ireland; and
- Teagasc.

Press Releases

In addition to the newspaper notice the EMRWMO prepared a press release which coincided with the launch of the Draft Plan in November 2014. The press release was circulated to all local papers and radio stations within the Region and to the relevant on-line platforms. Copies of the draft reports in printed and/or CD format along with copies of the Draft Plan Executive Summary were also made available.

Social Media

A copy of the Draft Plan and the associated Natura Impact Report and SEA Environmental Report were available for download on www.emwr.ie. In addition to this each of the local authorities within the region provided information about the Draft Plan on their website or a link to the EMRWO website.

Presentations to the Elected Members of the Local Authority

Following the publication of the Draft Plan the EMRWO prepared a briefing document for the elected members of the local authorities within the region. This document provided details of the draft plan including the background, the strategic vision, plan targets, present position, how it is proposed to implement the plan and the consultation process. A power-point presentation was also prepared in conjunction with the briefing document. The power-point presentation was presented at Strategic Policy Committee/Local Authority Council meetings within the region during December 2014 and January 2015.

Presentations to Local Authority staff

The EMRWMO, in conjunction with the other two waste regions, held a briefing session for all local authority staff on the 22 January 2015. This session provided details of the background to the process along with a comprehensive overview of each of the parts of the Draft Plan, how it is proposed to implement the plan and the consultation process. This event was attended by approximately 100 local authority staff from across the country.

Presentations to the Waste Sector

On behalf of the three regions, the Regional Waste Coordinator from the Southern Region presented details of the draft WMP at the Waste Summit, organised by the Sunday Business Post on the 21 November 2014. The Regional Waste Coordinator from the EMRWO also participated in a panel discussion on the Draft Plan at the Waste Management Conference, organised by the Irish Waste Management Association, on the 25 November 2014 in Kildare.

The EMRWO, in conjunction with the other two regions, provided an information stand at both of the above events. Copies of the draft plan executive summaries were distributed at these events and queries from attendees at the event were answered.

A total of 61 submissions were received from various stakeholders and all submissions were considered in the preparation of the final plan.

Full details of the post-draft submissions received are provided in the *Eastern-Midlands Regional Waste Management Plan – Post-Draft Consultation Report* (EMR, 2015).

2 REGIONAL WASTE PLANNING FRAMEWORK

2.1 PURPOSE OF THE REGIONAL WASTE PLAN

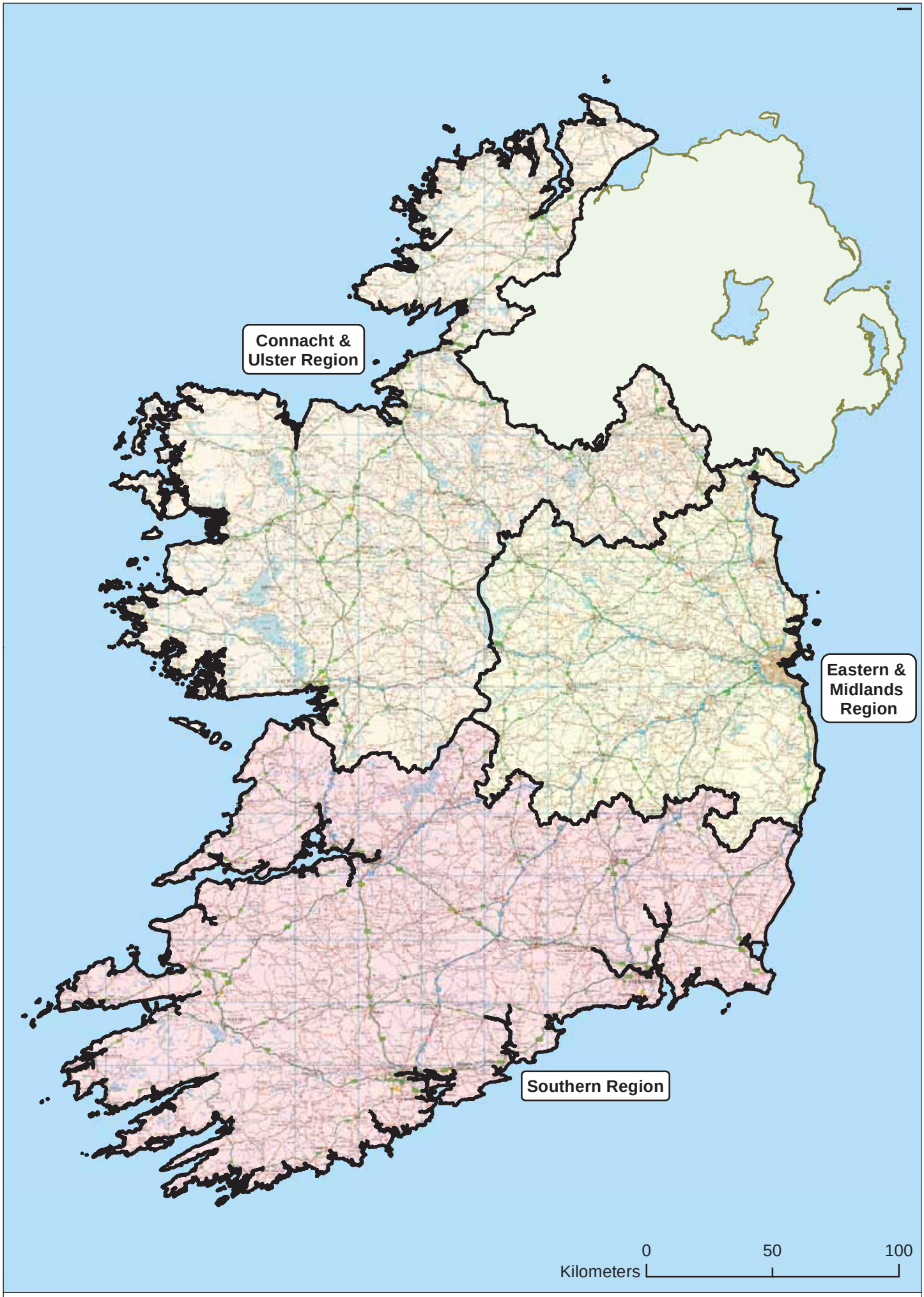
The waste management plans in Ireland are statutory planning documents. Their objective is to set out a framework for the prevention and management of wastes for a defined regional area. The preparation of the waste plans is the statutory responsibility of the local authorities, and two or more local 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[1] 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 Manager's 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; Waterford 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

[1] A Resource Opportunity, Waste Management Policy in Ireland (July 2012).



Regional Waste Plans, SEA and AA

File Ref: MDR0998Arc0001F01

Figure 2-1 Waste Regions of Ireland

RPS

The required content of the waste management plan is described in the Waste Management Act 1996[2] 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[3] 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 2015.

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) in force in November 2014, in the EMR are:

- Regional Planning Guidelines for the Greater Dublin Area (includes the four Dublin Local Authorities, Wicklow, Meath and Kildare) 2010-2022;
- Regional Planning Guidelines for the Midlands Region (includes Longford, Westmeath, Laois and Offaly) 2010-2022; and
- Regional Planning Guidelines for the Border Region (includes Louth) 2010-2022.

Each of the RPGs listed above contains strategic recommendations to be considered in the waste plan. 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

[2] Sections 6, 7 & 8 of the Waste Management Act as amended.
[3] Preparing a Waste Management Plan, A methodological guidance note, European Commission (2012)

infrastructure, such as energy recovery and biological treatment to help divert waste from landfill, is also highlighted.

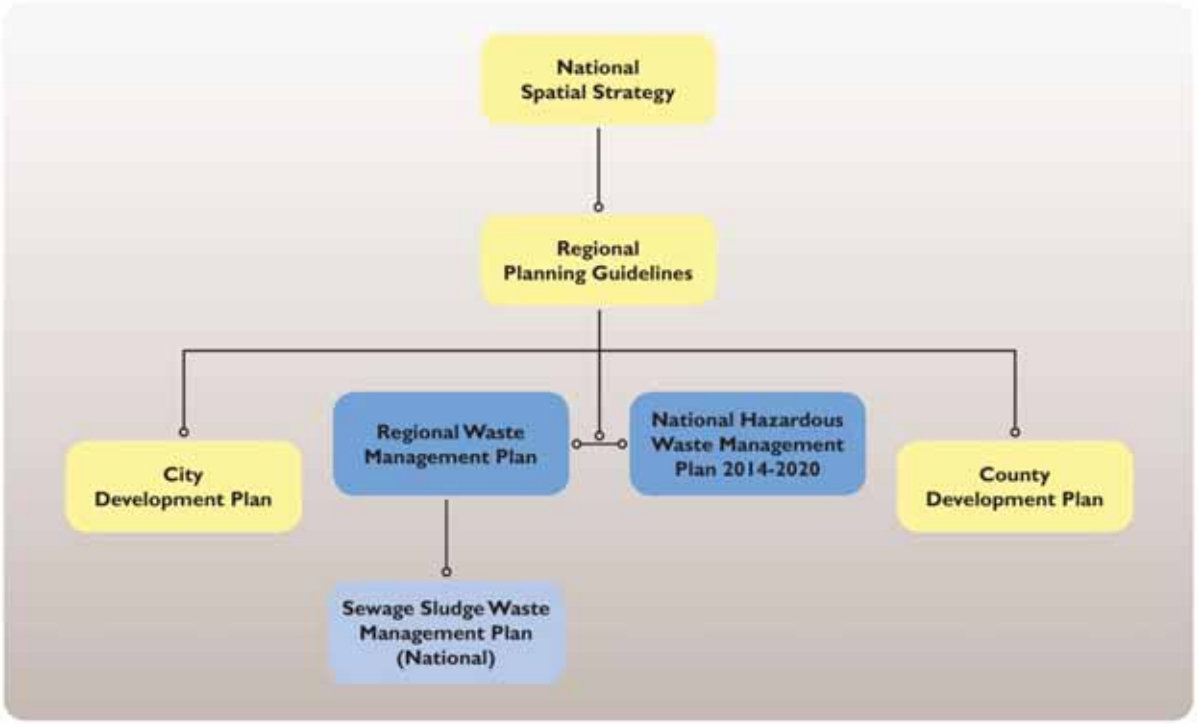


Figure 2-2 Hierarchy of Irish Planning Frameworks

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[4].

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[5].

[4] Section 10A (a) Waste Management Act 1996.
[5] Section 10A (b)(i) Waste Management Act 1996.

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 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; and
- Sludge Management Plan - sludge management plans are prepared by Irish Water and a national plan for the management of wastewater sludge is being written in November 2014. 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[6] 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.

[6] Under the Planning and Development (Strategic Infrastructure) Act 2006, which amends the Planning and Development Act 2000.

Prior to making an application directly to the Bord, the applicant must first receive a notice in writing from it confirming that the subject of 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;
- 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:

- Waste 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[7]. 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 waste 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.

[7] www.irishstatutebook.ie

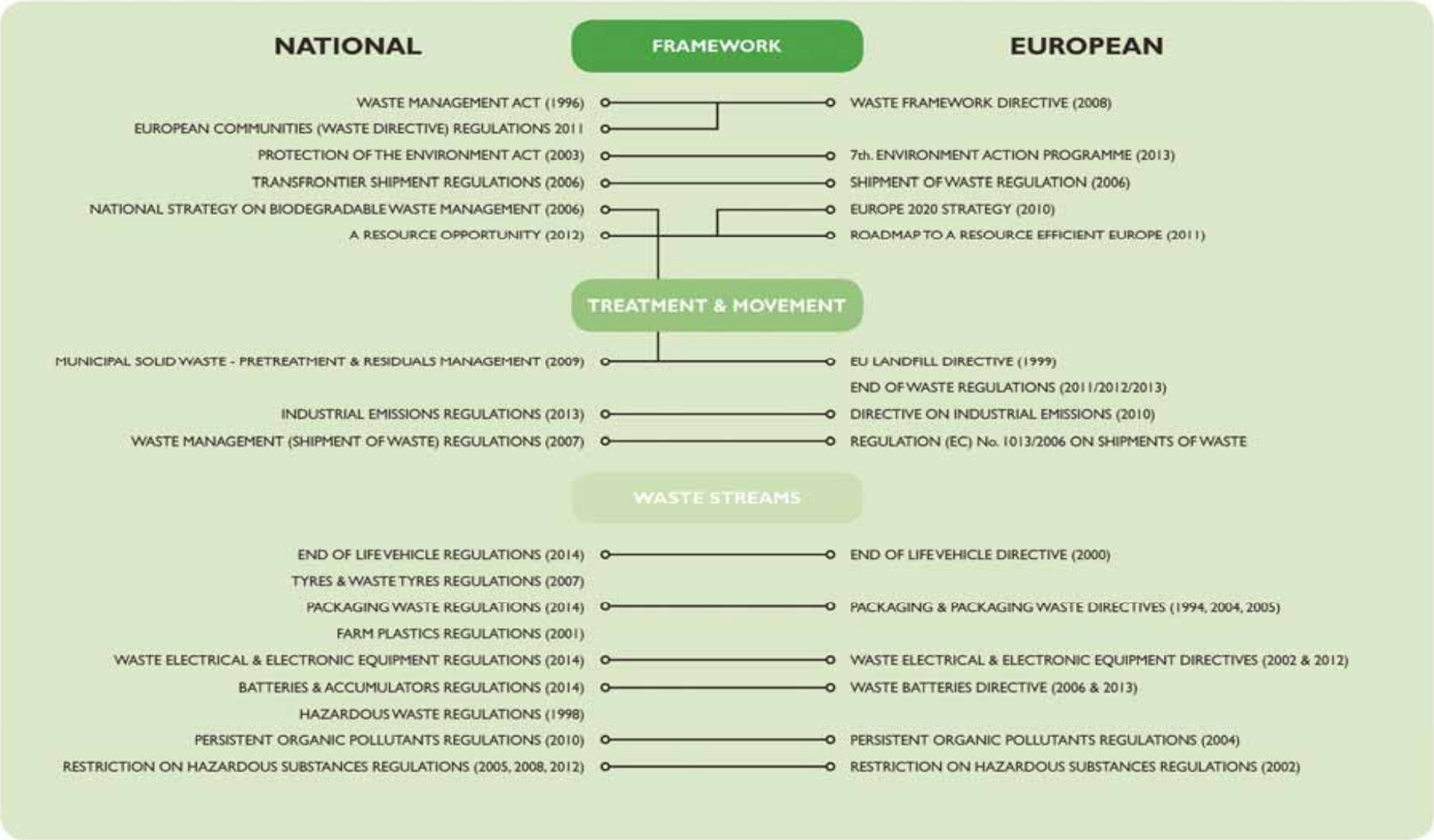


Figure 3-1 Mapping European and Irish Waste Legislation & Policy

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.

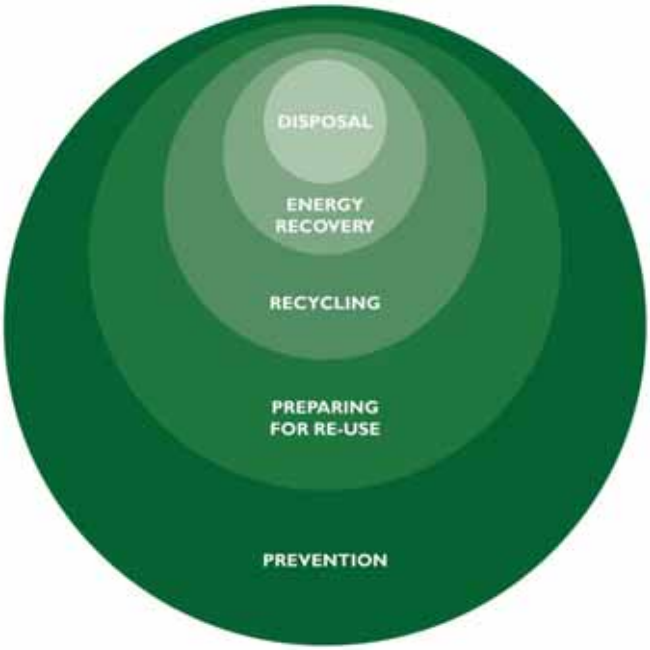


Figure 3-2 Revised Waste Management Hierarchy

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[8] 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 procedure;

- 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; and
- 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 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 1996 and the Protection of the Environment Act 2003. The Waste Management Act 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 Waste Management Act 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;

[8] 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.

- Enable measures designed to improve performance in relation to the prevention and recovery of waste; and
- 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 that are 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 AND 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 Techniques (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 refuse 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 (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[9] 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 Wastes 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 conditions. EoW criteria have been developed to determine when iron, steel, aluminium scrap metal[10] and glass cullet[11] cease to be waste.

[9] EPA Pre-Treatment Guidelines
[10] Council Regulation (EU) No. 333/2011 (iron, steel, aluminium scrap metal).
[11] Council Regulation (EU) No. 1179/2012 (glass cullet).

In accordance with the EoW Regulations, a quality management system must be implemented and verified 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.

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 (NWCPO) in 2012 and is responsible for administering waste collection permits in the Republic of Ireland.

Obligations for the movement of hazardous waste are covered 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[12] 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[13] 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[14] 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

[12] Changing Our Ways (1998) Department of Environment, Community and Local Government.
[13] The European Union (Household Food Wastes and Bio-Waste) Regulations 2013
[14] Household derived paper, metal, plastic and glass

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 of used packaging. The European Union (Packaging) Regulations 2014 (S.I. No. 282 of 2014) replace the previous suite of regulations introduced in 1997. 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[15] issued under the Planning and Development Acts[16] 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 and hazardous waste and 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[17] 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).

[15] Guidelines 13 – Development Guidelines for Local Authorities, DECLG
[16] Section 28 of the Planning and Development Acts
[17] European Union (End of Life Vehicles) Regulations, 2014 (S.I. No. 281 of 2014)

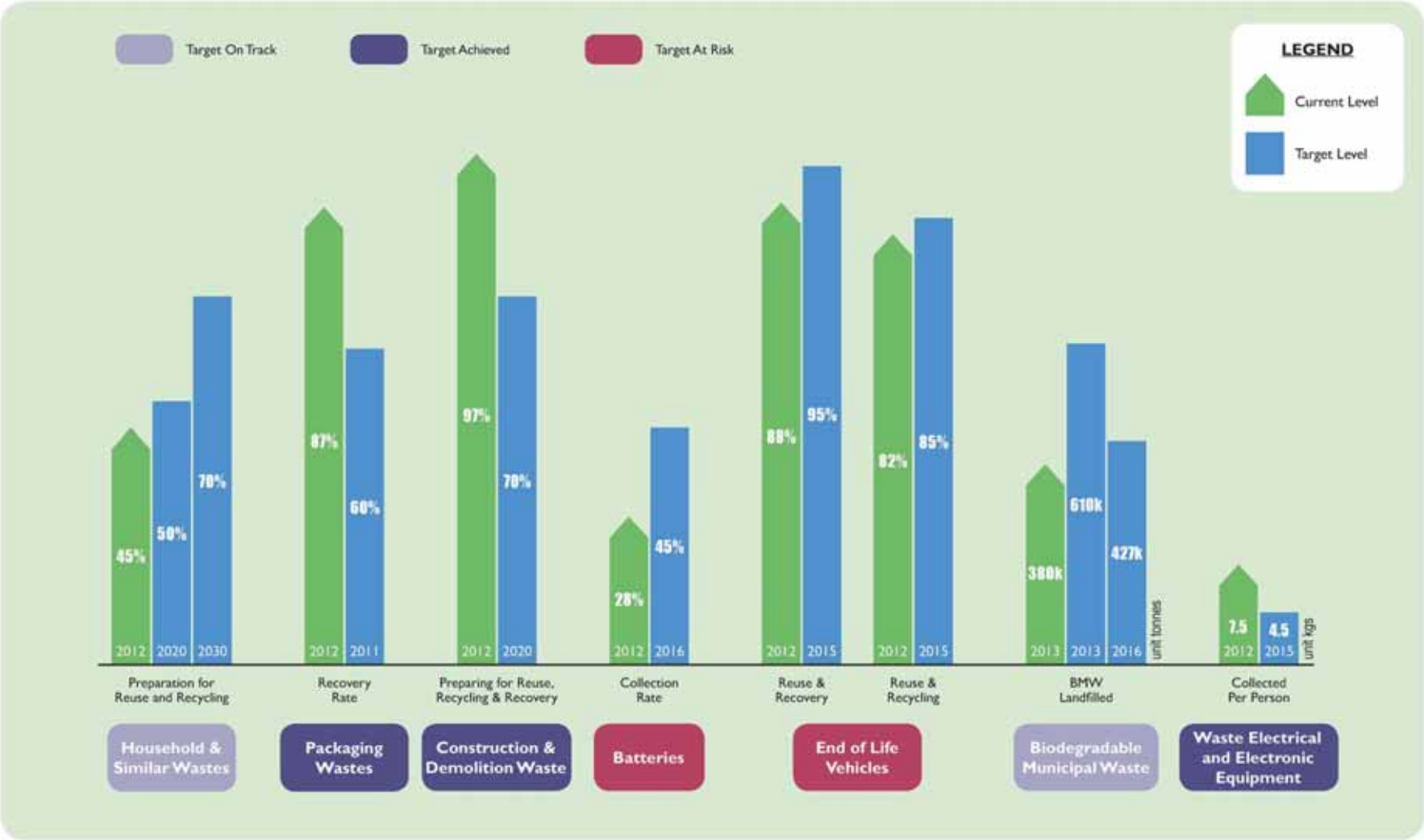


Figure 3-3 Ireland's Progress towards European and National Mandatory Targets

Batteries and accumulators: EU Directives 2006/66/EC and 2013/56/EU on waste batteries and the national legislation[18] 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 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[19] 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. Some local authorities have produced separate sludge plans for the management of sewage and industrial sludges, but in most cases these are out of date. Irish Water is proposing to introduce a national wastewater sludge management plan in 2015, and a national water treatment sludge management plan at a later date.

[18] European Union (Batteries and Accumulators) Regulations 2014, S.I. No. 283 of 2008.
[19] 2009 Regulation (EC No 1069/2009).

Mining and extractive industries wastes: The EU Directive (2006/21/EC) on the management of waste from extractive industries and National legislation[20] 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 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.

[20] Waste Management (Management of Waste from Extractive Industries) Regulations 2009 (S.I. No. 566 of 2009).

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 reuse 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 **Chapter 13** 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 1976 Act, gave statutory protection to Natural Heritage Areas (NHAs) and enhanced conservation of wildlife species and their habitats.

Section 21 of the Wildlife Acts 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 2012 the Eastern-Midlands 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 *A 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[21] 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 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.
- 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 of RDF, commenced as far back as 2004. Exporting of segregated biowaste to Northern Ireland is a trend that has developed more recently. 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.

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 solid recovered fuel (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

[21] CircularWP01/15.

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 any, treatment. The EPA has introduced guidance[22] outlining to operators who are preparing residual waste for export the level of processing required to allow a reclassification of material from an 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 six in 2015, 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[23].

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[24] from the Netherlands predicts that some of the Dutch Waste to Energy (WtE) plants that are importing waste during 2014 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 reinvestment if they are to continue to meet operating standards. In Germany for example, 36% of WtE facilities are over 20 years old[25] 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.

[22] EWC Classification of Mixed Municipal Waste Exiting Waste Management Facilities, EPA (October 2012).
[23] Data source: National TFS Office, 2013.
[24] Recycling benefits from combustible waste imports, Dutch Waste Management Association, November 2012.
[25] UK Waste Export: Opportunity or Threat?, 2011 Briefing Report, June 2011.

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-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)**.

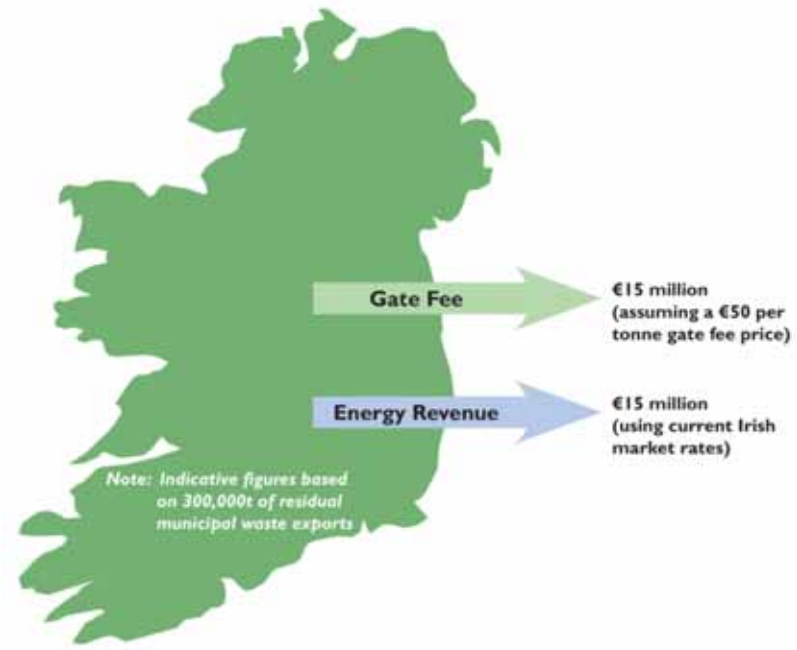


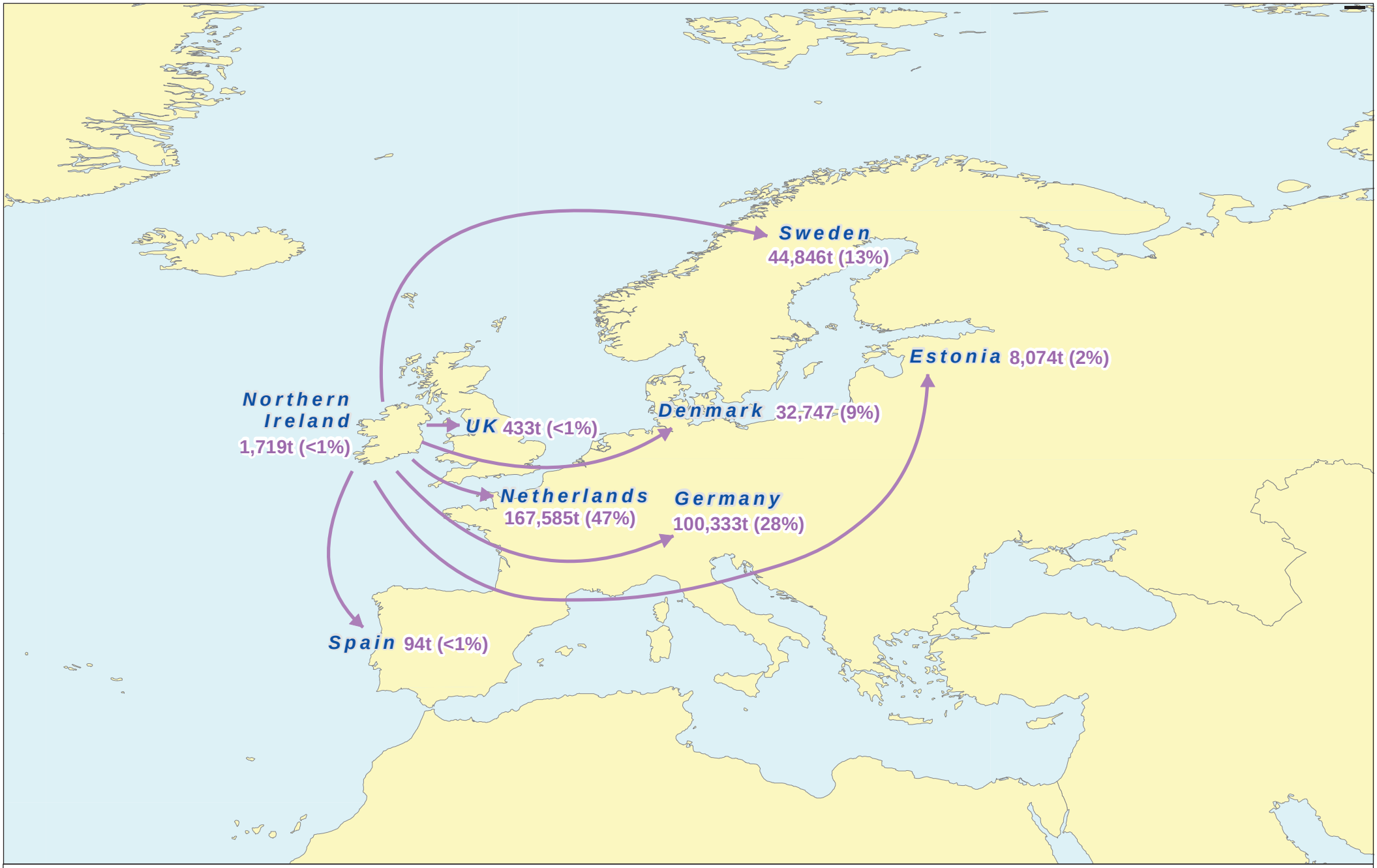
Figure 4-1 Indicative Financial Losses from Exporting Residual Wastes

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.

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.



Regional Waste Plans, SEA and AA

File Ref: MDR0998Arc0029F01

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

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_2 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[26] or national[27] legislation which creates specific environmental obligations 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 Government's 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 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.

[26] 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.

[27] 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.

As part of the Irish Government's commitment to achieving the EU GPP target, the Departments of Environment, Community and Local Government (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 Communication Technology[28]. The policy document defines the legal context and provides an overview of the mandatory environmental criteria which 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 ongoing 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[29] 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.

[28] 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.
[29] Green Procurement, Guidance for the Public Sector, EPA September 2014.

5 STRATEGIC APPROACH

This chapter sets out the overarching waste strategic approach for the EMR, 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 EMR includes all or parts of five 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. 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 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[30] 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.

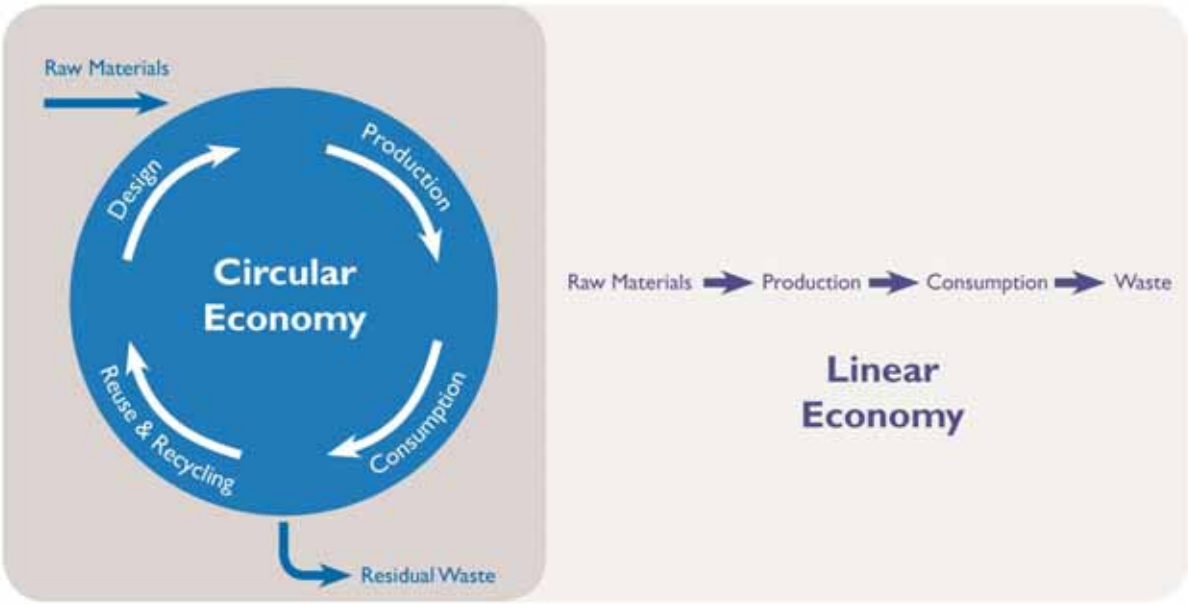


Figure 5-1 Circular Economy and Linear Economy Models

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 resources 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 prices to meet demand. The economic reality is very different.

[30] 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 a new legislative proposal 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[31] 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 has set out an institutional framework for sustainable development and the green economy titled *Our Sustainable Future*[32]. 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 5-2** 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

[31] Roadmap for a National Resource Efficiency Plan For Ireland, EPA (2014).
[32] 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.

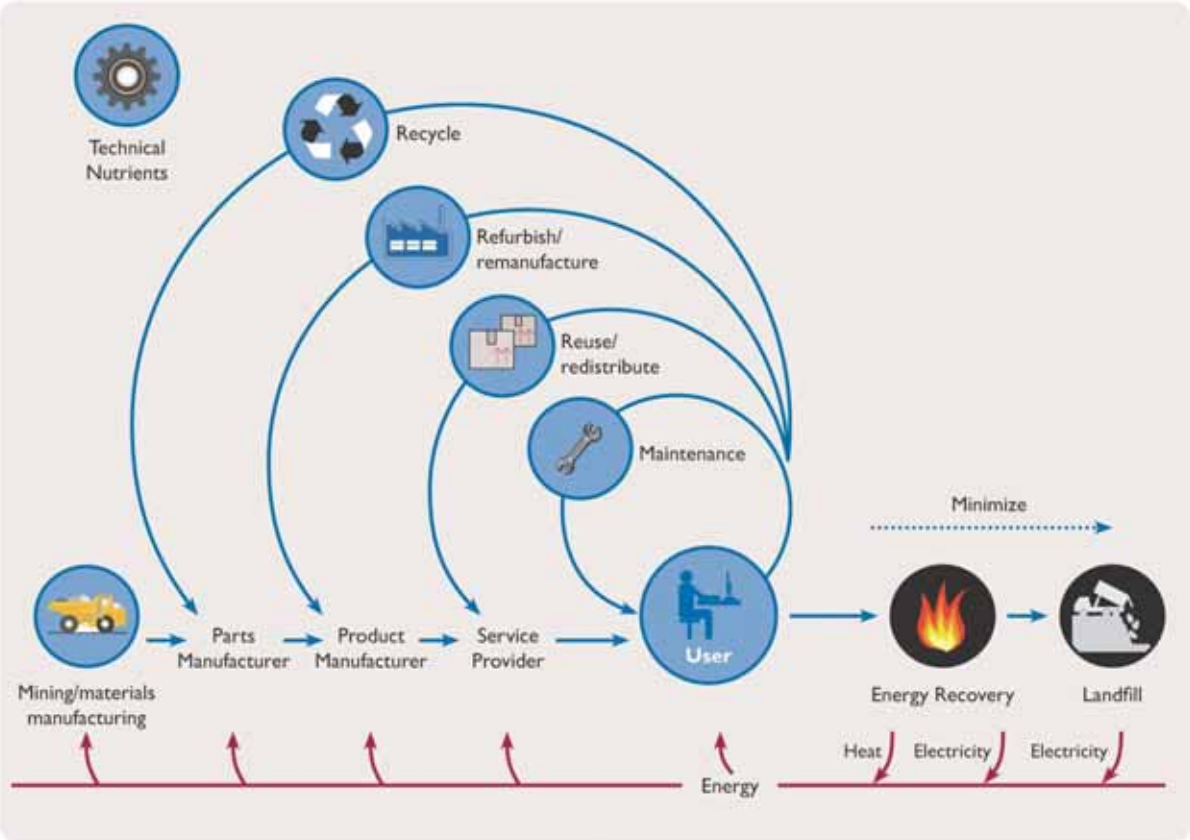


Figure 5-2 Material Resource and Waste Flows in a Circular Economy[33]

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

[33] This modified figure has been developed from an image prepared by the Ellen McArthur 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 adaption. 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 Mts of CO_{2eq}. 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.

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 to 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 will 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.

Figure 5-3 Strategic Principles of the Plan

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 need 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 & Regulations

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, 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
	Preparing for Reuse, Recycling and Material Recovery Target	
Construction & Demolition Wastes (excluding soil and stones)	70%	2020
	Maximum Quantity of BMW to Landfill Target	
Biodegradable municipal waste	427,000 tonnes	July 2016
	Reuse and Recovery Target	
End of Life Vehicles	95%	January 2015
	Reuse and Recycling Target	
End of Life Vehicles	85%	January 2015
	Collection Rate Target	
Batteries and Accumulators	45%	September 2016
	Recovery and Recycling Rate	
WEEE	Varies depending on the category of WEEE[34]	August 2015

[34] European Communities (Waste Electrical and Electronic) Regulations 2014.

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 demolition waste to be achieved by 2020. The State is 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 ongoing 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.

Plan Target

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

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, 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.

Plan Target

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

The local authorities along with private waste collectors play an important role in the management of municipal waste. The proposed target mirrors that of the 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 three facilities (at Drehid, (Kildare) Knockharley (Meath), and Ballynagran (Wicklow)) operating in the EMR 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.

** 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.*

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 that 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.

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.

Future Targets to 2030
Absolute decoupling of household waste from economic growth and disposable income
Preparing for reuse and recycling rate of 60-70%[35] of municipal waste by the end of 2030
Reduce and where possible, eliminate the 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. 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.

[35] Discussions are ongoing between European Member States regarding the proposed mandatory recycling rate target which is expected to be within this range.

6 REGIONAL PROFILE

The EMR covers a total area of approximately 1,491,020 hectares, which equates to 21% of the area of the country (70,273 km²). The region consists of the administrative areas of Louth, Meath, Longford, Westmeath, Offaly, Kildare, Laois, Wicklow, and the four Dublin authorities – Dublin, Fingal, South Dublin and Dún Laoghaire-Rathdown. The 2011 population census showed that the region has a population of 2,209,463, which represents almost half of the national population (4,588,252).

6.1 POPULATION

The population of the region in 2011 was 2,209,463 (CSO, 2011), an increase of 183,960 or 9.1% since the previous census of 2006. Table 6.1 shows the population in each local authority area. The 2011 census figures show that regional growth is slightly above national growth of 8.2%.

The distribution of people and their activities within the region varies from rural agricultural communities to the city of Dublin and its commuter belts. The population density is high compared to the rest of Ireland, and the region has seen population growth of over 10% in the past 10 years. IN 2006–2011 the population in Dublin increased by 4%, while Dublin commuter towns expanded at rates as high as 51%. The greatest population increases have been in villages with a population of between 50 and 1,500 people in Dublin, Meath, Kildare and Wicklow.

Table 6-1: Eastern-Midlands Region Population

Local Authority	2006	2011	% Increase
Dublin City	506,211	527,612	4.2%
Dún Laoghaire-Rathdown	194,038	206,261	6.3%
Fingal	239,992	273,991	14.2%
South Dublin	246,935	265,205	7.4%
Kildare	186,335	210,312	12.9%
Laois	67,095	80,559	20.1%
Longford	34,391	39,000	13.4%
Louth	111,267	122,897	10.5%
Meath	162,831	184,135	13.1%
Offaly	70,868	76,687	8.2%
Westmeath	79,346	86,164	8.6%
Wicklow	126,194	136,640	8.3%
Total Population - EMR	**2,025,503**	**2,209,463**	**9.1%**
Total Population - National	**4,239,848**	**4,588,252**	**8.2%**

6.2 URBAN/RURAL POPULATION DISTRIBUTION

The most recent census figures show that the urban/rural population split is 81%/19%. While 19% of the population may appear to be a relatively small figure, it equates to approximately 420,146 people. Counties Laois, Longford, Offaly and Westmeath have more rural than urban population

numbers. **Table 6-2** summarises the urban/rural population distribution for each Local Authority Area.

Table 6-2: Urban/Rural Population Distribution in the Region

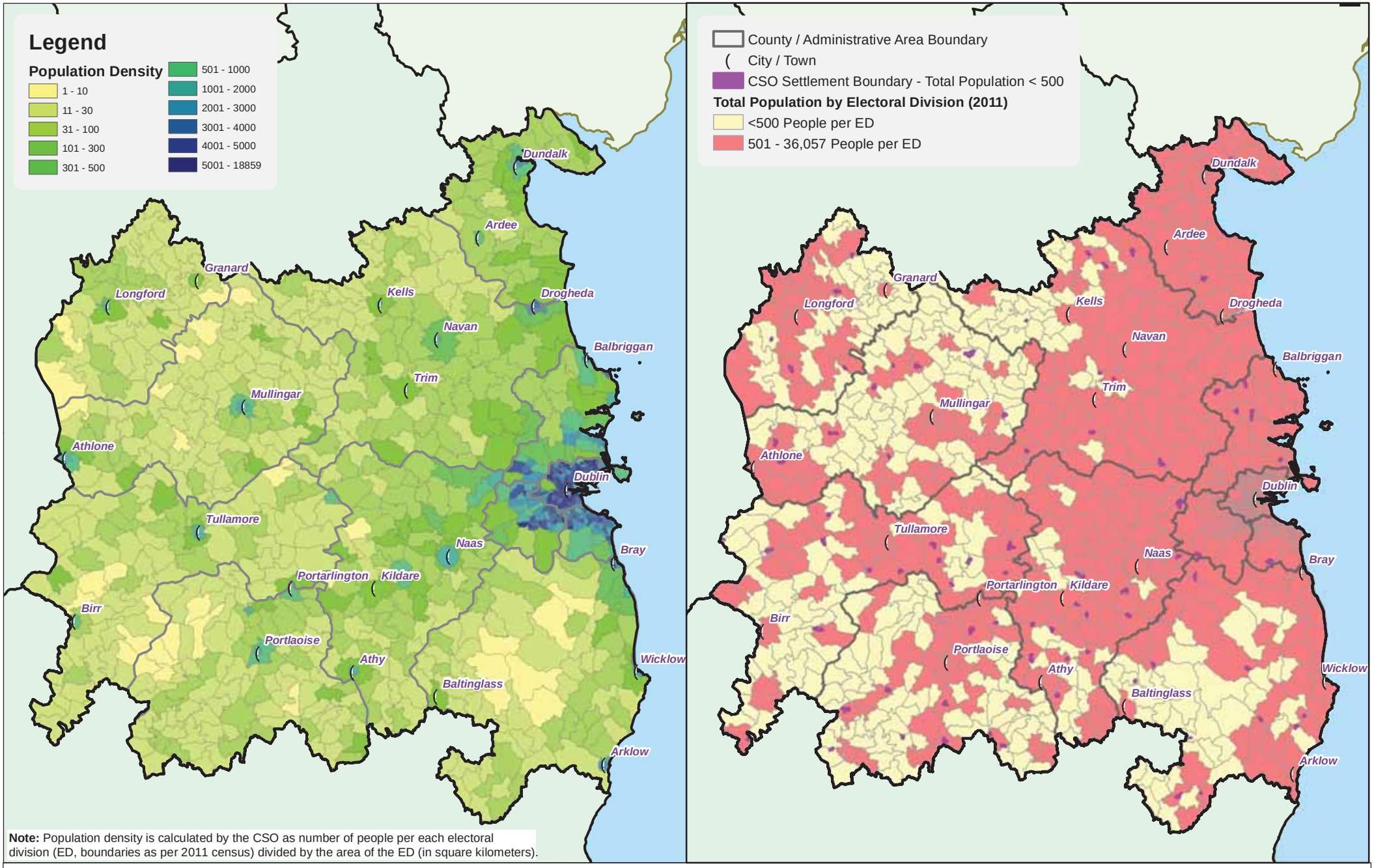
Local Authority	Urban 2011	Rural 2011
Dublin City	527,612	0
Dún Laoghaire-Rathdown	204,354	1,907
Fingal	255,833	18,158
South Dublin	259,729	5,476
Kildare	142,171	68,141
Laois	38,181	42,378
Longford	12,908	26,092
Louth	79,117	43,780
Meath	105,018	79,117
Offaly	33,626	43,061
Westmeath	41,823	44,341
Wicklow	88,945	47,695
Total	**1,789,317**	**420,146**

6.3 HOUSEHOLDS

The total number of households in the EMR was 793,402 (CSO, 2011), an increase of 90,970 or 12.9% since the previous census. According to the CSO, nationally *"there were just under 1.65 million occupied permanent housing units at the time of the census, an increase of 187,100 units, or 13 per cent, since 2006"*. The number of new residential units provided in the region is on a par with this national increase, with the greatest percentage growth in Laois, Longford, Fingal, Kildare and Meath.

Table 6-3: Number of Households in the Eastern-Midlands Region

Local Authority	2006	2011	% Increase
Dublin City	190,984	208,716	9.3%
Dún Laoghaire-Rathdown	68,412	75,953	11.0%
Fingal	80,402	93,305	16.0%
South Dublin	80,631	90,148	11.8%
Kildare	60,957	70,882	16.3%
Laois	22,591	28,057	24.2%
Longford	12,111	14,472	19.5%
Louth	38,703	44,043	13.8%
Meath	53,938	62,297	15.5%
Offaly	23,769	26,795	12.7%
Westmeath	27,064	30,811	13.8%
Wicklow	42,870	47,923	11.8%
Total	702,432	793,402	12.9%



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

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Figure 6-1 Population Density & Distribution

RPS

6.4 EMPLOYMENT AND ECONOMIC ACTIVITY

The 2011 census concluded that there was a total labour force for the region of 1,104,478, of which 901,860 were in employment. The rate of unemployment in the region stood at 19.6%, which was close to the national average of 19%. **Table 6-4** shows the number of employees per local authority. The 2014 CSO standard unemployment rate nationally is 11.6%, indicative of the ongoing economic recovery and increasing employment opportunities in all local authority areas.

Table 6-4: Employment in the Region in 2011

Local Authority	Number Employed	Local Authority	Number Employed
Dublin City	227,429	Longford	13,871
Dún Laoghaire-Rathdown	87,490	Louth	44,232
Fingal	119,276	Meath	74,342
South Dublin	106,534	Offaly	27,536
Kildare	85,587	Westmeath	32,319
Laois	30,337	Wicklow	52,907

Figure 6-2 shows that the highest percentage of employment in 2011 Q2 was in the Commerce and Trade sector, accounting for 32% of the total employment in the region. The region hosts large multinational manufacturing companies such as INTEL, Hewlett Packard and a number of European Customer Service Centres, all generating significant employment. Building and construction, agricultural, forestry and fishing accounted for the lowest percentages of employment in the region.

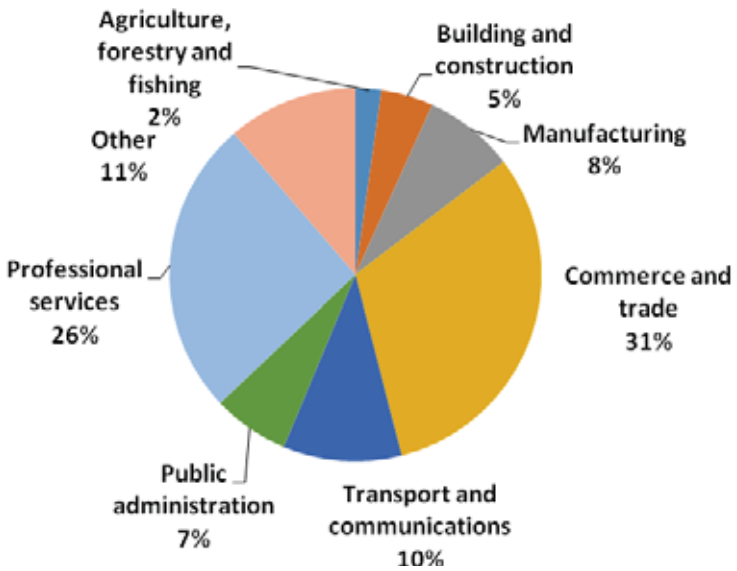

Figure 6-2 Employment by Sector

Educational facilities are generally centred in the Dublin City area. There are several third-level universities located in the city centre, on the northern and southern periphery of the city and also in Maynooth, County Kildare. A number of Institutes of Technology are distributed in the region, including Athlone, Aungier Street, Kevin Street, Dundalk, Dún Laoghaire, Blanchardstown and Tallaght. Second level and primary level schools are relatively evenly distributed by population.

There are 23 major healthcare facilities in the region, which are set out in **Table 6-5**.

Table 6-5: Major Healthcare Facilities

Healthcare Facility	Local Authority Area
Beaumont Hospital	Dublin
Cappagh National Orthopaedic Hospital	Fingal
Children's University Hospital, Temple Street	Dublin
James Connolly Hospital, Blanchardstown	Fingal
Coombe Women's Hospital	Dublin
Mater Misericordiae University Hospital	Dublin
National Maternity Hospital, Holles Street	Dublin
Our Lady's Children's Hospital, Crumlin	Dublin
Rotunda Hospital	Dublin
Royal Victoria Eye and Ear Hospital	Dublin
St Columcille's Hospital, Loughlinstown	Dún Laoghaire Rathdown
St James's Hospital, Dublin 8	Dublin
St Luke's Hospital, Rathgar	Dublin
St. Michael's Hospital, Dún Laoghaire	Dún Laoghaire Rathdown
St. Vincent's University Hospital, Elm Park	Dún Laoghaire Rathdown
Tallaght Hospital	South Dublin
Our Lady of Lourdes Hospital, Drogheda	Louth
Louth County Hospital, Dundalk	Louth
Our Lady's Hospital, Navan	Meath
Midland Regional Hospital, Mullingar	Westmeath
Midland Regional Hospital, Tullamore	Offaly
Midland Regional Hospital, Portlaoise	Laois
Naas General Hospital	Kildare

6.4.1 Tourism

In 2012 over 4.34 million people from overseas visited the region, generating approximately €1.5 billion for the economy. In addition there were 2.3 million domestic trips generating €392 million. The top two national visitor attractions, the Guinness Storehouse and Dublin Zoo, are located in the region, as are a number of heritage sites, notably the World Designated Heritage Site at Newgrange in the Boyne Valley. Other key visitor attractions include numerous lakes and rivers used for boating, fishing and other leisure activities.

It is worth highlighting that seasonal tourism and recreational events such as sporting and other major entertainment events place additional pressures on litter management and waste collection services in the region.

6.5 TRANSPORT

The Department of Transport, Tourism and Sport's Strategy for the period 2011–2014 is "*To provide for the maintenance and upgrade of the transport network and ensure the delivery of public transport services with particular regard to economic competitiveness, social needs, sustainability and safety objectives*." The Exchequer Capital Investment in the Transport Sector will total €4.3 billion over the period 2012–2016. In addition to the investment on the Road and Public Transport Infrastructure, there will be a particular focus on Smarter Travel initiatives including cycle lanes and cycle ways, pedestrianisation projects, signage/information provision and traffic calming across the region together with the extension of bike sharing schemes.

The region is well advanced in terms of accessibility, with an extensive road, rail, bus, air and sea transport network (see **Figure 6-3**). Some of the headline statistics for the region for 2012 are as follows:

- Total national primary road network length 1,319 km, of which 474 km is motorway;
- Over 19.2 million passengers through Dublin Airport
- 19 million tonnes of goods handled at Dublin port – 40% of the national total;
- Over 1,071,000 licensed vehicles in the region;
- 60.3% of people travel to work by car;
- 1.6 million journeys on Dublin Bikes; and
- 29.3 million passengers on Dublin LUAS light rail system.

6.6 LAND USE

The EMR covers about 21% of the country, with land area of around 15,000km^2. Dublin and the Greater Dublin Area (GDA) account for 81% of the region's population (1,795,000), with Dublin City and its suburbs occupying the largest urban land area in Ireland at 372 km^2 and holding 39% of the total urban population. Only 5% of the land area in the EMR comprises built-up areas, 75% is agricultural and the remainder natural. The high proportion of agricultural land has given rise to a thriving food manufacturing industry. The region's rivers support fishing and boating activities and the coastline is a popular holiday destination. In addition, some areas in the EMR contain rare and vulnerable habitats and wildlife. These areas include parts of the Boyne, Liffey and Vartry rivers as well as their estuaries. In addition, many coastal sites have been identified to protect recreational bathing areas and habitats of importance.

Local authorities have a key role to play in preserving the natural heritage of their areas arising from the legal responsibilities placed on them and from the increasing public awareness of the importance of nature conservation at a local level. These protected areas are granted special status and their protection is mandatory under European and/or Irish law. Many of these areas are designated at European level (for example Special Protection Areas under the Birds Directive, Special Areas of Conservation under the Habitats Directive). There are also nationally designated areas such as the National Heritage Areas. The region has 93 Special Areas of Conservation (SACs), 48 Special Protection Areas (SPAs), 38 Natural Heritage Areas (NHAs), and one Amenity Area Order (AAO). These areas are depicted in **Figure 6-4**.

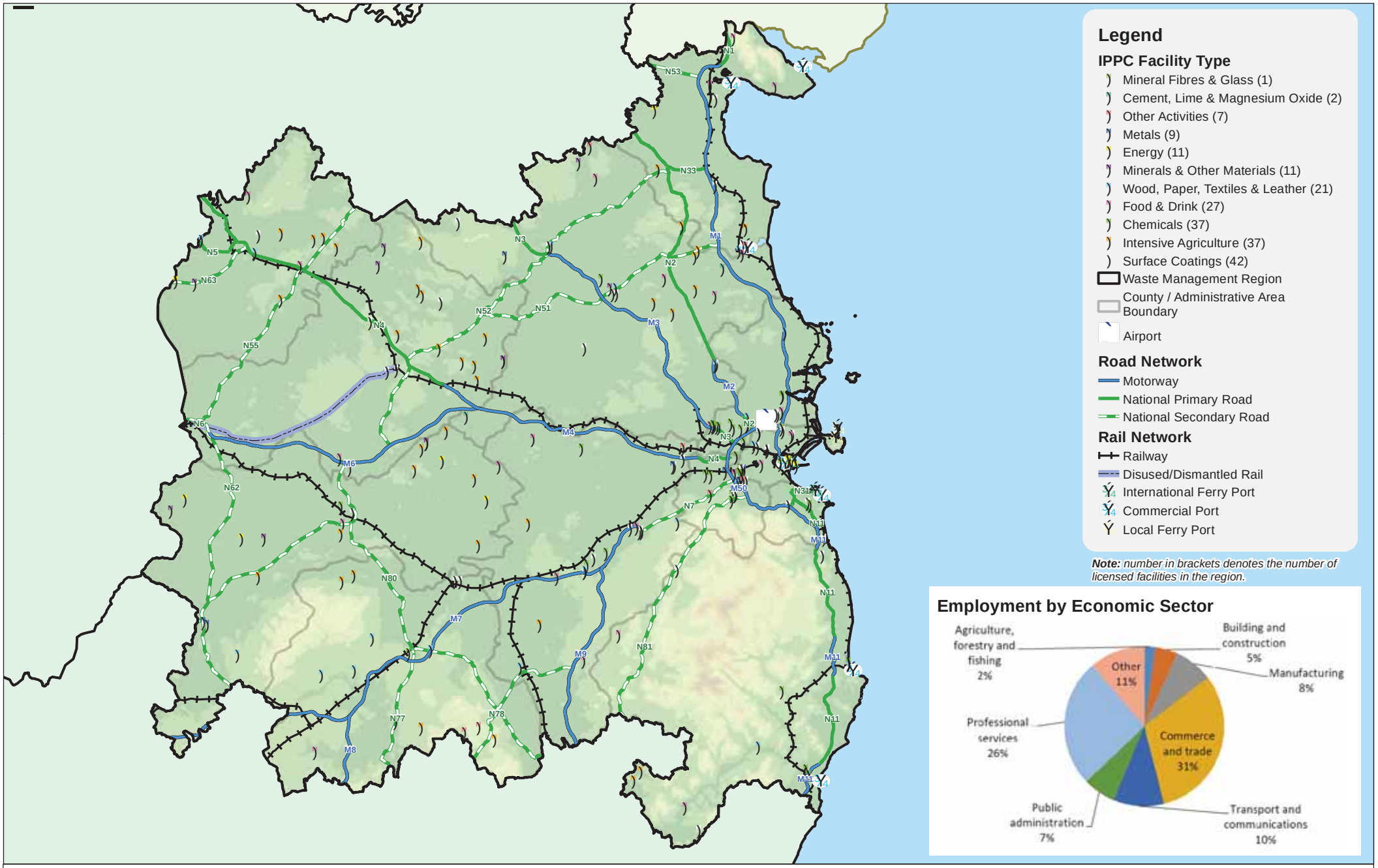

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Figure 6-3 Economic Activity & Transportation Network

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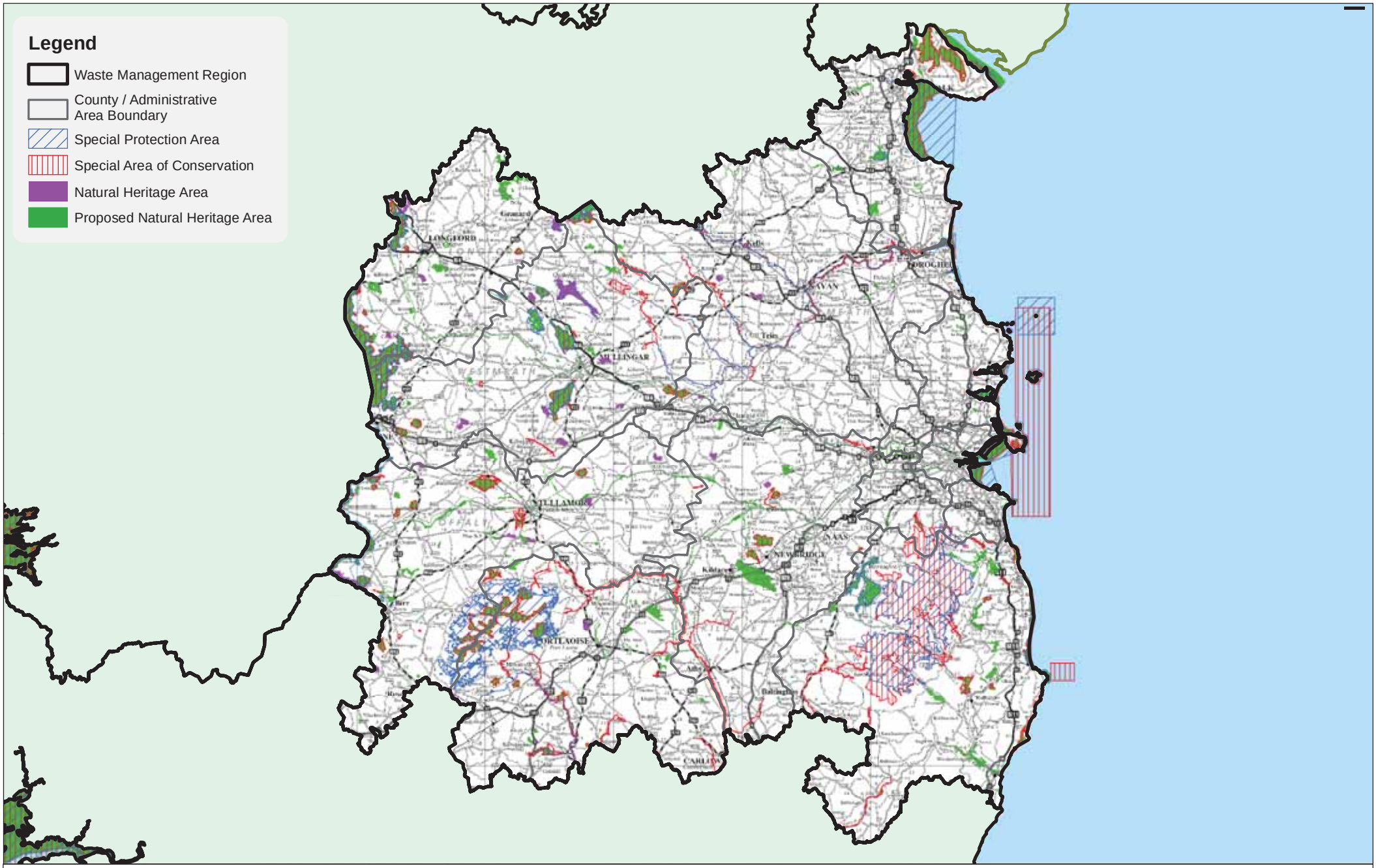

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Figure 6-4 Environmentally Sensitive and Protected Areas

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6.7 TOPOGRAPHY

The topography in the region is varied, with a coastline from Louth to Wicklow, which consists of sandy beaches with intermittent rocky headlands. The main mountain ranges include the Dublin and Wicklow mountains and the Cooley Mountains in Louth, which border Northern Ireland. The low-lying midlands consist of a combination of arable land and raised bogs, primarily in Offaly and Westmeath, which provide for a large-scale commercial peat industry in the surrounding area. The River Shannon forms the principal western boundary of the region, and expands into Lough Ree in Westmeath. There are numerous other lakes in the region including Lough Ennel, Lough Owel and Lough Derevaragh. The plain of Kildare and fertile agricultural land stretches towards Meath. These areas are depicted in **Figure 6-5.**

6.8 GEOLOGY

The dominant rock group is the upper Paleozoics which occur throughout Fingal County, Dublin City and much of South Dublin. This group is entirely composed of calcareous shale and limestone. The geology in the Midlands Region is largely composed of carboniferous limestone with small pockets of sandstone and some older volcanic and metamorphic rock. In Laois, deposits of basalt and other volcanic rock are noted in the northern part of the county, while there are pockets of coal measures at its centre. Westmeath is dominated by carboniferous limestone. Offaly is extensively underlain with Lower Carboniferous limestone. The bedrock geology of Kildare is composed of slate, volcanic rock and old red sandstone formations and carboniferous limestone. The bedrock geology of Wicklow consists of different groups of rocks, including marine and volcanic rock and shales. Leinster granite dominates the central area of Wicklow and its full extent stretches from Dún Laoghaire, Co. Dublin to New Ross, Co. Wexford. The geology of the North East consists of siltstone and shales with small pockets of tuff and lava. There are significant lead and zinc deposits in the Navan area.

6.9 HYDROLOGY

From Drogheda all the way south to Arklow, the river waters enter the Irish Sea along 130 km of coastline from the Boyne estuary and Malahide, Dublin, Killiney and Brittas Bays. The River Liffey catchment covers a large part of the Dublin Region; the river rises in the Dublin Mountains near Brittas and loops around through counties Wicklow, Kildare and Meath over 129 km before entering Dublin Bay. The principal tributaries near Dublin are the Camac to the south and the Rye-Water to the West. There are two hydroelectric generating plants on the Liffey, at Golden Falls and Leixlip. The other main rivers which discharge to Dublin Bay are the Dodder and the Tolka. Fingal has a number of smaller rivers, typically draining directly west to the Irish Sea from a distance of no more than 30 km inland. In the southern part of the region, the Kill of the Grange Stream and the Shanganagh River are the more important flows which drain Dún Laoghaire.

The hydrology of the North East Region is marked in the east by the Rivers Boyne, Blackwater, Fane, Glyde and Dee. These rivers have contributed to the formation of fertile plains in counties Louth and Meath.

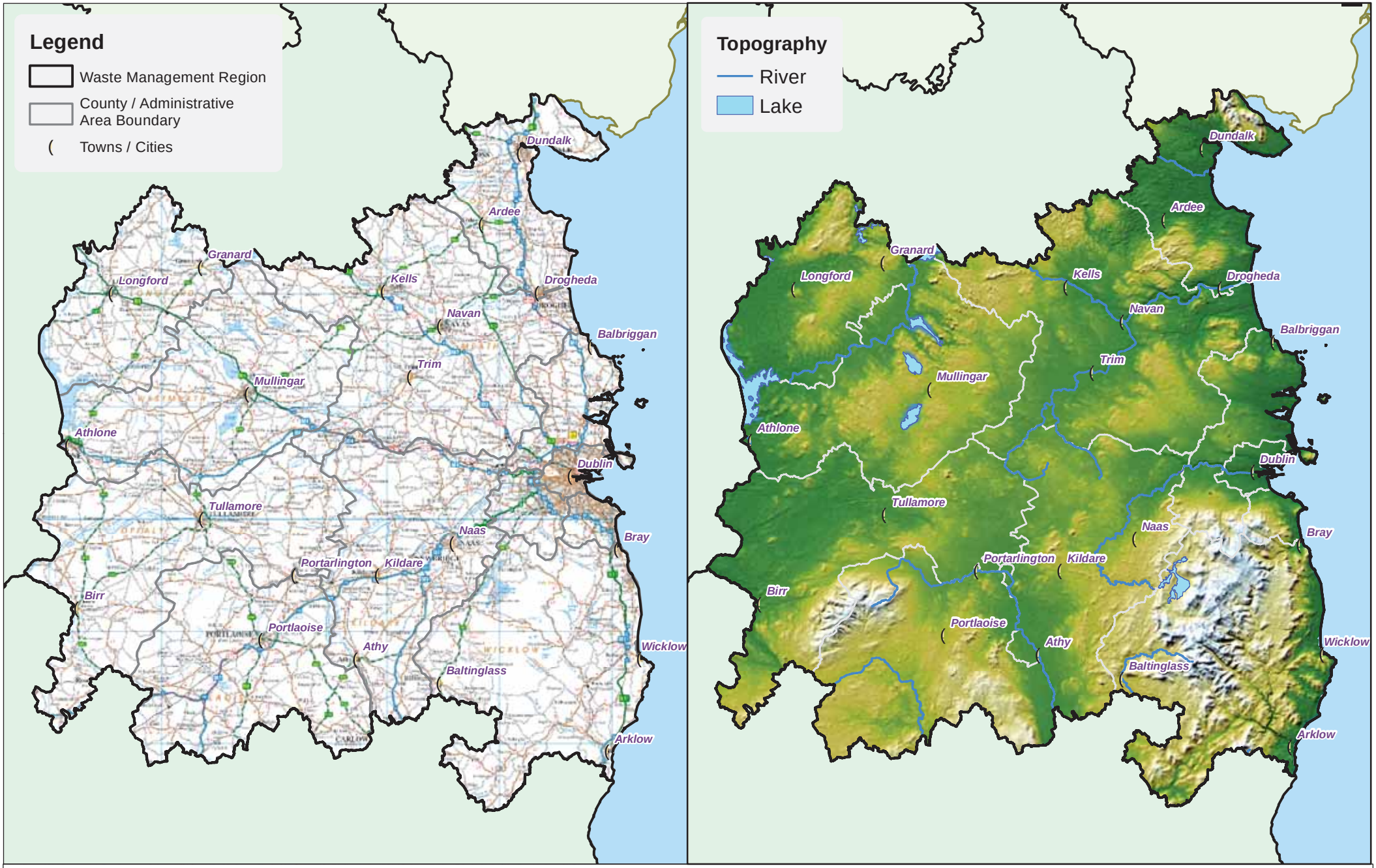

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Figure 6-5 Map of the Geographical Area of the Region

RPS

The major rivers draining County Kildare are the Liffey, the Boyne and the Barrow. The Liffey rises in the Wicklow Mountains and flows west, and then to the north at Kilcullen. County Wicklow is divided into a number of catchments. The Liffey and the Glencree Rivers drain the north of the Wicklow Mountains and flow into Dublin. The River Vartry rises in the Wicklow mountains near Roundwood. It then flows South East towards Wicklow town where it joins the Broadlough just north of the town. The reservoirs of Poulaphouca and Vartry are used to supply Dublin and parts of Wicklow and Kildare. The Poulaphouca Reservoir is used to provide hydroelectric power.

The Midlands Region contains sections of a number of catchments, such as the Shannon, Inny, Barrow and Boyne. There are a number of rivers and canals in the region, the primary ones being the Shannon, Barrow, Nore, Suir, Boyne and the Grand and Royal Canals. Lough Ree and Lough Derg are the two main lakes in the Midlands. Both the Royal and Grand Canals cross the Midlands Region from east to west, connecting Dublin with the River Shannon.

6.10 HYDROGEOLOGY

Groundwater is a major natural resource in the Republic of Ireland, providing between 20% and 25% of drinking water supplies. In certain counties in the region the proportion is much greater – over 50%. The Geological Survey of Ireland (GSI) classifies the groundwater resource according to vulnerability – i.e. the hydrogeological characteristics intrinsic to a groundwater body which determine how easily that water body may be contaminated through human activities. There are over 7,000 groundwater wells and springs in the region (those with the highest positional accuracy).

In rural areas not served by public or group water schemes, groundwater is usually the only source of supply. There are at least 7,000 wells and springs in use in the EMR. Of these, approximately 175 are at the appropriate abstraction yield to provide for potable water supply. In addition to groundwater well data, the GSI holds a database on karst features in the country. The majority of karst features (including swallow holes, caves and enclosed depressions) occur in the Midlands and along the west coast of Ireland. Of the nearly 4,000 karst features recorded by the GSI, approximately 151 are scattered across the EMR, mostly towards the middle to western portions of the region. The database is not comprehensive, however, and new features are added as more information becomes available. For the region, groundwater vulnerability exhibits a range of vulnerability ratings, classified as Low risk up to Moderate, High, Extreme and where rock is exposed near the surface or composed of karst (X vulnerability rating).

In that context it is imperative that this resource be protected. This can be achieved through appropriate land use planning and practice. To date, the Geological Survey of Ireland has completed Groundwater Protection Schemes for the following local authorities – Dublin (Fingal and South Dublin), Kildare, Laois, Longford, Meath, Offaly and Wicklow. Other reports have been commissioned by local authorities from hydrogeological consultants.

DUBLIN REGION: In general the aquifer potential of the Dublin Region is poor. Permeable strata exist within the limestone bedrock. These strata are responsible for higher than expected yields, for example within the Clondalkin Formation. The North Dublin Fault zone has an associated aquifer within which a water supply has been developed at Bog of the Ring in Fingal County. The granite and metamorphic sediments are classified as poor aquifers with groundwater flow confined to localised discontinuous systems, most of which occur in the upper weathered zone.

LOUTH/MEATH: A significant aquifer in the North East runs from Carnaross in the north of County Meath into Louth and the southern part of Monaghan. The solid geology of this aquifer consists of Calp Limestones and Shallow Water Limestones, with some of the sandstones and siltstones of the Navan Beds. These formations produce reasonable yielding wells in the towns of Nobber and Kilmainhamwood.

In County Meath there is a large formation that spreads from the west of the county to the coast. This is predominantly Calp Limestone with Shallow Water Limestone. There is also a minor Upper Carboniferous aquifer along the coast in Louth to the south of Dundalk and along the coastline of the Carlingford Peninsula. In County Meath drift geology forms a sand and gravel aquifer running south west to the north east, from Enfield to Navan, and a small aquifer is present along the border with County Westmeath in the Athboy area. There are also large areas of locally important aquifers in the region, which are poor aquifers and yield very small quantities of water. They are sometimes used as water supply for single households or farms. However, their capacity is small, with the water being contained only in the uppermost few metres of rock, and they can therefore run dry in the summer as the water table lowers.

LAOIS/LONGFORD/OFFALY/WESTMEATH: These counties feature both bedrock and quaternary (sand and gravel) aquifers. The importance of these aquifers will vary with their productivity. County Laois contains two large bedrock aquifer formations situated between Abbeyleix and Castlecomer, in County Kilkenny, and in the west of County Laois at Mountrath running north east to the outskirts of Portlaoise. Laois also has small sand and gravel aquifers near Portlaoise and Abbeyleix. The bedrock aquifer in the west of County Laois runs into County Offaly in the Slieve Bloom Mountain formations while sand and gravel aquifers are also present in this area, in particular just north of Roscrea. There is a large bedrock aquifer running from Banagher to Tullamore with a minor sand and gravel aquifer south west of Banagher. In Westmeath there are small areas of sand and gravel aquifers near Moate, with a bedrock aquifer in the Castletown area. There is also a larger sand and gravel aquifer near Delvin. County Longford has a small bedrock aquifer in the Longford Town area.

Groundwater Schemes – County % of Total Water Supply:

- Longford 15%;
- Westmeath 20%;
- Offaly 80%; and
- Laois 95%.

The proportion of groundwater usage is not reflected in the number of schemes but in the proportion of the total water supply. An estimated 80% of the current water supply in Offaly comes from groundwater while this figure falls to 15% in County Longford.

The proportion of groundwater abstracted is not a function of the number of wells or schemes within the counties but of the yield from boreholes. In Longford for example, while there are a large number of private abstractions the percentage of the total water supply derived from groundwater is relatively low.

KILDARE: County Kildare has extensive and valuable groundwater resources and has approximately 20 classified aquifer groupings throughout the county. The most important aquifer units are the sand and gravel deposits which overlie limestone bedrock in the central area of the county. Groundwater quality from the highly permeable aquifers of County Kildare is generally excellent.

Groundwater from these aquifers tends to be very hard, a characteristic which, although beneficial to health, can cause problems in pipes, hot water systems and some industrial processes. Groundwater yield from the less permeable aquifers is naturally poor and is often characterised by low pH values and high concentrations of iron, manganese and sulphates. These occur naturally in the groundwater in these areas and can be attributed to the bedrock through which the water has passed. Many aquifers in County Kildare are vulnerable to pollution. Water-bearing glacial deposits (sand and gravels), particularly where the water table is shallow, can be at risk from landspreading of fertilisers or septic tank effluent.

WICKLOW: In County Wicklow, three public supply wells – at Roundwood, Redcross and Baltinglass – have been designated as important sources and under the groundwater protection scheme are subject to source protection. In general, however, the groundwater production in County Wicklow ranges on average from moderately productive in local areas to unproductive. Therefore even in areas where the vulnerability rating is high to extreme, the effect of a pollution event on a groundwater supply would only be considered significant in a local context.

Further detail on each county in the region is available from the GSI – www.gsi.ie – or the relevant local authority.

PART 2 EXISTING SITUATION

7 REGIONAL WASTE DATA

Since 2005, waste data reporting and recording mechanisms have improved significantly for most waste streams, in part due to the introduction of a new system, hosted by the NWCPO, which allows 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 the local authorities have also contributed to the improvements in data quality. It should be noted that some differences exist between the published *National Waste Report* (Environmental Protection Agency, 2012) and the data published in this plan. This is due to amendments to EPA data following publication of the NWR, 2012.

Nevertheless there is a need for all stakeholders to improve data management and reporting continually and to ensure that returns are made in an accurate and timely manner. A national register of waste facilities that collates annual returns from facilities needs to be developed during 2015 and be supported by all stakeholders.

7.1 DATA SOURCES

Since the adoption of the previous Waste Management Plans (2008), total waste arisings have continued to reduce marginally in the region, reflecting the national trend as reported in the *National Waste Report* (Environmental Protection Agency, 2012). The reporting and recording mechanisms for waste data have improved significantly for household, commercial and construction and demolition waste streams in recent years; however, further improvements in data management and reporting are necessary. The new EMR is an amalgamation of 12 local authorities, from five of the 2005 waste management regions. As a result, the data regarding generation of waste streams cannot be compared to 2005 statistics; therefore, statistics presented in **Table 7-1** compare 2010–2012 data for the region and the key sources include:

- EPA National Waste Reports;
- Local Authority National Waste Returns;
- National Waste Collection Permit Office (NWCPO);
- National Hazardous Waste Management Plan 2008–2012; and
- Producer Responsibility Compliance Scheme Annual Reports, including WEEE Ireland and ERP.

Tables 7-1, 7-2 and **7-3** list the key waste categories in accordance with the requirements set out in the Waste Management (Planning) Regulations, 1997. The total of all waste arisings in 2012 is 4,138,410 tonnes.

This figure excludes animal by-products and other agricultural wastes, which are exempt from the requirements of the waste collection permitting system. The figures reported include all private and any public collections of waste including bring banks, civic amenity sites and waste collected by the existing producer responsibility schemes for waste electrical and electronic equipment (WEEE) and batteries.

While the figures are reasonably consistent over the course of the three years, as reported in the *National Waste Report* (Environmental Protection Agency, 2012), there was an overall increase in the total amount of waste generated in the region between 2010 and 2012.

7.2 HOUSEHOLD WASTE

Table 7-1 presents the tonnages of household waste arisings for the years 2010–2012.

Table 7-1: Tonnes Household Municipal Waste Arising in the EMR 2010–2012

Household Municipal Waste	2010	2011	2012
Household waste managed (kerbside)	567,608	581,818	560,786
Household waste collected from CA and bring sites (including bulky waste and excluding WEEE and batteries)[36]	103,893	92,463	91,464
Household waste collected from other bring facilities (PTUs) and direct to landfill[1]	n/a	n/a	3,145
Bulky household waste, other than from CA and bring sites[37]	24,493	32,995	26,054
Household waste (Total)	**695,964**	**707,276**	**681,449**

Over 560,000 tonnes of household waste was collected annually in the region through kerbside collection systems from 2010 to 2012. Kerbside waste is generally segregated at source and collected by private authorised collectors. Kerbside collection represents 81% of total household waste managed (THWM) in the region in 2012. The comparable national figure for 2012 is 79%.

The quantity of waste collected through the extensive EMR network of bring banks and civic amenity sites represents 13% of THWM in 2012, which is similar to the national rate of 15%. While there has been a reduction in tonnage in comparison to 2010, this represents a considerable portion of household waste and support for this infrastructure network needs to be maintained.

The delivery of waste directly to collection facilities (primarily landfill) by householders continues to decline. However, delivery of waste to Pay to Use (PTU) compactors in the EMR was recorded for the first time in 2012, with less than 125 tonnes collected. The future use of PTUs as part of the waste collection system is under review and will be governed by the proposed Waste Management (Collection Permit) Regulations, 2015

7.2.1 Commercial Waste

In 2012, commercial waste collected in the region was 568,873 tonnes. The commercial waste trend in the EMR is in line with the national picture which shows a continuous decrease in commercial waste from 2007 to 2011. The greater part of commercial waste is segregated at source and collected by private waste collectors at commercial premises and holdings. It is acknowledged that other wastes are also generated at commercial premises and may be recorded under other headings and not identified as commercial.

[36] EPA NWR/LA Returns.
[37] National Waste Collection Permit Office.

7.3 PRIORITY WASTE

Table 7-2 presents the tonnages of priority waste arisings for the years 2010–2012.

Table 7-2: Priority Waste Collected in the EMR 2010–2012

Priority Wastes (Collected)	2010	2011	2012
Construction and Demolition[37]	2,339,654	2,048,344	1,910,887
Household WEEE[38]	12,956	16,598	16,364
Non-Household WEEE[39]	12,896	12,656	16,704
Batteries (portable)[38]	169	199	232
Batteries (non-portable)[39]	2,999	7,912	7,194
End-of-Life Vehicles (EWC 16 01 04)[37]	25,556	25,530	29,182
Tyres[37]	9,801	12,689	10,374
Healthcare[37]	16,361	20,788	15,761
Waste Oils[37]	33,150	34,445	37,363
Polychlorinated Biphenyls (PCBs)[37]	198	195	152

7.3.1 Construction and Demolition (C&D) Waste

The estimate of C&D waste arisings for the region in 2012 is 1.91 million tonnes, a reduction compared to 2010 and 2011. As the construction sector begins to record increasing activity during 2014, the importance of construction and demolition plans and their enforcement must be stressed. Equally, the appropriate processing facilities need to be in place to facilitate increased reuse, recycling and recovery of this waste stream.

7.3.2 WEEE and Batteries

The collection and management of WEEE is primarily carried out by the two compliance schemes – WEEE Ireland and European Recycling Platform (ERP). Each local authority in the region has set up collection points for WEEE at civic amenity and a number of bring sites. One-off collection events are also held throughout the region.

The total household WEEE collected in 2010 was 12,956 tonnes, a figure which reached 16,598 tonnes in 2011 and plateaued in 2012 at 16,364 tonnes. 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 Report* (Environmental Protection Agency, 2010–2012). This regional trend is

[38] PR Compliance Schemes (WEEE Ireland, ERP).
[39] NWCPO and PR Compliance Schemes (WEEE Ireland, ERP).

different to the national trend, which shows a decrease in tonnage collected from 2010 to 2011 and a plateauing of figures between 2011 and 2012.

The compliance schemes for WEEE also collect and manage certain portable waste batteries. It is estimated that over 7,000 tonnes of batteries were collected within the region in 2012, primarily by WEEE Ireland and ERP, a significant increase on 2010 data. Nationally, there is 140 tonnes of portable lead batteries collected by the compliance schemes which cannot be broken down per region and hence not included in the portable battery tonnage for the EMR.

7.3.3 End-of-Life Vehicles (ELVs)

ELVs are mainly managed at Authorised Treatment Facilities (ATFs). An estimated 29,182 tonnes of ELVs was managed in 2012, a 14% increase in tonnage compared to 2010 and 2011 estimates.

7.3.4 Waste Oils and Polychlorinated Biphenyls (PCBs)

Waste oils include both mineral and non-mineral based oils and there has been a notable increase in the amount collected, from 33,150 tonnes in 2010 to 37,363 tonnes in 2012. Capacitors and transformers containing PCBs account for most of the PCB waste stream in Ireland. The use of electrical equipment containing PCBs was banned since 1986 and therefore the tonnage collected largely represents old/historic PCB waste coming to its end of life.

7.3.5 Healthcare Waste

Twenty-three main hospitals in the region generate healthcare waste. Further waste is generated by clinics, pharmacies and medical practices. Healthcare waste is collected by authorised collectors and delivered to specialist facilities. 15,761 tonnes was generated in the region in 2012, a reduction from 20,788 tonnes collected in 2011

7.4 OTHER WASTES

Table 7-3 presents the tonnages of other waste arisings for the years 2010–2012.

Table 7-3: Tonnes Other Waste Arisings in the EMR 2010–2012

Other Wastes (Collected)	2010	2011	2012
Contaminated Soil[37]	4,214	6,594	13,133
Mining and Quarry[37]	1,339	33	113
Agricultural[37]	34,174	28,461	11,331
Non-Hazardous Industrial[37]	84,802	78,342	105,980
Hazardous Industrial[37]	9,577	17,414	30,499
Industrial Sludges[37]	9,649	9,168	2,648
Ash and Incinerator Residues[37]	35	5,435	44,348
Landfill Leachate[37]	146,270	175,291	236,396

Other Wastes (Collected)	2010	2011	2012
Sewage Sludges[37]	223,591	226,433	227,998
Water Treatment Sludges[37]	14,244	30,080	43,933
Total	**527,895**	**577,251**	**716,379**

7.4.1 Contaminated Soil Waste

Between 2010 and 2012, 23,941 tonnes of contaminated soil was produced in the region. The *National Waste Report* (Environmental Protection Agency, 2012) reports a significant drop in tonnage of contaminated soil reported compared to 2008 as a result of the downturn in the construction industry.

7.4.2 Mining and Quarry Waste

An estimated 113 tonnes of waste was generated in this sector in 2012. Tara Mines in County Meath is the sole active mine in the region.

7.4.3 Agricultural Waste

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 waste management collection permit system.

Farming organisations and the compliance schemes have made considerable efforts in collecting farm film plastics in recent years, by hosting local collection events with the cooperation of the local authorities: as shown in **Table 7-4**, there has been a steady increase in the tonnage collected.

Table 7-4: Farm Film Plastic in the Eastern-Midlands Region

Waste Type	Tonnes per Annum			Source
	2010	2011	2012	
Farm Film Plastics	3177	3651	4326	IFFPG & FRS

The Department of Agriculture, Food and the Marine (DAFM) has estimated that 395,921 tonnes of dry livestock manure was produced by bovines in sheds over the winter period, 2011–2012. This material is classified as an organic fertiliser and is applied to land in accordance with S.I. 610 2010 (Nitrates regulations, since updated by S.I. 31 2014); it reduces the need to apply chemical fertilisers.

DAFM calculated the amount of nitrogen produced by livestock annually on the basis of bovine figures on the animal identification and movement system (AIMS) in the region. This figure was then converted to dairy cow equivalents and the weekly slurry production figures for dairy cows were multiplied by 18 to give an estimated figure that would be produced over the winter period.

4,949,016 tonnes of material was produced; the dry matter was estimated at 7%. This equates to a dry matter production of 395,921 tonnes.

7.4.4 Industrial Waste

Table 7-3 details the quantities of industrial waste (hazardous and non-hazardous) collected in the region. In 2012, there was an increase in the amount collected with a total estimate of 105,980 tonnes; this may be related to increased activity. There was a similar increasing trend in hazardous industrial waste, with 30,499 tonnes collected, an increase of 68% over the amount collected in 2010.

7.4.5 Ash and Incinerator Residues

In 2012, 44,348 tonnes of ash/incinerator residue was reported in the region, generated primarily at the Carranstown Waste to Energy Facility in County Meath.

7.4.6 Landfill Leachate

Landfill leachate generation has increased in 2010–2012, with 236,396 tonnes generated in 2012. Leachate generation is influenced by a number of factors including waste quality and quantity, rainfall and the amount of landfill face exposed.

In 2012, 11 landfills were managing waste in the EMR. Even after their closure these landfills will continue to generate leachate, the quantities of which will gradually reduce over time.

The landfill leachate generation figure does not include landfill leachate discharged to sewer as there is no recording system for this stream. 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 concentrated in waste water treatment plants controlled by Irish Water.

7.4.7 Sewage and water treatment sludges

Sludges are generated in the region from a number of different sources. Industrial sludges decreased in 2012 to 2,648 tonnes, while sewage sludge generation remained similar between 2010 and 2012. The introduction of the septic tank inspection system may increase the amounts reported. Water treatment sludge increased to 43,933 tonnes in 2012 compared to 14,244 tonnes in 2010.

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 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 regarding water and waste water sludges, and with other relevant stakeholders to ensure waste sludges are managed in a safe and compliant manner. The effective communication between stakeholder groups addressing the control and management of sludge in an environmentally sustainable manner will provide 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

The EU Waste Framework Directive, published in 2008, resulted in revisions to the waste hierarchy, the principles of proximity and self-reliance and the definitions of waste treatments. The Directive places a greater emphasis on optimising resource efficiency, prevention, reuse and the recovery of mixed residual wastes. The original Waste Framework Directive (Directive 75/442/EEC on waste, amended by Directive 91/156/EEC) called on member states to encourage waste prevention in the first instance, and then to promote recovery through reuse and recycling. The revised 2008 Directive outlines a new hierarchy, which should act as a "priority order" in waste prevention, legislation and policy.

Within the EMR, 13 environmental awareness officers (EAOs) are working in the area of waste prevention and resource efficiency. In addition to these officers, a number of local authorities have staff that are working specifically with the Green Schools Programme, while others have staff providing additional technical and administrative support and assistance.

Over the lifetime of the previous regional waste plans, the role of the EAOs in some local authorities became somewhat diluted and included other aspects of waste management operations, community development and communications. The EAOs' role was therefore not prioritised or focused on advising and assisting the wider community in resource efficiency. In order to ensure that the objectives of this plan are achieved, and in particular the achievement of resource efficiency measures through waste prevention and reuse activities, the role of Environmental Awareness in the region will need to be clearly defined and resourced.

8.1 AWARENESS RAISING OVERVIEW

Environmental awareness, waste prevention and reuse activities in the region are currently focused on the following areas:

- Supporting and assisting schools and homes in environmental education programmes: Green Schools, Green Campus and Green Homes programme;
- Participation in and promotion of waste prevention and minimisation programmes streaming from the National Waste Prevention Programme (NWPP); for example, Local Authority Prevention Network (LAPN), Stop Food Waste programme, FreeTrade Ireland and Smile Resource Exchange;
- Organising and coordinating green business events and business certification programmes including site visits, resource efficiency audits, briefings, workshops and award ceremonies;
- Assisting and supporting local environmental social enterprises working specifically in the area of reuse and upcycling;
- Management and coordination of grants and funding: Local Agenda 21, Anti-Litter and Anti-Graffiti grants, Green Enterprise and LAPN;
- Coordinating individual or joint local authority media campaigns, in particular billboards, local radio, print, cinema and social media;
- Participation in National tree week, National recycling week, National spring clean, Gum litter task force and coordinating mobile WEEE collections;
- Participation in seasonal campaigns – green Christmas, Easter and Halloween;
- Promotion of and participation in Tidy Towns and community clean-ups;

- Promoting composting through home composting and master composter programmes; and
- Promotion of local recycling infrastructure (bottle banks, bring centres and recycling centres/CA sites) and the procurement of associated recycling contracts.

Figure 8-1 Kill Recycling Bank – 2010 Tidy Towns Competition winner

Policy

The aim of local authorities is to build on prevention activities which are under way throughout the region. The role of local authority awareness staff, in particular the Environmental Awareness officer is central in building a consistent waste prevention programmes across the region. In addition the necessary resources need to be available to local authorities, to ensure programme and campaigns can be effectively delivered. Prevention is the most effective waste management option in terms of protection of the environment and human health. It 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.

Over the plan period, local authorities in the region will continue to implement local campaigns and activities. However, the restructuring of the region also affords the opportunity to focus towards a

collective and regional collaboration. This approach will be established over the plan period to yield greater coordination of activities. Education and awareness is an important policy area in terms of environmental protection as it offers the greatest scope to reduce negative behaviours at individual, community, regional and national levels. Behavioural changes leading to the prevention of waste have positive effects on 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.

8.2 NATIONAL PROGRAMMES

The NWPP launched in 2004 and is managed by the EPA. Updated in 2014 with the publishing of the EPA's Prevention Plan 2014–2020, the programme was adapted to meet the requirements of the 2008 revised Waste Framework Directive. The EPA has now published a fourth iteration of the NWWP, *Towards a Resource Efficient Ireland*, which will run until 2020. The aim of the NWPP is to deliver substantive results with regards to hazardous and non-hazardous waste prevention and minimisation and to integrate a range of initiatives addressing awareness-raising, technical and financial assistance, training and incentive mechanisms.

'Be Green' brings together all of the individual programmes and activities developed under the NWPP and includes the following:

- Be Green Guides – a series of guides aimed at businesses, homes and commercial activities, on how to reduce resource usage;
- Be Green Programmes – bring together programmes that have been put in place by the EPA, local authorities and other partners to promote waste prevention. Programmes include LAPN, Green Healthcare, Green Hospitality, Green Business and Smart Farming;
- Environment and Enterprise, which provides details on collaborative or supporting roles for environment and enterprise organisations; and
- Resource Efficiency Programmes including FreeTrade Ireland and the Community Reuse Network (CRNI). All local authorities actively promote and participate in national prevention programmes, such as the Stop Food Waste Programme and FreeTrade Ireland.

The EPA's Stop Food Waste programme provides advice and tips on how to reduce food waste in the home and on composting food waste that cannot be prevented. EAOs in the region have hosted evening seminars with community groups on the importance of food waste prevention. Certain local authorities across the region have distributed measuring instruments, which assist households with portion control. Recipe books have also been produced and distributed at Christmas with hints and tips on what to do with leftovers. EAOs have encouraged and promoted waste minimisation in local authorities through lunchtime talks/briefing sessions for staff on food waste prevention and ensured that food waste from canteens is segregated and sent for composting.

The majority of local authorities in the region have also hosted the master composter programme, whereby participants are trained in the area of home composting, including building a home composting demonstration site, which is further used to demonstrate the various methods of home composting.

FreeTrade Ireland is a free online reuse service which allows its users to pass on unwanted items for free, from beds and furniture to electronic goods and garden equipment. The service delivers real financial savings to all its users, as well as being good for the environment. After four successful years operating in Dublin, FreeTradeIreland.ie was launched nationally in July 2010. Its aim is to facilitate the reuse of household and business items throughout Ireland, promoting reuse and waste prevention.

Information on items exchanged and reused through the dedicated website since the national launch is set out in **Table 8-1.**

Table 8-1: FreeTrade Ireland Reuse Data (July 2010–March 2015)

Region	Number of Items Reused	Diversion (Kg)	Estimated Savings (€)
Eastern-Midlands Region	64,569	965,504	6,650,001

In 2015 FreeTrade Ireland established a Public Resource Exchange Platform (PREP) which is a free online reuse service for public services, allowing its users to pass on unused or unwanted items for free within the public sector. Prep.ie delivers real financial savings to all its users, as well as being good for the environment.

Policy

The NWPP is an exemplar programme. Its initiatives have raised awareness and evoked changes in behaviour in household, business and industry participants. The evaluation of the previous waste plans identified the need for local authorities to continue their work with the NWPP but to better coordinate their activities to deliver more consistent and effective messaging. Over the plan period the local authorities in the region will continue to support the NWPP and through the regional authority, 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 waste prevention activities targeting households and small businesses. The local authorities recognise the need for better synergies between the two plans, in areas of common interest. There are other national programmes and producer responsibility schemes which are involved in activities related to those of the regional waste plan. The local authorities will therefore explore opportunities to work with other stakeholders, thus ensuring the message of waste prevention is far reaching.

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).

8.3 REGIONAL PROGRESS

Progress in the area of environmental awareness extends across a variety of sectors and includes schools, householders, community groups, businesses and public bodies. EAOs within the region have excelled themselves in each area, leading by example, and have promoted and encouraged a similar ethos within these communities.

8.3.1 Schools

The Green Schools programme is an environmental management system and award scheme that promotes whole school action for the environment. **Table 8-2** details the number of schools involved in this programme across the region and the number of flags awarded at primary, post–primary and third levels.

Table 8-2: Green Schools and Green Campus Programme, 2013

Local Authority	Primary Schools		Secondary Schools		3RD Level Colleges	
	Total Number	% Green Flag Awarded	Total Number	% Green Flag Awarded	Total Number	% Green Flag Awarded
Dublin City Council	226	59	79	39	19	16
Dún Laoghaire-Rathdown County Council	85	78	33	61	7	0
Fingal County Council	95	89	27	33	1	0
Kildare County Council	107	85	26	38	1	0
Laois County Council	69	84	9	67	2	100
Longford County Council	38	95	9	78	0	0
Louth County Council	75	57	16	88	2	100
Meath County Council	118	74	20	50	0	0

Local Authority	Primary Schools		Secondary Schools		3RD Level Colleges	
	Total Number	% Green Flag Awarded	Total Number	% Green Flag Awarded	Total Number	% Green Flag Awarded
Offaly County Council	62	84	12	92	0	0
South Dublin County Council	100	88	35	67	1	0
Westmeath County Council	78	88	14	57	2	100
Wicklow County Council	92	83	20	45	0	0

The aim of An Taisce's Green Schools programme is to increase environmental awareness and good practice among school children of all ages. Throughout the programme, children develop an understanding of the impact their own everyday actions have on the environment. The educational element of the programme, together with the good environmental practices children experience in school, instils a strong sense of personal responsibility for the protection of the environment.

The EAOs/Green Schools officer provides support and advice to schools that are involved in the Green school and Green Campus programmes. Support is provided through school visits, with the majority of green flag award and renewal visits being conducted by local authorities. The programme is promoted through annual Green Schools seminars and through articles and competitions. Resources such as posters and information leaflets are made available to schools as well as presentations and workshops on all aspects of the environment.

Figure 8-2 Party Entertainers at Green Schools Event

8.3.2 Household and Community Groups

Significant progress in the area of waste prevention has been made with householders and community groups. With the direct provision of funds under both the Local Agenda 21 grant and the Anti-Litter and Anti-Graffiti awareness grant, EAOs in the region have encouraged groups to actively participate in environmental initiatives and programmes. A wide variety of LA21 projects and schemes have been supported under the Fund, which include community gardens and allotments, compost schemes, rainwater harvesting, biodiversity projects, waste reduction initiatives, educational initiatives and environmental exhibitions. Projects funded tend to focus on environmental awareness and actions which complement national environmental policies.

Table 8-3 details the number of projects funded during 2013 under both grant schemes

Table 8-3: Local Agenda 21 Projects and Anti-Litter and Anti-Graffiti Programme, 2013

Local Authority	Local Agenda 21 Projects	Anti-Litter and Anti-Graffiti Projects
Dublin City Council	41	1[40]
Dún Laoghaire-Rathdown County Council	14	11
Fingal County Council	40	35
Kildare County Council	16	12
Laois County Council	19	7
Longford County Council	20	14
Louth County Council	6	6
Meath County Council	23	6
Offaly County Council	37	8
South Dublin County Council	21	22
Westmeath County Council	21	5
Wicklow County Council	9	9
Total	**267**	**136**

With regard to the Anti-Litter and Anti-Graffiti awareness grant, projects typically funded include adopt a street, adopt a bring bank, community clean-ups, provision of anti-litter materials, awareness competitions and design a poster competition for schools, with the winning designs produced as anti-litter posters or calendars.

[40] This was a city-wide campaign utilising national media, local press, outdoor and ambient media. The sole focus of this campaign was on dog fouling.

EAOs across the region also assist communities involved with the National Tidy Towns competition. The focus of Tidy Towns is to encourage communities (community groups, residents' associations, local businesses) to improve and take ownership of their local environment. Examples include EAOs hosting and facilitating workshops with Tidy Towns groups on environmental awareness and waste prevention, supporting composting schemes – community & local, grass cycling, greener gardening – and advising local business on the more efficient use of resources.

Over the course of the previous waste plans, the region's EAOs have been involved in intensive local and national media campaigns, particularly in the areas of waste prevention, recycling, litter, illegal dumping and energy efficiency. In conjunction with campaigns, regular workshops and talks are organised and delivered.

Figure 8-3 Master Composting Programme, training community members

Other Regional highlights include:

- A number of local authorities facilitating furniture and textile redesign and upcycling courses. These courses not only provide practical skills training but also demonstrate the ethos of diverting waste from landfill by redesigning and reusing waste materials;
- Coordinating and facilitating reuse events at recycling centres;
- Assisting in the promotion and hosting of WEEE open days within local authority areas;
- Coordination of local competitions to raise awareness and promote waste minimisation, e.g. Inter Community Litter Challenges;
- Organising Green shopping initiatives in local supermarkets, to coincide with Repak Recycling Week and promotion of various seasonal campaigns; and

- Coordinating and hosting Annual Eco Weeks and Green Days within individual local authority functional areas.

8.4 UPCYCLING, REUSE AND PREPARING FOR REUSE

Upcycling and preparing for reuse enterprises have been establishing and developing across Ireland in recent years. The significant contraction in the national economy has directly affected the level of income available to families and as a result has altered personal consumption behaviours. A renewed interest in the value and life of our materials has taken root, with many new businesses employing innovative solutions to waste materials.

Figure 8-4 Portlaoise Community Environment Initiative

The recently published EC Barometer *Attitudes of Europeans towards waste management and resource efficiency* 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, more importantly, avoiding adding them to landfill. Upcycling and other similar prevention and preparing for reuse activities can no longer be viewed as add-ons to our waste management system. In addition, for those working in the sector and for consumers, there are direct social, environmental and financial benefits.

Fiscal, technical and regulatory supports are currently being provided by the EPA to specific upcycling organisations. The local authorities also provide funding where possible and support to local initiatives in the sector. To ensure the viability of the upcycling sector, funding avenues such as local enterprise grants should be explored to help kick-start and grow the sector.

Upcycling activities are varied: in some instances items or products which never become waste, are renewed and converted into higher value items. In other cases, waste materials are repaired or modified or cleaned into usable and valuable products and items. From a waste perspective upcycling activities straddle waste prevention and preparing for reuse treatments as defined on the waste hierarchy.

8.4.1 Ongoing Community Initiatives

The Community Reuse Network (CRNI) 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 CRNI membership is listed in **Table 8-4.**

Table 8-4: Members of CRNI Ireland, 2015

Community Reuse Network Ireland			
Busy Bees	ReCreate Ireland	Eco Mattress	SMILE
Camara Ireland	Rediscovery Centre	ICSA	Sunflower Recycling
CCRI	Revamp 3R	FreeTrade	Rehab Recycling
The Upcycle Movement	Voluntary Services Lisburn	Upside Design	Revamp Furniture Recycling Project
Boomerang Mattress Cork			

During 2014, CRNI executed two successful projects under the EPA Strive Programme which focused on Green Enterprise. These projects were: developing a smartphone application, “Reuse It!” to provide information about reuse service providers, and Revival by CRNI – a pop-up reuse education and retail space. The newly launched “Reuse It!” allows users to find the nearest and most appropriate reuse enterprise or venue to which they can bring their pre-loved items. The app is available for download from Google play store and iTunes. Revival by CRNI was a unique project which established a summer pop-up retail and educational space. The pop-up shop located in Dublin city centre retailed high-end, highly desirable reused items and had sales of over €18,000 for the three-month period.

EAOs also assist and support the CRNI, in particular through the availability of paint, mattresses and bicycles from recycling centres for recycling or repair and reuse. Bicycles and paints are recovered by various environmental community organisations for further reuse at community level. Mattresses on the other hand are recycled and recovered – the wood is sold as fuel, metals are recycled and fabric is shredded and used for fuel in cement kilns. These projects will provide useful data for quantifying the amount of these wastes that can be reused or recycled annually.

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 and is implementing a direct action, calling for "job creation through the greater use of waste as a resource". This specific 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 to which reuse, repair, upcycling and preparing for reuse activities 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. It reduces the quantity of waste to be managed and thereby reduces the associated environmental impacts with recovery and disposal of wastes.

Policy:

C1. Establish reuse, repair, and preparing for reuse activities and networks to recirculate and extend the lifespan of items.

8.5 COMMERCE AND INDUSTRY

In addition to local authority staff assisting and providing technical support and advice to businesses in the area of resource efficiency by means of briefings and workshops, site visits and audits, the EcoMerit Programme is a partnership between local authorities, the EPA and environmental consultants, Econcertive. A number of local authorities across the region are involved with this programme, which has resulted in local businesses demonstrating savings on waste, energy and water costs while improving their environmental performance and becoming environmentally certified.

A number of local authorities within the region coordinate and host green business award ceremonies in association with their respective chamber of commerce or have specific business categories as part of overall community awards, the focus of which is rewarding organisations that demonstrate excellence in protecting the environment.

EAOs also promote resource efficiency in the business and industrial sector through the www.greenbusiness.ie website. Green Business is a free resource efficiency service and its objective is to deliver substantive resource efficiency improvements and cost savings, through waste prevention and reductions in water and energy consumption.

EAOs also promote the Green Hospitality programme and the Green Healthcare programme**.** By participating in the Green Hospitality programme, the hotel sector can make significant savings on waste, energy and water. The work involved in the Green Healthcare programme is primarily focused on the area of waste, in particular food waste, risk waste and recyclables. Eleven healthcare facilities in the EMR have benefited from participating in this programme. **Table 8-5** details the number of green hospitality award members, the number of businesses partaking in the Green Business programme and the number of hospitals/healthcare facilities that were the subject of green healthcare audits during 2013.

Table 8-5: Green Hospitality, Green Business Programme and Green Health Care, 2013

Local Authority	Green Hospitality Awards Members	Green Business Participants	Hospitals/Healthcare facilities undertook Green Healthcare Audits
Dublin Local Authorities	56	21	9
Kildare County Council	5	4	0
Laois County Council	1	0	1
Louth County Council	2	1	0
Meath County Council	4	2	0
Offaly County Council	9	4	1
Westmeath County Council	14	2	0
Wicklow County Council	3	2	0
Total	94	36	11

8.6 LOCAL AUTHORITY PREVENTION NETWORK (LAPN)

LAPN aims to build capacity among local authority staff to enable and promote waste prevention for the benefit of the region. LAPN commenced in 2010 and 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. It accomplishes this by piloting new prevention initiatives locally and/or promoting other NWPP in its areas.

The three main stakeholders involved with the network are local authorities, the EPA and the Clean Technology Centre (CTC). The EPA provides financial and promotional support to participating local authorities and the CTC is funded by the EPA to provide technical assistance and training with resource efficiency initiatives.

Training and upskilling have been a significant component of the LAPN programme. Eighteen local authority staff in this Region availed of food waste prevention training and 10 have availed of water conservation training. Ten staff also completed waste prevention FETAC level 5 training through LAPN.

The region has been an active participant in LAPD and LAPN since its inception and has participated in successful prevention and minimisation initiatives including waste prevention studies at service station delicatessens, food waste prevention initiatives and worm composting at a range of service providers including hostels, care centres, canteens and small restaurants. Other LAPN projects focused on waste minimisation, energy and water conservation in the farming and sports ground sector and food and solid waste prevention initiatives in shopping centres and town centres. The region has also been actively involved in the greening of festivals and public events.

2014 was the European Year against Food Waste and to coincide with this programme, a "waste garden" was commissioned at Bloom 2014, the main focus of which was food waste prevention. This was the national launch of the stop food waste challenge, which the region has been participating in.

With regard to a regional approach to waste prevention and reuse, the local authorities were successful with their 2014 LAPN application to host at least 12 Repair Cafés across the newly formed region. Repair Cafés teach individuals to view their possessions in a new light and to appreciate their value. They are free meetings whereby individuals learn how to repair everyday household items, for example clothes, furniture, electrical appliances and bicycles. These cafés will be held across the region during 2014 and 2015.

Figure 8-5 President Michael D Higgins and his wife Sabina at Bloom 2014

9 HOUSEHOLD WASTE

This chapter provides a comprehensive overview of the management of household waste in the EMR. The data presented is for the most part on a regional basis, with the corresponding data for individual local authorities available in the *National Waste Reports, 2010–2012* (Environmental Protection Agency, 2011–2013).

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

- Kerbside collection systems;
- Civic amenity facilities;
- Bring banks;
- Residual waste directly to landfill;
- Bulky waste collected by authorised collectors;
- Waste electrical and battery take-back schemes;
- One-off collection events; and
- Pay-to-Use (PTU) waste compactor units.

Table 9-1 details the wastes arising from the above sources in the EMR over the period 2010–2012. The flow diagram presented in **Figure 9-1** shows that household waste consists of both managed and unmanaged household waste.

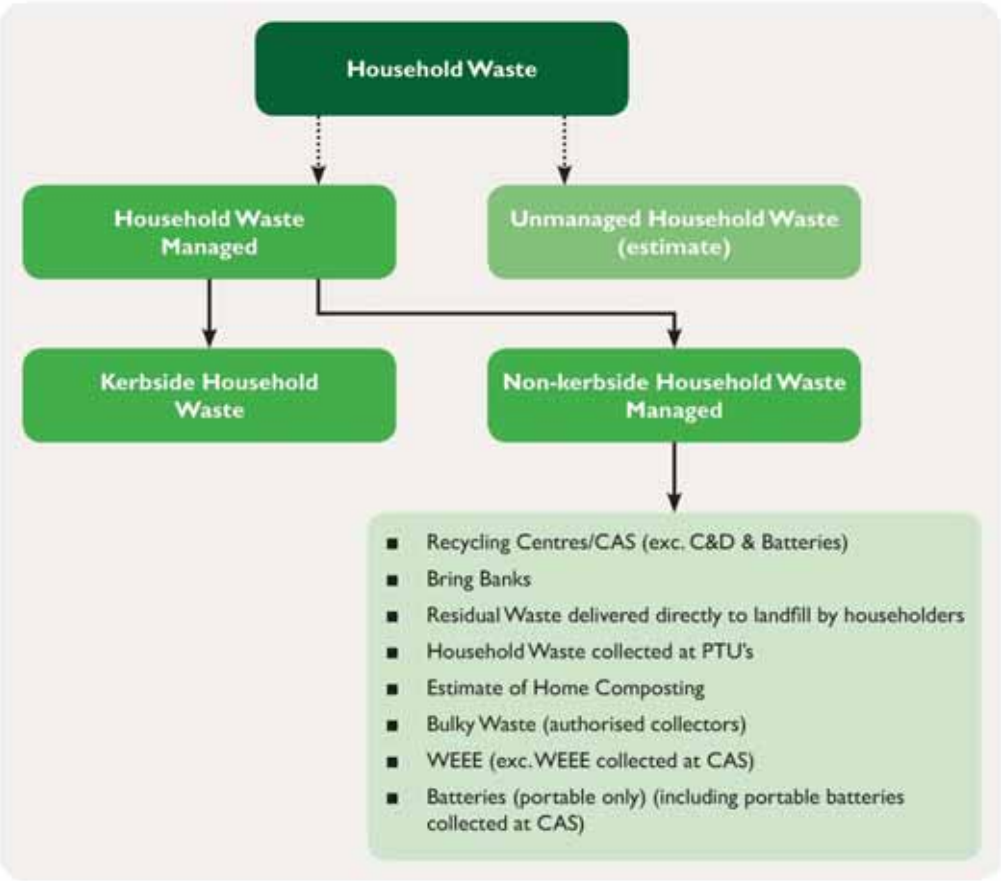


Figure 9-1 Household Waste Flow Diagram

The household waste managed (HWM) is the sum of the household waste collected at kerbside and the non-kerbside household waste. The kerbside household waste collected includes residual, mixed dry recyclables (MDR), organic and glass wastes mainly collected by authorised private collectors. The non-kerbside household waste collected includes bulky household waste collected by authorised collectors, waste brought by householders directly to landfills, PTUs, bring banks and civic amenity facilities. It also includes WEEE and batteries brought to retailers and quantities collected at collection events.

The unmanaged household waste is an estimate of the quantity of waste generated by households but not collected via one of the above collection systems. This is explored further in **Section 9.5**.

9.1 QUANTITY OF HOUSEHOLD WASTE

As presented in **Table 9-1**, 2011 was the first year that the household recovery rate (51%) exceeded the disposal rate (49%) in the EMR and this trend continued in 2012 with a 76% recovery rate and 24% disposal rate respectively for household waste managed. Increasing landfill levies, incineration of municipal waste and the export of refuse-derived fuel and baled municipal waste contributed to the diversion of waste for disposal in the region. Details of the HWM per local authority area, in the EMR, 2010-2012, are available in **Appendix C**.

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

Year	HWM[41] (tonnes)	HWM / inhabitant (tonnes)	% HWM directed to recycling / recovery	HWM - Directed to recycling / recovery per inhabitant (tonnes)	% HWM disposed	HWM - disposed / inhabitant (tonnes)
2010	715,980	0.32	47%	0.15	53%	0.17
2011	726,518	0.33	51%	0.17	49%	0.16
2012	694,441	0.31	76%	0.24	24%	0.08

9.1.1 Kerbside Household Waste Managed

Table 9-2 details the quantity of kerbside HWM collected in the EMR between 2010 and 2012. Of the HWM managed, the percentage collected at kerbside increased from 79% in 2010 to 81% 2012.

Table 9-2: Details of the Kerbside HWM in the EMR 2010–2012

Year	Kerbside HWM (tonnes)	Kerbside HWM / household served (tonnes)	Total residual kerbside household waste collected / household served (tonnes)	Total non-residual kerbside household waste collected 'Directed to Recycling' / household served (tonnes)
2010	567,608	0.86	0.59	0.27
2011	581,818	0.88	0.59	0.29
2012	560,786	0.88	0.59	0.30

[41] Includes WEEE and batteries.

The kerbside HWM collected per household served in the EMR increased slightly from 2010 to 2012, with the total residual kerbside household waste collected per household served remaining static. The quantity of non-residual kerbside household waste collected per household served increased slightly year on year during the period 2010–2012.

9.1.2 Non-Kerbside Household Waste Managed

As detailed in **Table 9-3**, the non-kerbside HWM within the EMR decreased year on year from 2010, with a 2.4% decrease recorded in 2011 and a further 8% in 2012. This decrease is due in part to a decline in the quantity of residual waste delivered directly to collection sites at landfills within the region due to the closure of a number of these facilities (refer to **Chapter 12**). The reductions may also be due to decreased levels of personal consumption. The reductions in the quantity of waste collected at bring banks and civic amenity facilities have also contributed to an overall reduction in the quantity of non-kerbside HWM collected.

Table 9-3: Details of the Non-Kerbside HWM within the EMR 2010-2012

Year	Non-Kerbside Household Waste Managed (tonnes)
2010	148,372
2011	144,700
2012	133,655

9.2 TREATMENT OF HOUSEHOLD WASTE

Figure 9-2 shows the treatment of household residual waste collected at kerbside in the EMR in 2012. As illustrated, the majority of waste streams are either source segregated and brought directly to bulking stations for onward transfer to appropriate treatment facilities or are brought directly to the treatment facility.

The treatment of household residual waste collected in the EMR in 2012 post analysis of the bulking station destinations is detailed in **Table 9-4.**

Table 9-4: Treatment of Kerbside Household Residual Waste in EMR 2012

	Quantity in EMR (tonnes)	% To Destination in EMR
Household residual waste collected	**371,158**	
Residual directly to landfill and from bulking station to landfill	143,267	39%
Residual (directed to recycling) DREC	163,310	44%
Residual directly to thermal recovery facility and from bulking station to thermal recovery facility	55,674	15%
Residual from bulking station to another waste facility (bulking or mechanical treatment facility)	9,279	2%

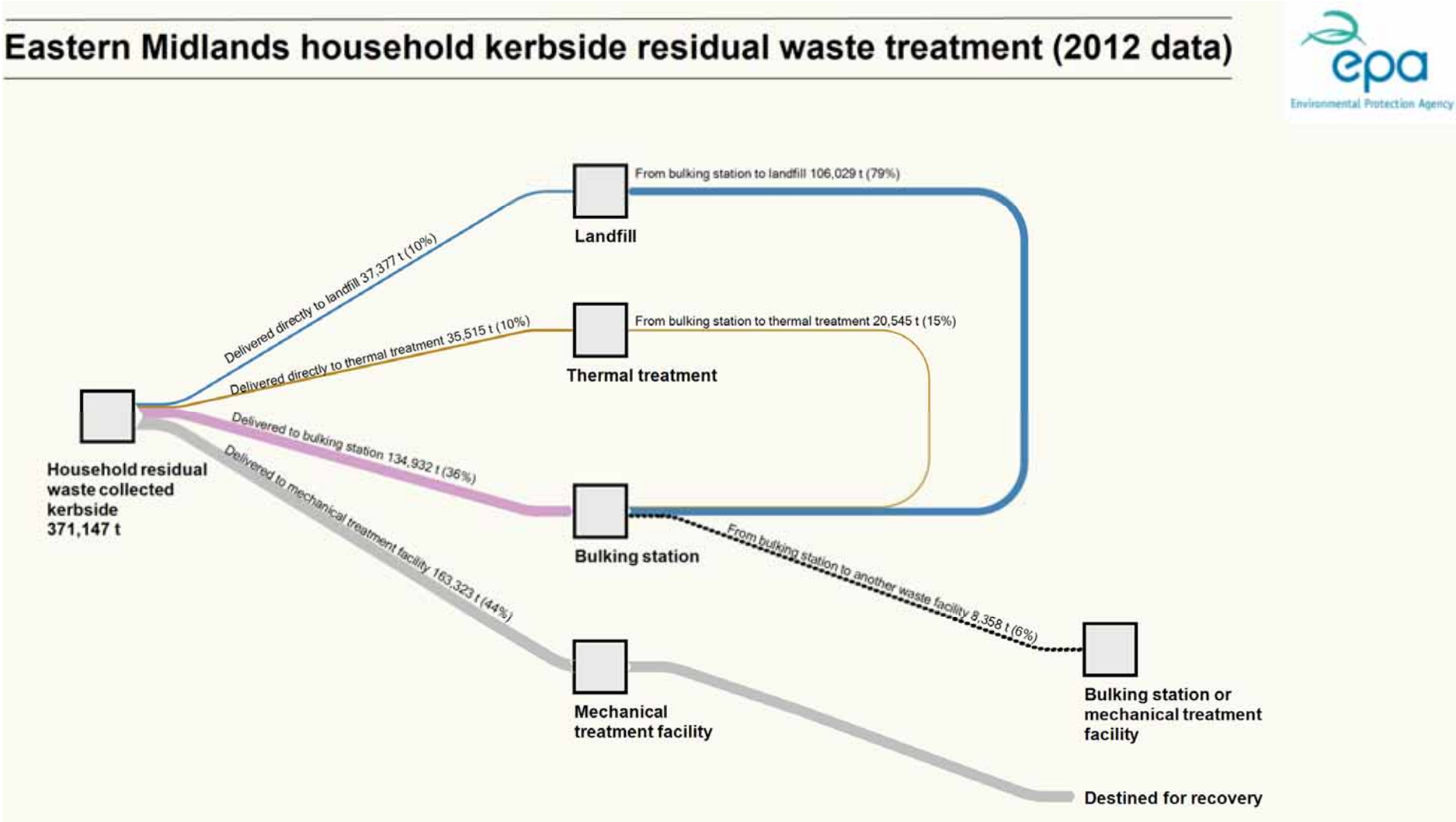


Figure 9-2 Treatment of Household Residual Waste Collected at Kerbside in EMR 2012

9.3 KERBSIDE HOUSEHOLD WASTE

9.3.1 Collection Service

Kerbside household waste collection in the EMR is operated by private operators. In 2012, the waste collection operators reported that there were 642,546 households (81%) in the region that availed of a waste collection service. While the statistics illustrate that on a Regional average, 19% of households do not have a waste collection service, in some counties that can be as high as 50% or as low as 2% (**Figure 9-3**).

The figures are in line with those reported by the EPA,[42] which estimates that approximately 28% of households in the State do not avail of a waste collection service. These figures are based on the data contained in the waste collection permit Annual Returns by authorised waste collectors to the NWCPO and rely on the accuracy of the waste operators in reporting households serviced.

Although 642,546 households are availing of a service in the region, other households are not included in this figure for a number of possible reasons, including:

- Inaccurate reporting of the number of customers/households; and
- Householders disposing of their waste at landfills; transfer stations; civic amenity facilities or PTUs.

In the EMR in 2012, 49% of households on a collection service were provided with a two-bin system for residual waste and MDR. Also in 2012, 46% of households on a collection service were provided with a three-bin system for residual waste, MDR, and organic waste. Thus, 95% have a two-bin or a three-bin service.

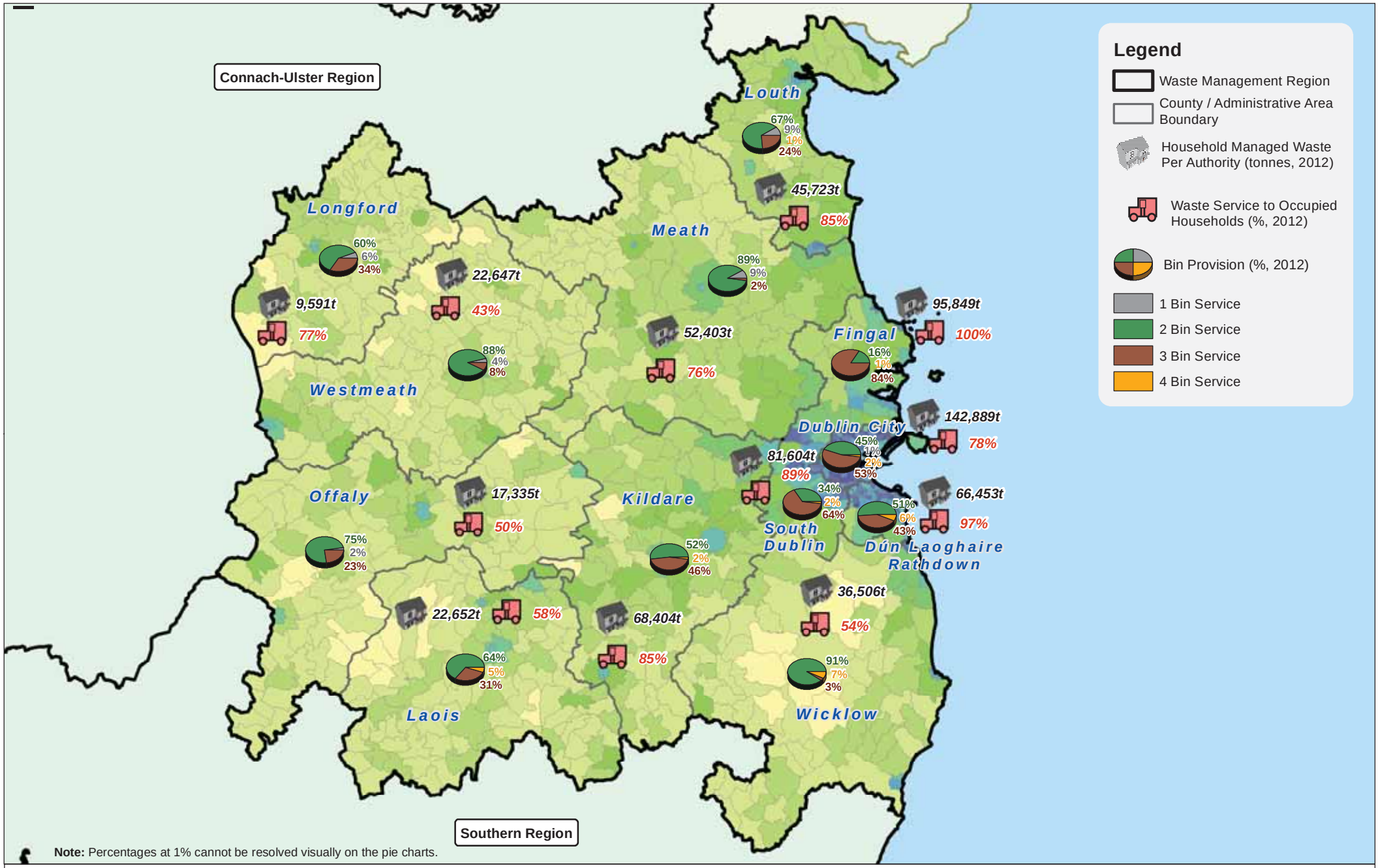
Organic waste accounted for 10% of all kerbside waste collected in the region in 2012 and MDR accounted for 24%.

While bins are the preferred receptacles for waste collection, large urban areas have encountered difficulties with the use of bags as receptacles. Bags are in use in cities where there are storage limitations. Householders availing of a bag collection service are not currently registered with the service provider as bags are usually purchased at retail outlets. This makes it difficult to estimate how many of these households avail of a paid service. It will be necessary for local authorities to engage with the service providers to ensure that householders availing of a bag services are registered to the service provider and have a waste collection service in place.

Policy

The kerbside collection service in the region captures the highest 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 is part of a reliable and cost-effective three-bin system. Local authorities will work with householders 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.

[42] National Waste Report 2012, Environmental Protection Agency, 2014.



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

Regional Waste Plans, SEA and AA

File Ref: MDR0998Arc0019F01

Figure 9-3 Waste Services in the Easten-Midlands Region

RPS

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.

9.3.2 Collection Charges and Customer Charters

All authorised household waste collectors within the region have been issued a WCP in accordance with the Waste Management (Collection Permit) Regulations 2007 and Waste Management (Collection Permit) Amendment Regulations 2008, with the exception of local authority operated collection services (only Dublin City and Dún Laoghaire-Rathdown reported collecting household waste at kerbside during 2012).

The WCPs have specific conditions in relation to the charging mechanism for household customers and the type of bins to be provided. In relation to the charging mechanism for household customers, the WCP requires 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 the bins.

While there are no charges for the use of bring banks, there are charges at the civic amenity sites and landfills which vary depending on the waste types collected. Some sites within the region accept segregated recyclables free of charge while at others a charge is applied. Residual waste is accepted at some of the civic amenity sites and is generally charged on a per bag/per vehicle basis. A number of the recycling centres also accept bulky waste items and a charge generally applies.

9.3.3 Residual Waste

Although household waste collectors are required to provide all householders with a minimum two-bin collection service, 2% of householders were offered a residual collection service only in the EMR in 2012.

Table 9-5: Residual Kerbside Household Waste Collected in EMR 2010–2012

Year	Residual kerbside household waste collected (tonnes)	Residual kerbside household waste collected / household served (tonnes)
2010	390,922	0.59
2011	387,878	0.59
2012	371,158	0.59

As presented in **Table 9-5**, the residual kerbside household waste collected in the EMR decreased slightly each year from 2010 to 2012. This slight decrease led to residual waste collected per household served remaining static from 2010 to 2012.

9.3.4 Mixed Dry Recyclables (MDR) Waste

As detailed in **Table 9-6,** the quantity of MDR collected in the region decreased by 3.2% in 2012 compared to 2011; the quantity of MDR waste collected per household served remained static between 2011 and 2012.

Table 9-6: Kerbside MDR Collected in the EMR 2010 - 2012

Year	MDR kerbside household waste collected (tonnes)	MDR kerbside household waste collected / household served (tonnes)
2010	132,340	0.20
2011	138,889	0.21
2012	134,366	0.21

9.3.5 Organic Waste

On a phased basis, household waste collectors must provide an organic waste bin to all householders. The roll-out of the organic waste bin must comply with the European Union (Household Food Waste and Bio-waste) Regulations 2013 which specify a phased roll-out, based on agglomeration sizes. In accordance with the regulations organic waste bins will be rolled out to the majority of towns and villages within the EMR by July 2016. It is anticipated that tonnages will increase year on year with the implementation of the regulation.

Table 9-7: Organic Kerbside Household Waste Collected in EMR 2010–2012

Year	Organic kerbside household waste collected (tonnes)	Organic kerbside household waste collected / household served (tonnes)
2010	43,959	0.02
2011	54,755	0.08
2012	54,647	0.09

Organic household waste collected in the EMR increased by 24% from 2010 to 2011 but decreased slightly from 2011 to 2012. Due to the phased rollout of the organic bin over the period 2010–2012 the quantities per household served are likely to be an underestimate of the total quantity of organic waste generated per household as they do not account for some composting and non-segregation of organic waste that remains in the residual bin.

9.3.6 Glass

Waste service providers in eight local authority areas have provided a fourth bin for the collection of source-segregated kerbside glass. This service is normally provided only in larger urban areas. In 2012, waste collectors were required to report on the number of households who were provided with a separate glass collection service. The quantity of kerbside segregated glass collected within the region increased in 2012 compared to the preceding year. Overall quantities are low, possibly because the region has a comprehensive bottle bank network.

Table 9-8: Kerbside Household Glass Collected in the EMR 2010–2012

Year	Kerbside household glass collected (tonnes)
2010	387
2011	296
2012	615

9.4 NON-KERBSIDE HOUSEHOLD WASTE

9.4.1 Civic amenity sites

Civic amenity sites are classed as either "recovery" or "recovery/disposal" facilities. In 2012, there were 34 civic amenity sites in the EMR, which equates to an average of 0.08 sites per 5,000 inhabitants. The total number of civic amenity sites and the quantity of waste collected throughout 2010 to 2012 are detailed in **Table 9-9.**

Table 9-9: Number of Civic Amenity Sites and Quantity of Waste Collected in EMR 2010–2012

Year	Number of civic amenity sites	Number of civic amenity sites per 5,000 inhabitants	Waste collected (tonnes)	Waste collected (tonnes) per inhabitant
2010	31	0.07	73,057	0.03
2011	34	0.08	61,991	0.03
2012	34	0.08	62,273	0.03

The tonnage of household waste collected at civic amenity sites accounted for approximately 9% of the HWM in 2012. Civic amenity sites have contributed significantly to the overall household recycling rate in recent years. It is assumed that a small quantity of commercial waste is included in the above materials captured in this system.

9.4.2 Bring Bank Network

Bring banks are unmanned, fixed receptacles used for the collection of non-hazardous, dry recyclables such as segregated glass (clear, brown and green), ferrous and non-ferrous metals and textiles. Bring banks are classified as "recovery" facilities.

Table 9-10: Bring Banks in the EMR 2010–2012

Year	Number of bring banks	Number of bring banks per 5,000 inhabitants	Waste collected (tonnes)	Waste collected (tonnes) per inhabitant
2010	673	1.52	36,773	0.02
2011	651	1.47	37,184	0.02
2012	618	1.4	36,092	0.02

The number of bring banks in the EMR has decreased year on year since 2010. Problems with illegal dumping, public complaints, antisocial behaviour and other local issues have resulted in the removal

of banks from certain sites. The tonnage of household waste collected at bring banks accounted for approximately 5.1% of the HWM in 2012 and 0.02 t of waste collected per inhabitant. It is assumed that a small quantity of commercial waste is included in the above materials captured in this system.

9.4.3 PTUs

Pay-to-Use waste compactor units (PTUs) are designed as a means of disposal for household residual waste only. There are two PTUs located in the EMR and an estimated 123 tonnes of household residual waste was disposed in these units in 2014. PTUs can accept approximately two large plastic bags of waste per use, with householders accessing the unit by purchasing a unique code from an adjacent retail facility. Changes in the existing regulatory structure will see the requirement for PTU operators to comply with the proposed household waste collection Regulations.

9.4.4 Non-Kerbside Organic Waste

In addition to kerbside collection, a number of civic amenity facilities within the region collect organic waste, primarily garden organics.

Table 9-11: Household Organic Waste Collected at Civic Amenity Sites in the EMR 2010–2012

Year	Quantity (tonnes) - household organic waste
2010	15,414
2011	11,796
2012	12,408

9.4.5 Bulky Waste

Bulky waste items, for example household/garden furniture, are items generally too large to be accommodated in a standard 240l wheeled bin. Bulky waste is collected by authorised waste collectors and quantities collected are reported as part of the Annual Returns. A number of the civic amenity sites within the region also accept bulky waste, and a charge per vehicle size or material weight is applied.

Table 9-12: Quantity of Household Bulky Waste Collected in the EMR 2010–2012

	2010	2011	2012
Household bulky waste collected, authorised collectors (tonnes)	24,493	32,995	26,054
Household bulky waste collected at Civic Amenity Facilities (tonnes)	10,890	10,745	9,971
Total Household bulky waste collected (tonnes)	**35,383**	**43,740**	**36,025**

The quantity of household bulky waste collected by authorised collectors increased by 35% in 2011 compared to 2010, with a decrease of 17% reported for 2012. For the purpose of estimating the quantity of HWM directed to recycling/recovery and quantity disposed, it was assumed that collected bulky waste consisted of 7.6% mixed waste, i.e. waste sent for disposal, with the remaining 92.4% sent for recycling/recovery. This assumption is in accordance with the findings of the *All Island Bulky Waste Reuse Best Practice Management Feasibility Study* (RX3, 2013).

9.4.6 Household WEEE

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

The quantity of household WEEE is collected through compliance scheme collection points in the EMR. In 2012, the 340 retailer collection points collected on average 25 tonnes per point whereas the 39 civic amenity sites collected on average 173 tonnes per site. As stated in **Section 7.3.2**, this data does not include an estimate of WEEE segregated from skips and similar sources. The civic amenity sites therefore play an important role in the collection of WEEE across the region.

Table 9-13 Quantity of Household WEEE collected in the EMR 2010 - 2012

	2010	2011	2012
Number of retailer collection points	341	368	340
Quantity of household WEEE collected at retailers (t)	8,524	8,290	8,351
Number of civic amenity facility collection points	39	39	39
Quantity of household WEEE collected at civic amenity sites (t)	8,037	6,587	6,752
Number of one-off collection days	52	75	88
Quantity of household WEEE collected at one-off collection events (t)	1,102	1,205	1,262

9.4.7 Batteries

The quantities of portable and non-portable batteries collected in the EMR are detailed in **Table 9-14.** The quantity of portable batteries has risen year on year, with a 15% increase reported in 2012 compared to 2011. As stated in **Section 7.3.2**, nationally there is 140 tonnes of portable lead acid batteries collected by the compliance schemes which cannot be broken down per region. The quantity of non-portable batteries also increased from 2010 to 2011, with only a 9% decrease recorded for 2012.

Table 9-14: Quantity of Batteries Collected in the EMR 2010–2012

	2010	2011	2012
Portable batteries collected (t)	169	201	232
Portable batteries collected per inhabitant (g)	76	90	105
Non-portable batteries collected (t)	2,299	7,912	7,194

9.4.8 Household Hazardous Waste

Common household hazardous waste types include:

- WEEE, including hazardous WEEE;
- Batteries, including hazardous batteries;
- Paints, thinners, adhesives and wood preservatives;

- Aerosol cans, out of date medicines;
- Fluorescent tubes, lamps and lightbulbs; and
- Waste mineral oils.

Most civic amenity sites within the EMR accept common household hazardous waste types. Quantities of common household hazardous wastes collected in the EMR are referenced in **Table 9-15**.

In addition to the hazardous waste collected at civic amenity sites, WEEE and batteries are also collected at retail premises and one-off collection events. Details are provided in **Sections 9.4.6** and **9.4.7.**

Table 9-15: Tonnes of Household Hazardous Waste Collected at CAS in the EMR 2010–2012

Year	Batteries [43]	Waste mineral oils & filters	Paint & varnish[44]	WEEE	Household hazardous	Other[45]	Total (exc batteries)
2010	236	143	526	8,037	35	72	**9049**
2011	126	132	823	6,587	145	98	**7,911**
2012	150	138	696	6,751	64	45	**7,844**

9.5 UNMANAGED HOUSEHOLD WASTE

Unmanaged household waste is waste that is generated by households but is not collected via kerbside or non-kerbside. This plan used the EPA's calculation method to estimate the quantity of unmanaged household waste presented in **Table 9-16**. Details of this calculation are provided in Appendix M of the EPA's national report.[42]

Table 9-16 Estimate of Unmanaged Household Waste in the EMR 2012

Year	Unmanaged Household Waste (estimate) tonnes
2012	63,333

The estimated quantity of unmanaged household waste in 2012 of 63,333 tonnes, accounts for approximately 9% of the household waste generated.

It is anticipated that 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.

[43] 80% of which (in t) are lead acid.
[44] Paints, thinners, wood preservatives & adhesives.
[45] Other = tyres, aerosols, gas cylinders, books, miscellaneous recyclables, fluorescent tubes, lamps and lightbulbs, etc.

Policy

Unmanaged waste remains a problem in the region which the local authorities intend to address 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 need to be addressed, and over the period of 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.

10 MUNICIPAL SOLID WASTE AND BIODEGRADABLE MUNICIPAL WASTE

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

10.1 MSW MANAGED

The definition of municipal solid waste (MSW) in Ireland is broad. As highlighted in **Figure 10-1**, it comprises wastes from households, municipal sweepings and parks, as well as from the commercial and services sector (shops, offices), including non-process industrial wastes. These waste types are comparable in nature and are managed through similar treatment processes. MSW does not include municipal waste-water treatment sludges or effluents.

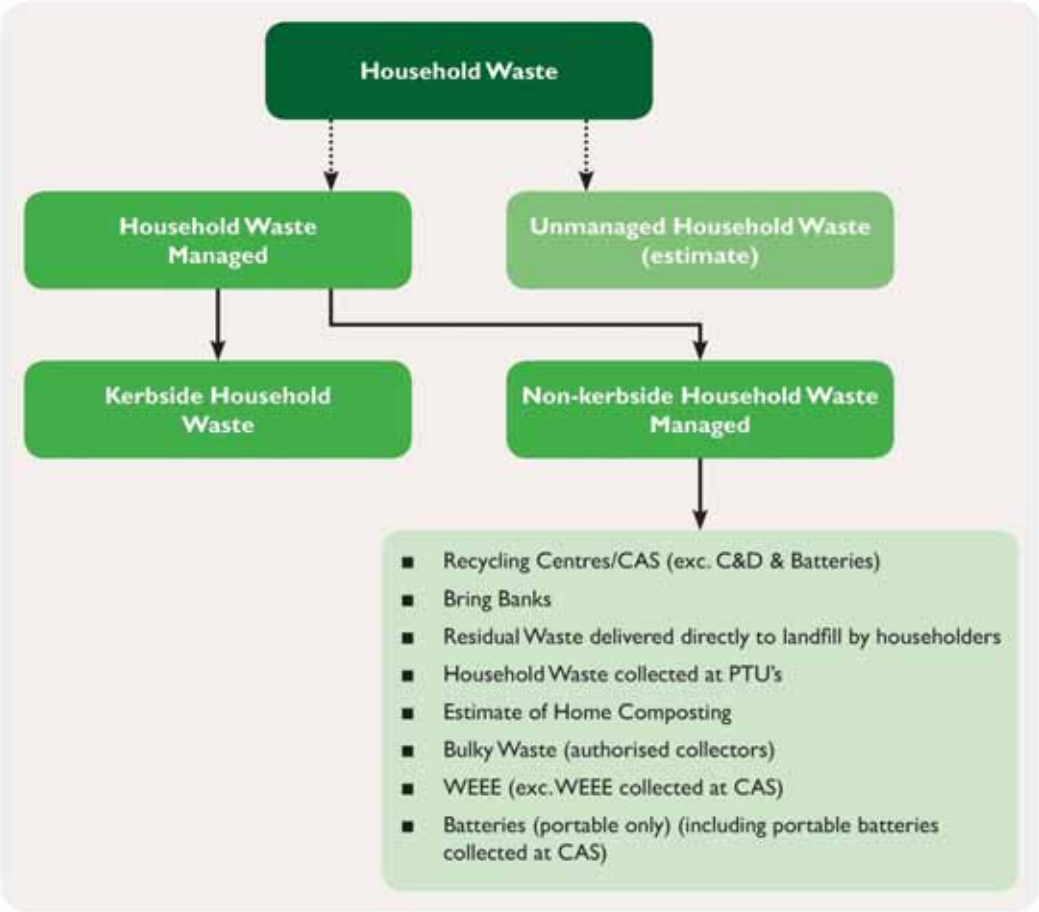


Figure 10-1 Municipal Solid Waste Flow Diagram

The quantity of MSW managed in the EMR in 2012 was 1,298,239 tonnes. Nationally the quantity of MSW managed has decreased since a peak in 2007 and this trend continued in 2012, with a 3% decrease in tonnage managed compared to 2011. This decrease is linked to a decrease in personal consumption as the economy contracted despite an increase in population over the same time period.

Table 10-1: MSW Managed in the EMR, 2012

	2012
EMR-MSW managed (tonnes)	1,298,239
EMR - MSW managed/inhabitant (tonnes)	0.59
National - MSW managed/inhabitant (tonnes)	**0.54**

The EPA'S report[46] provides national percentage rates which have been applied to quantify the tonnage of MSW recovered and disposed of in the region (see **Figure 9-2**). This percentage takes the following into account: the point of final treatment within the state or at the point of export for treatment, i.e. landfill, incineration/energy recovery, composting/digestion, and material recycling.

10.2 MSW RECOVERED

The percentage of MSW recovered in the EMR in 2012 is detailed in **Table 10-2.** This is the first year the percentage of MSW recovered in the EMR (59%) exceeded the percentage managed for disposal (41%).

Table 10-2: MSW Recovered in the EMR 2012

MSW Recovered	2012
MSW managed recovered	765,961 tonnes
MSW managed recovered	0.348 tonnes/inhabitant
% MSW managed recovered	59%

10.3 MSW DISPOSED

The EU Sustainable Development Indicator on municipal waste groups MSW disposal activities as (i) landfilling and (ii) incineration/disposal (i.e. incineration without energy recovery, D10). **Table 10-3** details the MSW managed and sent for disposal in the EMR in 2012.

Table 10-3: MSW Disposed in the EMR 2012

MSW Disposed	2012
MSW disposed	532,278 tonnes
MSW disposed	0.242 tonnes/inhabitant
% MSW disposed	41%

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

Since 2010, MSW managed and sent for disposal in the region has been decreasing. A number of key factors are driving the diversion of MSW from landfill and thereby increasing the recovery of this waste type:

- The decreasing number of landfills accepting MSW within the country;
- Legal requirements, e.g. food waste regulations, to divert biodegradable municipal waste (BMW) from disposal to landfill under the Landfill Directive targets;
- Increases in the landfill levy in recent years;
- The development of alternative treatment options such as incineration and the production of refuse derived/solid recovered fuel; and
- The use of waste as a fuel at cement kilns is taking on an increasingly significant role.

The number of landfills in the EMR accepting MSW for disposal decreased from 11 in 2010 to 7 in 2012, this has since reduced to 3 (Drehid, Ballynagran and Knockharley) by March 2015. It should be noted that quantities of MSW accepted to landfills may not have been generated in the EMR. The EPA reported[47] higher quantities of MSW accepted to landfills in the region compared to quantities managed and sent for disposal, as detailed above.

The breakdown of waste accepted at landfills in the region by waste type and tonnage disposed is detailed in **Figure 13-2** which shows that MSW is the most significant stream landfilled.

The Landfill Directive (1999/31/EC) and Waste Framework Directive (2008/98/EC) set out measures to progressively divert and reduce the amount of biodegradable municipal waste sent to landfill by 2016. **Table 10-4** details the percentage of BMW in the MSW delivered to landfills in the EMR during the period 2010 to 2012. The reported national percentage of BMW in MSW delivered to landfills is also presented.

Table 10-4: Percentage of BMW in MSW Disposed to Landfill, 2010–2012

	2010	2011	2012
EMR-% BMW in MSW	58%	57%	56%
National-% BMW in MSW	58%	57%	54%

The percentage of BMW in the MSW landfilled in the EMR has decreased year on year since first quantified in 2010. There was a decrease from 2011 to 2012, which is consistent with the national trend.

The increased landfill levy in recent years and the economic downturn have both significantly influenced the percentage of BMW content in MSW landfilled. Pre-treatment of commercial and household food and garden waste has been enhanced by the introduction of separate kerbside collections. However, meeting the 2016 target is at risk, particularly should economic recovery lead to increased generation of MSW.

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

10.4 NON-HOUSEHOLD MUNICIPAL (COMMERCIAL) WASTE MANAGEMENT

Non-household municipal waste, hereafter referred to as commercial waste, is waste derived from premises used for the purposes of a trade, business, sport, recreation, education, health or entertainment. It also includes non-process industrial waste, i.e. from factory canteens, offices, etc.

The managed national commercial waste figure published by the EPA is calculated from the quantities delivered for final treatment within the State or at the point of export for treatment. To estimate the quantity of this stream managed within the EMR, figures were calculated by multiplying the percentage of this stream collected by the quantity of this stream managed nationally. The quantity recovered and disposed was calculated using the relevant national percentage recovery and disposal rates.

Table 10-5: Commercial Waste Collected in the EMR 2012

	2012
Commercial waste managed (t)	568,873
Commercial waste managed per inhabitant (t)	0.257
National-Commercial waste managed per inhabitant (t)	0.243
Commercial waste recovered (t)	347,013
Commercial waste recovered per inhabitant (t)	0.157
Commercial waste recovery rate for commercial waste managed	61%
Commercial municipal waste disposed (t)	221,860
Commercial waste disposed per inhabitant (t)	0.100
Disposal rate for managed commercial waste	39%

The managed commercial waste recovery rate was recorded at 61% for 2012. The disposal rate shows a corresponding decrease which was due to the increased energy recovery of residual waste and mechanical treatment destined for recovery.

10.4.1 Commercial Organic Waste Managed

The introduction of the Waste Management (Food Waste) Regulations in 2009 promoted the segregation and beneficial use of food waste arising in the commercial sector. In particular, the regulations facilitated the achievement of the targets set out in Landfill Directive (99/31/EC) by directing source-segregated food waste to composting and biogas plants and to other forms of treatment (other than incineration).

Within the EMR there has been a slight decrease in the tonnage of commercial organic waste collected since 2010, despite the legislation requiring its segregation. By contrast, the quantity of commercial residual waste collected over the same period increased significantly. This may reflect treatment of organics extracted during SRF production.

Table 10-6: Commercial Organic Waste Collected, 2010–2012 (t)

	2010	2011	2012
Source segregated commercial organic waste collected	62,898	60,002	57,604
Source segregated organic waste collected per inhabitant	0.0285	0.0272	0.0261
kitchen and canteen waste (EWC 20 01 08) fraction (Of source segregated commercial organic waste above)	34,735	30,282	27,495
Source segregated kitchen and canteen waste (EWC 20 01 08) collected per inhabitant	0.016	0.014	0.012
Waste residual waste collected	78,403	75,762	194,962

Despite the requirement to provide and to use a source-segregated organic waste collection service, EPA characterisation surveys have found significant quantities of BMW in the residual bin even where a three-bin service is provided.[48] This BMW fraction in the residual waste is either disposed or recovered along with the residual waste.

10.5 MUNICIPAL SWEEPINGS AND PARKS

Municipal sweepings and parks waste comprises street cleansing waste, the content of street bins, park and garden waste, cemetery maintenance waste and litter campaign material. **Table 10-7** details the municipal sweepings and parks waste collected within the EMR from 2010 to 2012.

Table 10-7: Tonnes Municipal Sweepings and Parks Waste, 2010–2012

	2010	2011	2012
Municipal sweepings and parks waste collected	10,333	43,902	34,925

The total quantity of municipal sweepings and parks waste collected increased in 2011 and fell in 2012. The local authority areas within Dublin, and in particular Dublin City Council, account for the largest tonnage of municipal sweepings and parks waste within the region. This can be directly related to footfall arising from the tourism industry and sporting and other major entertainment events.

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

11 PACKAGING WASTE AND OTHER PRIORITY WASTE STREAMS

11.1 PACKAGING WASTE

Table 11-1 provides an estimate of the packaging waste managed in the EMR 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 increased between 2010 and 2011 but decreased again in 2012.

The national recovery rate 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 EMR 2010–2012

Year	Managed (tonnes)	Managed (tonnes/inhabitant)
2010	475,043	0.215
2011	544,066	0.246
2012	469,511	0.212

11.1.1 Collection and recovery system

Packaging waste is collected for recovery via two collection routes: kerbside (commercial 62% and household 23%) and civic amenity sites/bring sites (15%).[49] 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 taking place within Ireland.[50] Packaging waste from the processing of municipal residual waste and contaminated packaging from the MDR fraction is being processed into Refuse-Derived Fuel (RDF) 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;

[49] Repak 2012.
[50] 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 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 for 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 it is the national body responsible for achieving the national targets. In 2014, Repak reported[51] that it had 2120 members, with a loss of 122 members in 2013. In 2011, Repak members accounted for 95% (DECLG, 2014) of the compliant obligated producers (Repak members and self-compliers).

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

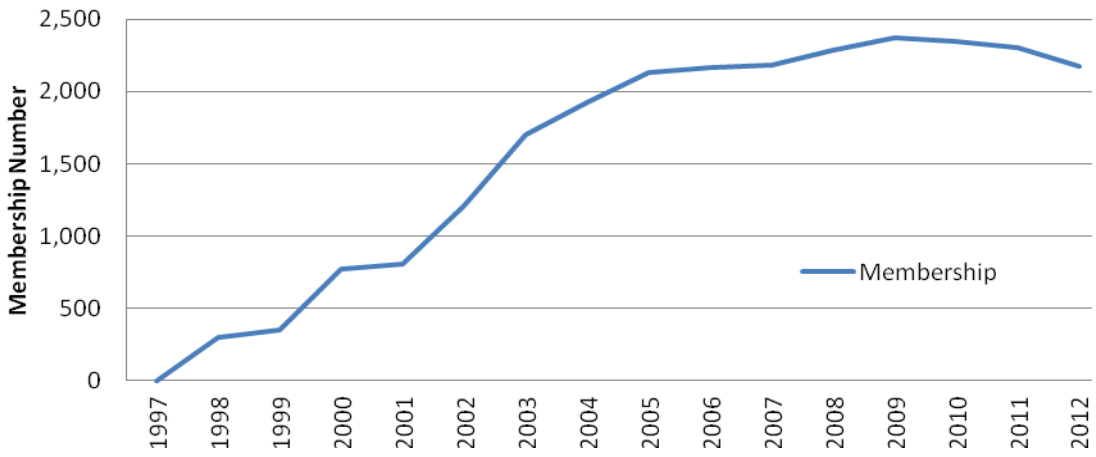


Figure 11-1: Evolution of Repak Membership 1997–2012[52]

Repak operates the Repak Payment Scheme of subsidy payments to fund the recovery of waste packaging that is sourced by service providers. Rates are agreed between Repak and the waste management industry (based on the material type and source, recovery activity for that material,

[51] Forward Together, Annual Report 2013–2014, Repak (2014).
[52] Review of Producer Responsibility Initiative Model in Ireland, DECLG (2014).

landfill levy, the market value of that material and the recycling and recovery target that Repak is committed to meet).

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 RDF. Subsidies for over 87,000 tonnes of RDF were funded by Repak from contaminated paper and plastic, which would have traditionally gone to landfill, an increase of 56% in 2012 versus the previous year.[52]

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 136 self-compliers registered with the local authorities (representing 186 unique producers). Eighty-five of these self-compliers were located in the EMR, representing 98 premises (refer to **Table 11-2**).

Table 11-2: Packaging Self-Compliers Registered in the EMR 2010–2012[50]

Year	No. of self-compliers	No. of premises
2010	90	103
2011	91	103
2012	85	98
2012 Data	**No. of self-compliers**	**No. of premises**
Dublin City Council	17	20
Dún Laoghaire Rathdown County Council	7	8
Fingal County Council	17	17
Kildare County Council	2	3
Laois County Council	1	1
Longford County Council	3	3
Louth County Council	5	6
Meath County Council	6	7
Offaly County Council	1	3
South Dublin County Council	24	24
Westmeath County Council	1	4
Wicklow County Council	1	2

From 2011 to 2012, the number of self-compliers reduced slightly from 91 to 85. In 2012, the self-compliers in the EMR placed 18,818 tonnes of packaging on the market and subsequently recovered

3,804 tonnes of packaging waste (20%).[53] However, the EPA noted that local authorities reported that a small number of self-complying producers failed to provide their full 2012 packaging recovered data in quarterly reports, therefore the packaging recovered tonnage is an incomplete dataset. In contrast to 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 packaging at their premises and packaging waste from the public regardless of where it is purchased. However, as most self-compliers do not take enough packaging waste from the public, they have to purchase packaging waste recovery evidence from waste operators to make up the difference to achieve the targets.

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

11.1.4 Progress against Packaging Waste Targets

Ireland has met and exceeded the recovery and recycling targets for packaging waste set by the EU Packaging Waste Directive for 2011.[50] The success in achieving the targets is due to a combination of measures:[52]

- 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 to raise the profile of waste including packaging waste which helps 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.

[53] Data provided by the EPA (August 2014).

Table 11-3: Local Authority Packaging Producer Responsibility Inspections 2007–2011[52]

Year	2007	2008	2009	2010	2011
No. of Inspections	3,104	2,034	2,244	813	1,187[54]

Repak indicates that 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.[52]

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

11.1.6 Future Activities

The DECLG undertook 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

[54] Not validated by the EPA.

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[52] published as an outcome of the review a list of recommendations for consideration. Many of these will impact on specific activities of the local authorities during the life time of this plan such as enforcement. The following recommendations from the report are relevant:

- Examining how the self-complier reporting system needs improvement, including examining how the existing system can be used to assess distance to targets and allow for financial compensation if the targets are not met;
- Reviewing the fees paid by self-compliers to provide a level playing field between large self-compliers, small self-compliers and compliance scheme members; 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 future targets are attained, the local authorities must assist DECLG in improving the self-complier reporting system and increase enforcement activities on non-compliant packaging producers.

11.2 CONSTRUCTION AND DEMOLITION 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 only a small percentage collected at civic amenity facilities. **Table 11-4** details the quantity of C&D waste collected in the EMR during the period 2010–2012.

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

	2010 (tonnes)	2011 (tonnes)	2012 (tonnes)
Soil and stone waste collected	1,734,377	1,358,080	1,328,875
Contaminated soils collected	4,214	6,594	13,133
C&D waste collected	2,343,868	2,054,939	1,910,887

Nationally the quantities of C&D waste managed peaked in 2007 and decreased year on year during the period 2007–2011, mirroring the national economic downturn. The EPA's report[50] 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 EMR during the period 2010 to 2012, where the total C&D waste collected reduced by 3% and the soil and stone waste collected reduced by 10%. There were signs of recovery

in the C&D sector in the region in 2012, where the total C&D waste collected increased by 8% and the soil and stone waste collected increased by 13%, when compared to 2011. The commencement of a number of significant construction projects has impacted on the increased quantities of C&D waste collected.

11.2.2 Management of Construction and Demolition Waste in the Region

Figure 11-3 shows that the bulk of the C&D waste collected is waste materials such as rubble, metals, timber, plastic, glass, wood, contaminated soils and mixed C&D waste, accounting for approximately 59% of all C&D waste collected with the remaining 41% consisting of soil and stones.

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

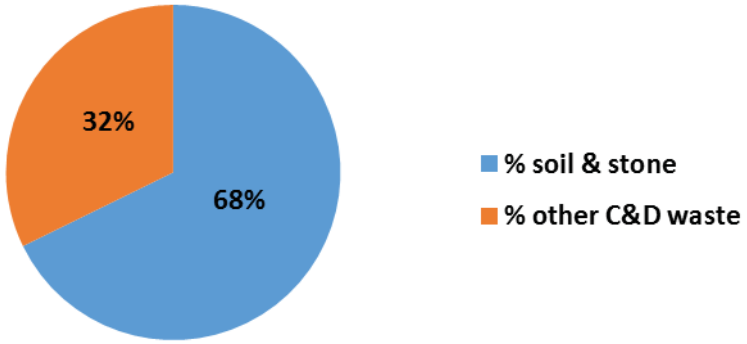


Figure 11-3 C&D Wastes Collected in the Eastern-Midlands Region in 2012

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 an increasing recognition of the potential ecological and biodiversity value of these wetland sites. There is also a sense that at many of these sites, the deposition of waste material rather than improvement or development of the land was the primary purpose of the activity.

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 indeed best 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[50] that Ireland has achieved this target, with a recovery rate of 97% being reported. Backfilling activities account for a significant portion of the recovery rate, with recycling of C&D wastes not as prevalent. The quantification of the different treatment options for C&D wastes is important to show if higher recovery activities, i.e. preparing for reuse and recycling, are growing.

11.2.4 C&D Waste Data & Classification

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

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

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

11.2.5 Future Activities

There is significant potential for recycling of the C&D waste stream given the nature of 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.

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

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

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.

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.

11.3 WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

Two compliance schemes have been approved by the Minister for the Environment, Community and Local Government to manage the collection, recovery and recycling of WEEE: WEEE Ireland and European Recycling Platform (ERP). The schemes must report annually to the DECLG, and demonstrate achievement of the European targets for collection and recovery of WEEE. Companies considered to be a producer of electrical and electronic equipment (EEE) also have the option to become “self-compliant”. This involves rigorous reporting obligations to the WEEE Register Society, arranging and financing for free “take-back”, as well as a number of technical requirements in accordance with the Regulations.

A system for the free "take-back" of WEEE from the household waste stream is well established through retail outlets, civic amenity sites and one-off collection events in the EMR. In 2012, WEEE generated by households was accepted at 39 civic amenity sites, the majority of which are operated by local authorities.

Non-household end-users of EEE are also provided with free take-back through the distributors and/or producers of EEE in the region. A number of private companies collect and manage WEEE from commercial and industrial activities.

11.4 BATTERIES AND ACCUMULATORS

WEEE Ireland and ERP are the approved compliance schemes for batteries and accumulators. Producers must finance the environmentally sound management of waste batteries by joining either one of the compliance schemes or by self-compliance. Self-complying producers must submit waste management reports and plans on batteries and accumulators to the EPA annually.

Portable batteries and accumulators are collected for recovery and recycling via the retailer and civic amenity network throughout the region. Portable and automotive (car only) batteries are accepted at 39 civic amenity sites. A number of private companies collect non-portable batteries and accumulators from the commercial and industrial sector in the region. These include a variety of battery types such as those in trucks, electric vehicles, golf buggies and boats.

In accordance with the Batteries Directive (2006/66/EC) a minimum 25% collection rate for batteries and accumulators was set for the end of 2011, with this figure increasing to 45% by September 2016. According to the EPA[50] Ireland has achieved the 2011 target but is at risk of falling to meet the 2016 target as the 2012 national collection rate is reported at 28%. This EU target applies to portable batteries only.

11.5 WASTE TYRES

The Central Statistics Office indicated that in 2012 approximately 3 million tyres were imported for supply in Ireland, which equates to approximately 24,000 tonnes of tyres. The EPA reported[50] that approximately 24,165 tonnes of waste tyres were managed in the state in 2012.

While waste tyres are not classified as hazardous waste, they can cause environmental pollution if disposed of incorrectly or irresponsibly. Stockpiles of tyres may cause environmental pollution due to the potential for uncontrolled fires to occur and the subsequent emission of toxins which are detrimental to both humans and animals.

The 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. In November 2014, TRACS was the only compliance scheme operating in the State.

Table 11.5 details the quantity of waste tyres collected by authorised collectors within the EMR for the period 2010 to 2012. The details were obtained from the WCP AER returns to the NWCPO.

Table 11-5: Quantity of Waste Tyres Collected by Authorised Collectors in the EMR 2010–2012

	2010	2011	2012
Quantity of waste tyres collected (t)	9801	12,689	10,374

According to the EPA[50] in 2012, approximately 40% of the total managed waste tyres in Ireland were exported, with the majority used as fuel (33%). The main treatment activity in the State in 2012 was the crumbing of waste tyres for conversion into saleable products (41% of the total managed waste tyres in Ireland).

11.6 END-OF-LIFE VEHICLES (ELVS)

Unlike the legislation for other compliance schemes such as packaging and WEEE, the ELV Regulations do not make provision for an approved body or compliance scheme. Therefore the responsibility for compliance with the legislation rests with each individual vehicle importer. However, in 2012 the producers' trade association, SIMI, indicated that it had submitted to the DECLG a proposal for the establishment of an ELV compliance scheme to improve target achievement, which will be funded by SIMI members.

An estimated 29,182 tonnes of ELVs was managed in 2012, a 14% increase compared to 2010 and 2011 estimates.

There are 29 facilities permitted to recover and dismantle end-of-life vehicles in 2014 in the EMR. The only permitted shredding facility in the EMR is located at Hammond Lane Metal Company, Ringsend, Dublin 4. At this facility, the metal is shredded and processed prior to export.

Following publication of its producer responsibility review,[52] the DECLG established a working group on ELVs. The role of the Working Group is to examine the recommendations set out in the final report on ELVs and to assist the Department in the drafting of any new regulations. The Working Group is also involved in facilitating the further development of a compliance scheme for the sector.

12 PRE-TREATMENT AND RECOVERY INFRASTRUCTURE

This chapter provides details on pre-treatment and recovery infrastructure in place in the EMR. 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 by either 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 the local authorities and the EPA are given in **Appendix D** and **Appendix 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[55] 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 new Regional waste plans. During the preparation of the plans, the local authorities spent considerable time developing a baseline of treatment capacities for the purpose of regional waste management planning. This data has been compiled using information[56] provided by each local authority and, for the first time, a detailed analysis of local and national capacities and activities has been undertaken.

12.1.1 Facilities and Treatment Capacities in the Region

Figure 12-1 provides details of all local authority authorised facilities in the region. The figure shows the distribution of WFP and CoR facilities and the scale of capacity authorised in each local authority area.

In mid-2014, there were 247 local authority authorised facilities in the region with an estimated market authorisation of 4.42 million tonnes.

The data shows that 50% of the authorised capacity in the region is in the functional areas of four local authorities: Kildare, Louth, Meath and South Dublin County Councils. The local authorities with the least authorised capacity are Dún Laoghaire-Rathdown and Longford County Councils.

Louth and Meath County Council have the greatest number of authorised facilities (33 each) with Dún Laoghaire-Rathdown County Council authorising the smallest number (three).

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

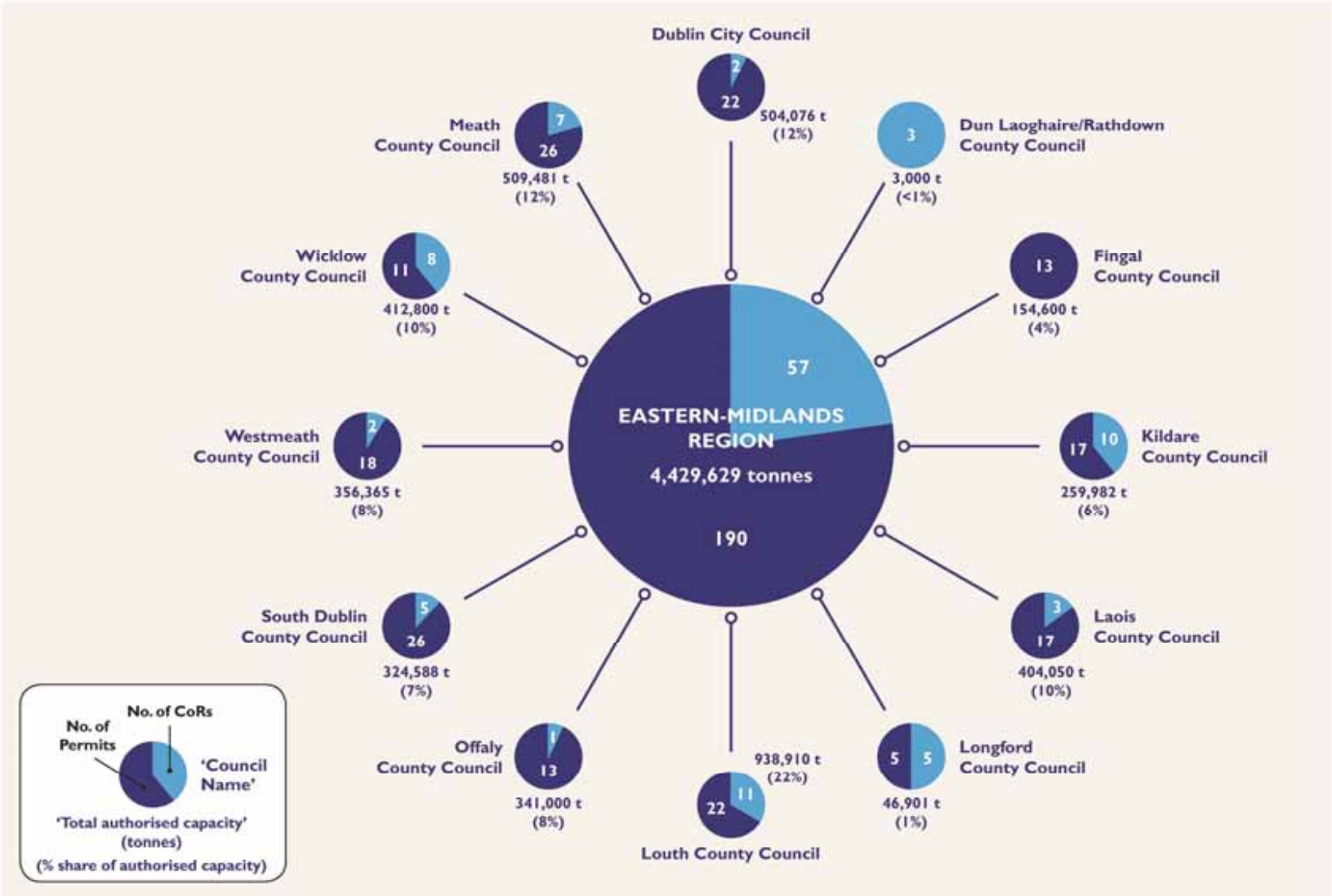


Figure 12-1 Number and Capacity of Local Authority Authorised Facilities

12.1.2 Market Capacity in the Region

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

Table 12-1 Number of Facilities Authorised by Activity Group

Group and Description	WFP Classes[57]	COR Classes[58]	No. of Facilities
G1 - Store/Process/transfer of waste including MSW	1,7,10	1,7,10	80
G2 - Metals and ELVs	4,12	-	36
G2a - Other waste vehicles	2	3	26
G3 - WEEE, Batteries	3,9	4	9
G4 - Land improvement	5,6	5,6,9	56
G5 - Biological	8	11,12	12
G6 - Organic landspread	-	13	13
G7 - Non-haz & CFC	11	14	8
G8 - Temp. storage	-	2	7
Total	**12 classes**	**13 classes**	**247**

Figure 12-2 details the number of facilities in each group and indicates that the storage and processing of waste (Group 1), metals and land improvement (Group 4) represent the largest grouped activities in terms of numbers of local authority authorised facilities.

Group 1 activities represent the largest number of local authority authorised facilities in the region, accounting for 79 (or 32%) of the total number of facilities. Activities in this group include mechanical pre-treatment facilities for inert and municipal wastes.

The land improvement group of activities, or group 4, is the next largest with 56 or 23% of the total number of facilities in the region.

This activity group is followed by group 2, which includes scrap metal and authorised treatment facilities (ATFs) for ELVs, accounting for 15% of all authorised facilities.

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

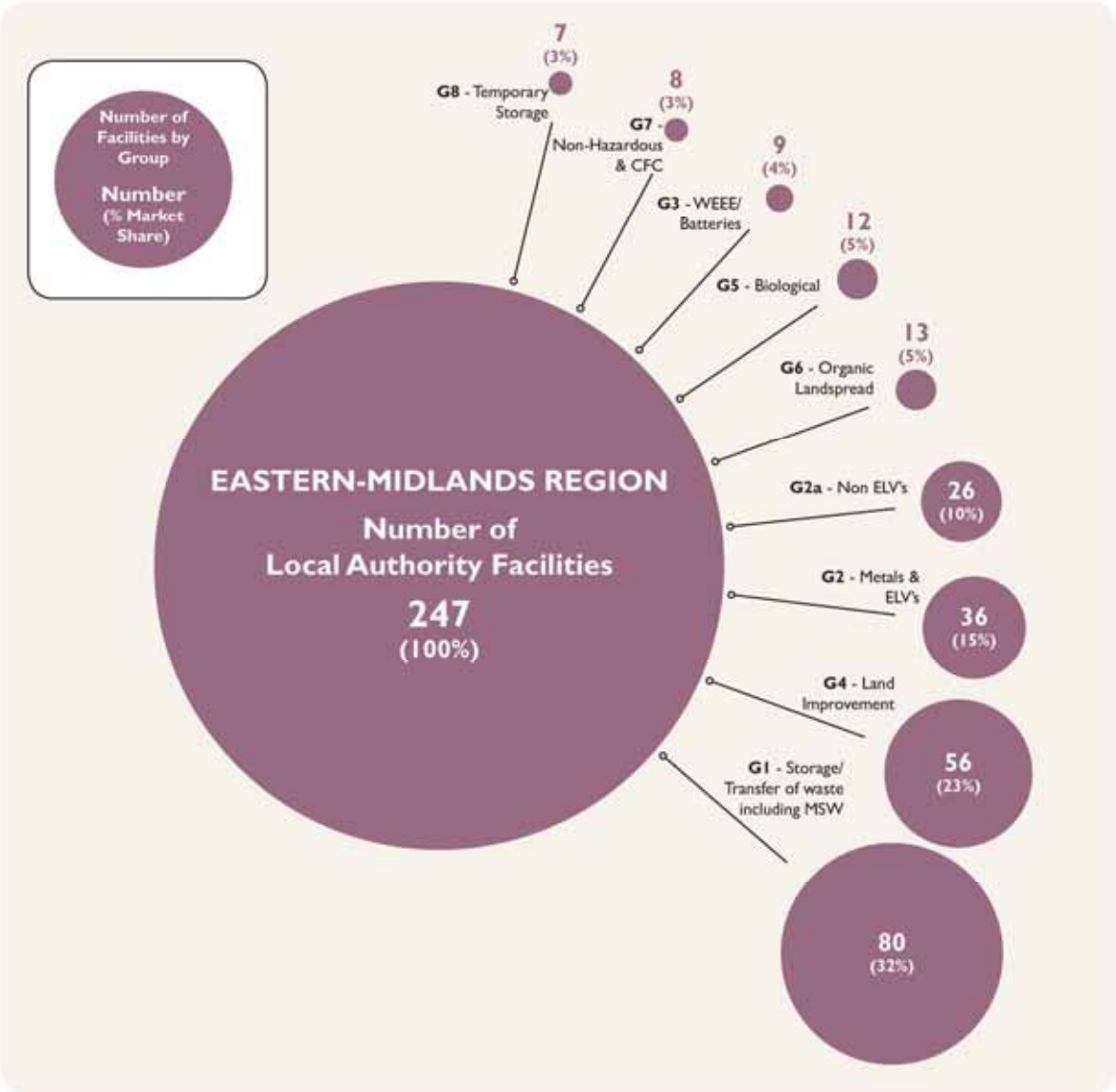


Figure 12-2 Local Authority Waste Authorisations by Eastern-Midlands Region

Figures 12-3 to **Figure 12-6** show the locations of the various groups of facilities in the EMR as follows. The references for the facilities in the figures correspond to the facility number in Appendix D.

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

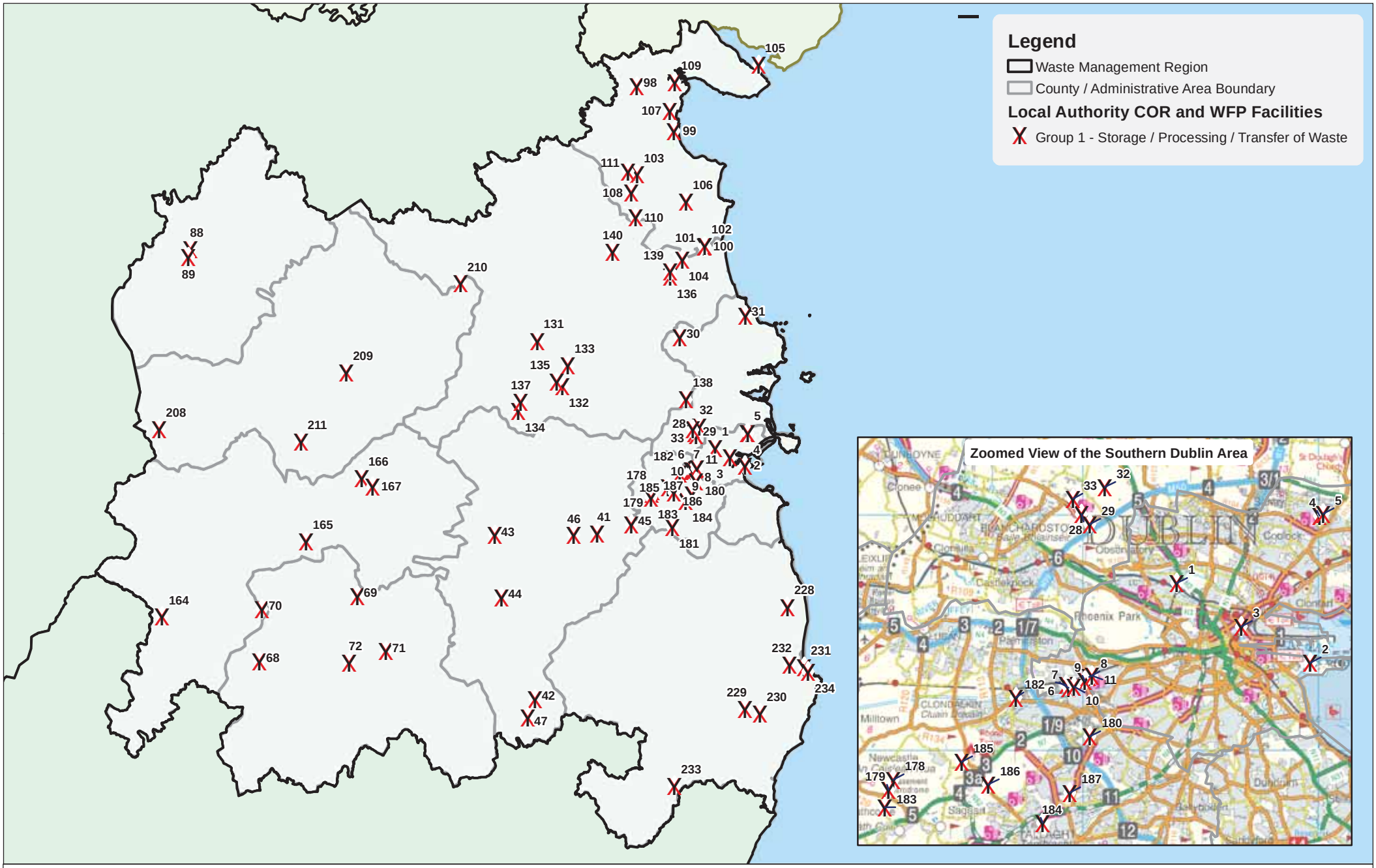


Figure 12-3 Group 1 Local Authority Authorised Waste Facilities in the Eastern-Midlands Region

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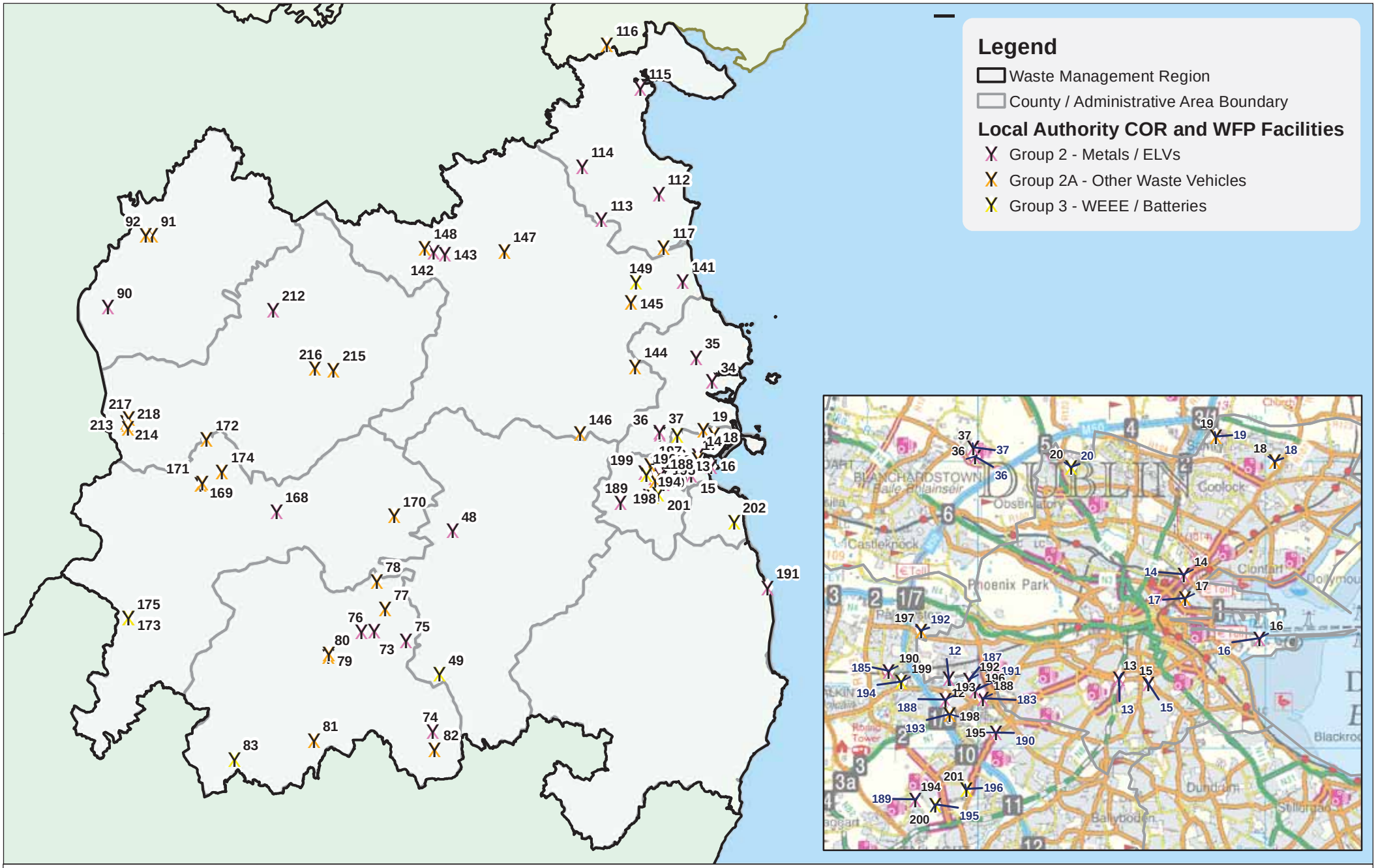

Figure 12-4 Group 2, 2A and 3 Local Authority Authorised Waste Facilities in the Eastern-Midlands Region

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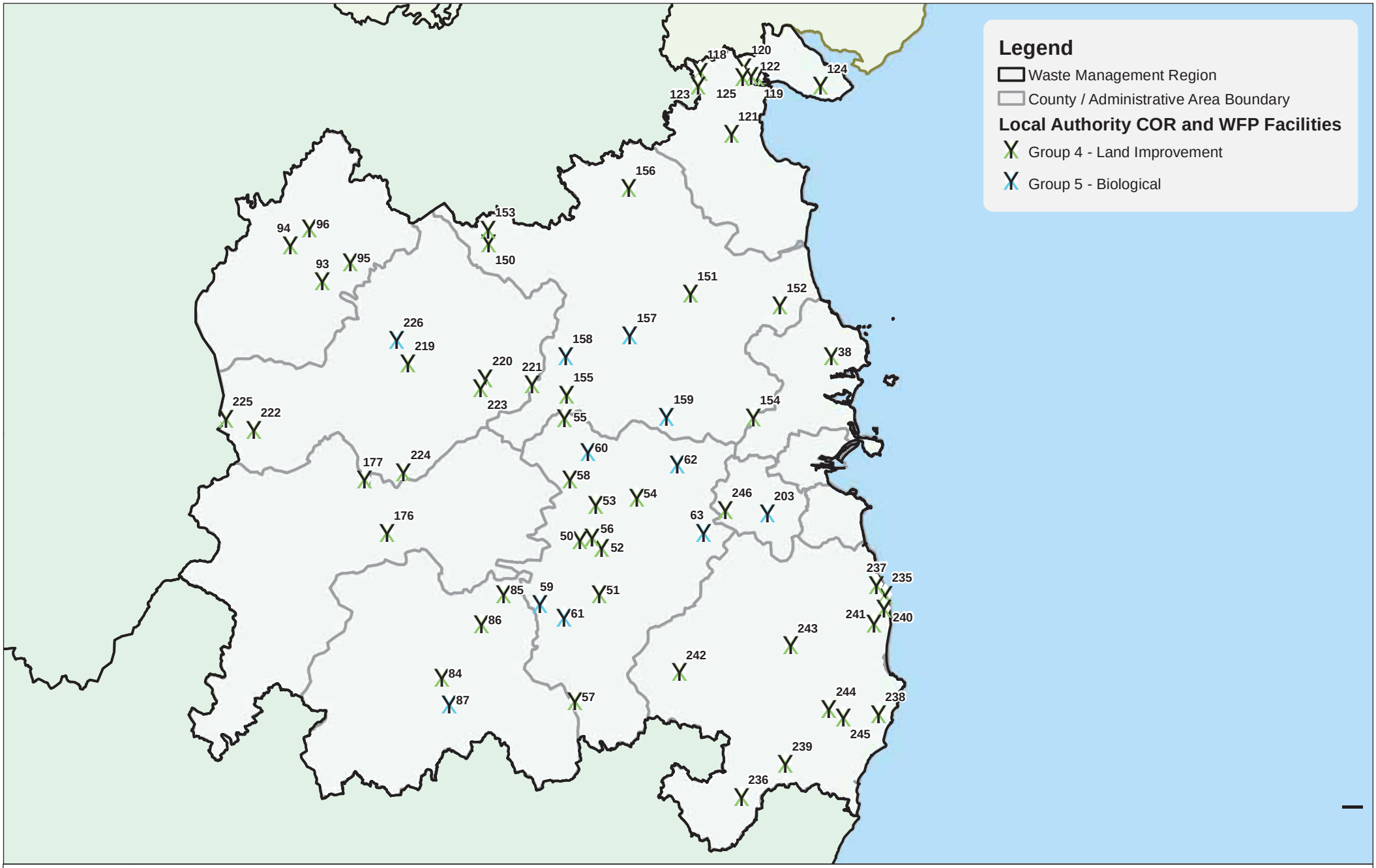

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Figure 12-5 Local Authority COR and WFP Facilities in the Eastern-Midlands Region

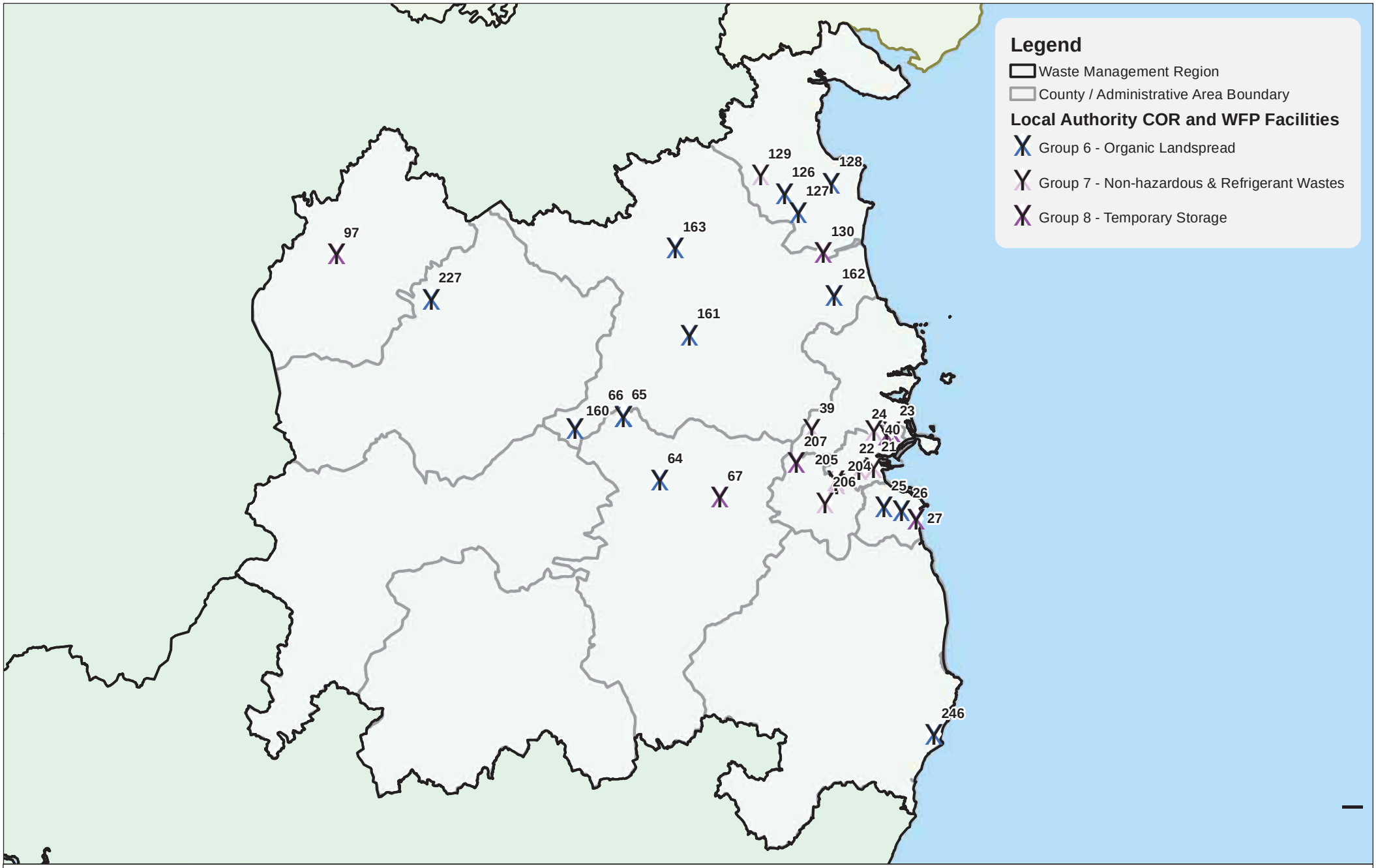

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Figure 12-6 Groups 6, 7 and 8 Local Authority Authorised Waste Facilities in the Eastern-Midlands Region

RPS

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 Certificates of Registration to local authorities for smaller scale waste activities listed in the regulations[58] which are primarily bring facilities (CA 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 management chain.

12.2.1 Overview of Waste Licensed Facilities in the Region

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

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

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

Treatment Type (Principal Activity Codes)	**Number of Active Facilities**	**Total Capacity**
Pre-Treatment Disposal (includes D9, D13, D14, D15)	13	1,343,237
Pre-Treatment Recovery (include R12 & R13)	13	1,546,000
Recovery (includes R1, R2, R3, R4, R9, R10)	16	2,041,000
Total	**42**	**4,930,237**

EPA authorised facilities in this region are predominantly pre-treatment facilities and **Table 12-2** provides details of the corresponding capacities. These facilities account for over 2.8 million tonnes of capacity. There are 16 active EPA authorised facilities involved in recovery and their authorised capacity is just over 2 million tonnes.

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 co-ordinated 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) section and relevant departments who are working with small businesses with a focus or need for secondary wastes as part of their operation. Growth of secondary material markets will ensure that more material is diverted from landfill and other lower tier recovery options, which will 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

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

12.4 WASTE RECYCLING AND MATERIALS RECOVERY

A network of bring banks, bring centres and civic amenity/recycling centres are located in each local authority area and serve an important role in accepting waste from both households and the commercial sector. This Regional network of facilities accepted 98,000 tonnes of waste in 2012. Recyclable material is accepted at these facilities, free of charge in a number of local authority areas, and transferred to other facilities for segregation and processing and ultimately to reprocessing markets.

12.4.1 Material Recovery Facilities (MRFs)

These facilities accept, sort and bale recyclable materials for transfer to reprocessing markets. In November 2014 there were five MRFs in the region, handling mainly commercial waste but also household recyclables. Throughput of commercial/industrial recyclables in MRFs was approximately 230,000 tonnes in 2012. Typically MRFs and transfer stations have been located in industrial areas.

Mixed dry recyclable waste collected as part of the dry recyclable bin service is delivered to MRFs where it is sorted into recoverable fractions, baled and transferred to reprocessing facilities. This processing results in a residue, which is either landfilled or diverted for energy recovery.

12.4.2 Reuse and Repair

The area of reuse and repair of goods (furniture, electronic equipment, etc.) is an emerging and expanding business in the region. The main role of the local authorities is to facilitate/support this sector where possible. Examples of facilitation include:

- The www.FreeTradeIreland.ie or www.smileexchange.ie websites (both EPA-funded initiatives);
- Local authority supported activities that target materials such as paint, bicycle, furniture and textiles (as described in **Chapter 8**.) This sector is served by the voluntary and private sectors;
- Environmental social enterprises and voluntary sector; and
- Private sector –
    - Classified advertisements in publications such as *Buy and Sell* enable items to be traded or sometimes given away free, e.g. www.donedeal.ie, and
    - A small number of businesses are involved in the resale of office furniture and architectural salvage, whereby items of furniture of historical or architectural value or appliances are sold, e.g. Revamp 3R Furniture Store in Longford.

12.4.3 Biological Treatment Facilities

There are eight private sector biological treatment facilities in the region that are engaged in the composting of bio-waste. A number of these facilities are also engaged in the biological stabilisation (also termed mechanical biological treatment or MBT) of the organic fraction of residual household and commercial waste. There is increasing interest in the development of anaerobic digestion treatment facilities which will have the benefit of also generating biogas for energy generation. A number of community composting schemes in the region are supported and encouraged by the local authorities to assist in the diversion of this waste from landfill.

12.4.4 Waste Transfer Stations

There are 24 waste transfer facilities in the region, a number of which also have the capacity to mechanically sort, compress and bale municipal waste for transfer for further recycling, landfill and also for export for energy recovery, in the form of (RDF). Such waste derived fuels, produced at mechanical waste treatment plants, can be composed of paper, plastic, and other combustible wastes used in waste to energy plants, cement kilns or other industrial furnaces.

12.4.5 Energy Recovery

At national level, between 2010 and 2012, there was a notable increase in the use of RDF/SRF as fuel, from 94,174 t to 158,297 t to 230,399 t. There was also a notable national increase in the use of other non-hazardous wastes as a fuel, including residual municipal waste from 19,293 t to 57,420 t to 244,334 t between 2010 and 2012.

Energy recovery within the region included waste recovered at a waste to energy facility, and SRF used as an alternative fuel source in two cement manufacturing facilities. RDF/SRF was also exported from ports within the region for energy recovery at waste-to-energy facilities in Europe. Ireland's first municipal waste waste-to-energy facility, located in Carranstown, County Meath, licensed to treat up to 200,000 tonnes of waste per year and to recover energy, was fully operational in 2012. The facility accepted 175,000 tonnes of mixed municipal waste in 2013, in addition to other waste for energy recovery. The EPA has granted a licence for a second waste-to-energy facility in the region at Poolbeg, Dublin. Cement kilns in Westmeath and Meath, while they are not classified as waste facilities, also accepted SRF for use as fuel.

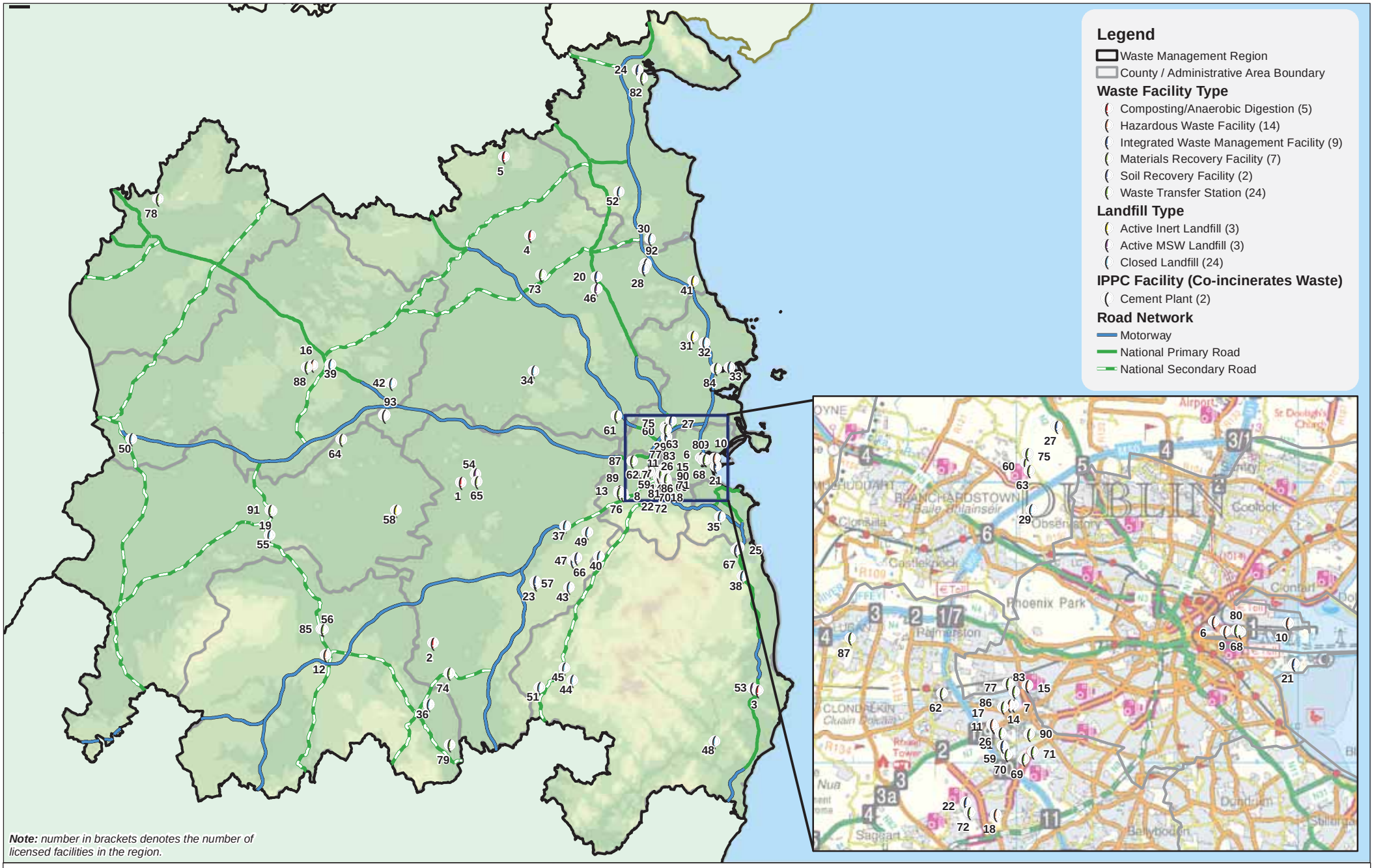

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Figure 12-7 EPA Waste Licensed Facilities in the Eastern-Midlands Region

13 DISPOSAL INFRASTRUCTURE

One of the main principles of waste policy over recent years has been to significantly reduce the reliance on landfill as a disposal method for waste. The EU Landfill Directive (1999/31/EC) has set challenging targets for Ireland with regard to the diversion of biodegradable municipal waste from landfill.

Significant increases in the landfill levy in the past 13 years have assisted the region in diverting waste from landfill and driving waste up the hierarchy towards waste to energy facilities and increased recycling rates. The landfill levy increased from £15/tonne in 2001 to €75/tonne in 2013. The number of operational landfills in the EMR has continuously declined over the years, mainly due to the changing national waste infrastructure and government policy on the elimination of landfill for waste disposal.

13.1 LANDFILL ACTIVITY IN THE REGION

Waste disposal by landfill remains a method of waste management in the EMR. As illustrated in **Figure 13-1**, there are six landfills serving the region in March 2015: Drehid Waste Management Facility (W0201-03), Ballynagran Residual Landfill (W0165-02), Knockharley Landfill (W146-02), Clonbullogue Ash Repository (W0049-02), Murphy Environmental Hollywood Ltd (W0129-02) and Murphy Concrete Manufacturing Ltd (W0151-01).

13.1.1 Remaining Capacity

A breakdown of remaining built and consented disposal capacity by landfill accepting MSW is shown in **Table 13-1.** Future capacity needs are discussed in detail in **Chapter 16**.

Table 13-1: Remaining Disposal Capacity at Landfills Accepting MSW in the EMR, 2014

Landfill Facility Name	Waste Licence Reg No.	Remaining consented disposal capacity (t)	Remaining constructed disposal capacity (t)	Remaining life expectancy consented	Remaining life constructed	Status 2014
Drehid	W0201-03	1,794,825	200,000	13 Years and 1.5 months	9 Months	Open
Knockharley	W0146-02	2,735,924	189,422	20	2	Open
Ballynagran	W0165-02	2,440,331	159,513	5	1	Open
Total		**6,971,080**	**548,935**	**38 years and 1.5 months**	**3 years and 9 months**	

13.1.2 Quantities of Wastes Disposed

The total quantities of household, commercial and industrial waste accepted at landfill from 2010 to 2012, as derived from National Waste Reports (Environmental Protection Agency, 2010–2012) are detailed in **Table 13-2**. The quantity of waste accepted for disposal has decreased year on year since 2010, with a significant decline observed in 2012 in comparison to 2011. This decrease has continued in 2013 and 2014 due to the closure of the landfills in the EMR.

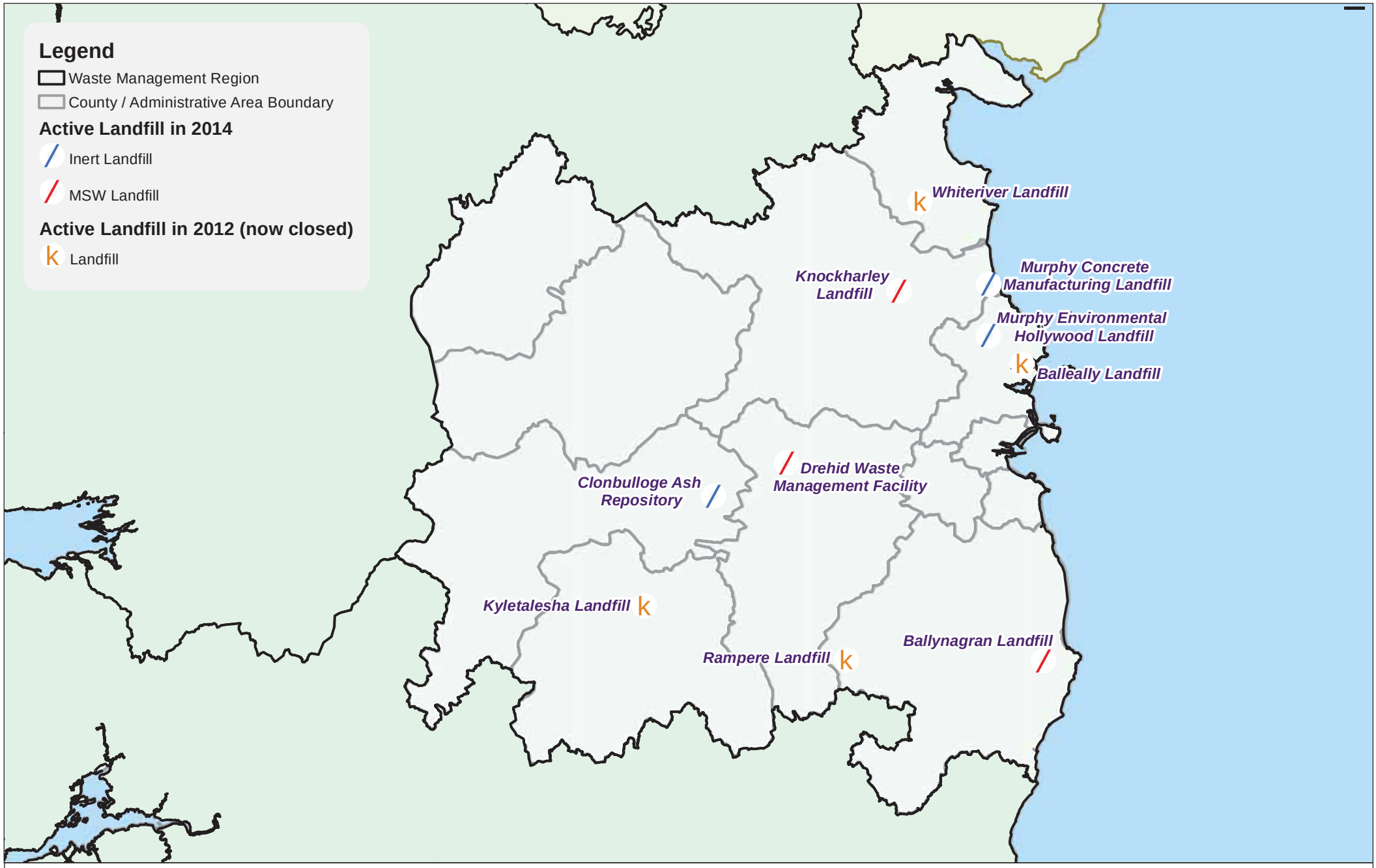

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Figure 13-1 Active Landfills in the Eastern-Midlands Region

RPS

Table 13-2: Total Waste Accepted at Landfills in the EMR, 2010-2012

Facility Name	EPA Licence Reg. No	Total waste accepted(t) 2010	Total waste accepted for disposal(t) 2010	Total waste accepted(t) 2011	Total waste accepted for disposal(t) 2011	Total waste accepted(t) 2012	Total waste accepted for disposal(t) 2012
Balleally	W0009-03	97,726	64,703	89,503	54,377	238,362	12,240
Kyletalesha	W0026-03	58,289	50,189	43,720	36,786	40,830	37,944
Whiteriver	W0060-03	41,664	34,113	120,381	75,618	143,291	89,355
Derryclure	W0029-04	51,332	17,703	110,123	95,249	-	-
Arthurstown	W0004-04	255,379	191,553	33,438	-	27,703	0
Ballydonagh	W0028-03	23,993	22,428	-	-	-	-
Rampere	W0066-03	31,630	28,123	38,825	27,925	20,354	15,670
Clonbullogue Ash Respository	W0049-02	32,157	32,157	34,663	34,663	31,422	31,422
Drehid	W0201-03	418,243	328,390	415,583	328,813	415,554	295,089
Knockharley	W0146-02	198,365	161,535	126,128	89,578	132,744	88,487
Ballynagran	W0165-02	169,475	130,534	212,192	152,511	231,257	154,024
KTK Ltd.	W0081-04	57,654	24,946	258,751	110,800	-	-
Murphy Hollywood	W0129-02	30,626	30,626	27,378	23,575	41,565	41,565
Murphy Concrete	W0151-01	151,477	-	60,427	-	11,176	-
Kerrdiffstown	W0047-02	3,731	3,731	-	-	-	-
Total		**1,621,740**	**1,121,732**	**1,571,112**	**1,029,894**	**1,334,258**	**765,795**

Figure 13-2 illustrates that the level of waste disposal in the region has decreased since 2010, and as discussed previously in this Plan, landfilling is no longer the primary treatment route for municipal, industrial and C&D waste.

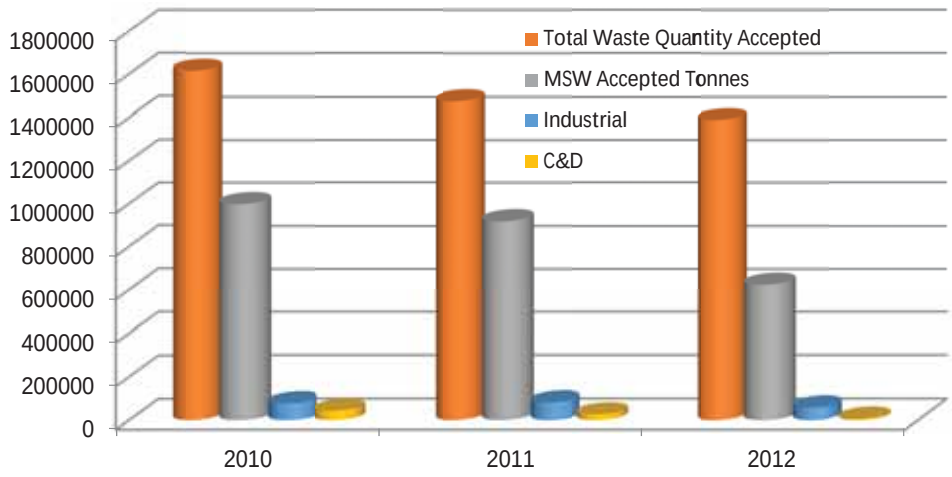

Figure 13-2 Total Waste Accepted at Landfill in the Eastern-Midlands Region, 2010 to 2012

Landfilling of each waste type has been decreasing on a yearly basis since 2010. In the years 2010 to 2012, the quantities of municipal waste sent to landfill reduced by 37%, industrial waste by 24% and construction and demolition waste by 83%.

13.1.3 Biostabilised Solid Waste Accepted at Landfills

Biostabilised solid waste is generally an output from composting plants that process a type of waste from a mechanical processing facilities that it is typically referred to as "organic fines". Mechanical processing plants accept and process mixed municipal residual waste. This material contains some BMW. 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 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[59] onwards. These are outlined in the text box below.

"Stabilisation" means the reduction of the decomposition properties of biowaste to such an extent that offensive odours are minimised and that the Respiration Activity after four days (AT4) is <10 mg O2/g DM (until 1-1-2016), and <7 mg O2/g Dry Matter thereafter.

The estimated national figures for biostabilised residual waste reported as having been accepted at landfills between 2012 and 2014 are presented in **Table 13-3**.

Table 13-3: National Quantity of Biostabilised Waste Accepted at Landfill, 2012–2014

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

This table indicates that there has been a trend of increasing production of biostabilised residual waste over the past few 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.

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

13.2 REPATRIATION OF WASTE FROM NORTHERN IRELAND

In accordance with an intergovernmental agreement in 2008, the repatriation of waste originating in Ireland, but which was illegally disposed of in Northern Ireland in the early 2000s, is now under way. A cooperative agreement provides a template for dealing with this historical legacy issue, which was endorsed by Ministers from both jurisdictions and by the EU Commission. Under the agreement, the costs for 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 National TFS Office 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. The Framework duration is four years, and eight landfills are on the Framework, located within the three Regional waste areas. In 2014, however, only four landfills on the Framework were open and accepting waste, with three being located in the EMR. The fourth landfill site is located 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 coming years.

13.3 LEGACY AND HISTORIC LANDFILLS

Under the Waste Management 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 in addition to identifying the remedial action to be taken. In 2005, a Ministerial Direction was issued by means of Section 60 policy guidance under the Waste Management Act (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 assessing closed landfills, 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 assessment by local authorities. The risk assessment methodology is a structured transparent and practical process that allows for the prioritisation of the sites in high, moderate and low risk, known as Classes A, B and C respectively. 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).

The EMR has identified and registered 153 closed landfills in accordance with Section 22 (7) (h) of the Waste Management Act. It should be noted that a risk assessment of environmental pollution is pending on Calliaghstown Upper (S22-02818) located in South Dublin County Council.

A summary of the number of high-, medium- and low-risk sites is shown in **Table 13-4.** A more detailed list, sourced directly from local authorities, can be found in **Appendix F.** The 17 remaining sites, which are pre-1977 landfills, were not assessed.

Table 13-4: Landfill Risk Assessment for the EMR

Description	Total No. of Sites	High Risk	Medium Risk	Low Risk	Not Risk Assessed
Illegal Sites (Historic & Legacy)	11	2	5	4	0
Local Authority Sites (Historic & Legacy)	77	12	25	40	0
Pre-1977 Sites (Legacy)	38	1	3	17	17
Private Sites (Historic & Legacy)	27	6	7	14	0
All sites (Historic & Legacy)	**153**	**21**	**40**	**75**	**17**

The Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008 require all landfills closed between 1977 and 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. The EMR has carried out assessments on four landfills and has applied to the EPA for a Certificate of Authorisation for each site. There are no sites authorised in the EMR Q4, 2014.

The DECLG provided funding for the investigation of landfills in the region in recent years; many of these landfills have now Tier 2 and Tier 3 phase assessment completed. The three regions have agreed a road map for dealing with the remaining Category A facilities over the lifetime of the Plans. Landfills with gas related emissions are placed in Category A and will be dealt with first.

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

14 ENFORCEMENT AND REGULATION

Since the introduction of the Waste Management Act 1996 and subsequent regulations, the task of regulation and enforcement has become increasingly important in the region. In April 2005, the landmark European Court of Justice (ECJ) judgment (Case C494/01) ruled that Ireland had infringed the Waste Framework Directive by generally and persistently failing to fulfil its obligation to fulfil various articles under that Directive. This ruling resulted in structural and administrative deficiencies as well as site-specific cases being addressed. In addition, other issues such as unregulated ELVs and 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.[60]

14.1 ROLES AND RESPONSIBILITIES

Waste enforcement is operated on the ground primarily by local authorities and by the EPA. In addition, the DECLG and the National TFS Office play a role in enforcement.

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

Under the Waste Management Act, the Minister for Environment, Community and Local Government is responsible for developing the policy and legislative framework for waste management in Ireland. The Minister is precluded by Section 60(3) of the Waste Management Act from exercising any power or control in relation to the performance of the EPA or a local authority of any functions conferred onto 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, has a mandate to deliver enhanced environmental compliance through enforcement of EPA licences issued to 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 enforcing environmental protection legislation;
- Enforce waste licences, integrated Pollution Prevention and Control (IPPC) licences and industrial Emission Directive (IED) licences;[61]
- Enforce certificate of registrations issued to local authorities;

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

[61] Activities which require an IPPC Licence or Waste Licence and are listed in Annex I of the Industrial Emissions Directive are now required to hold an Industrial Emissions Licence. Existing IPPC licences and Waste Licences which relate to activities listed in Annex 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.

- 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 failing to discharge 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. They may also carry out broad assessments of their environmental performance, such as environmental audits, and provide advice, recommendations, assistance or support. Where appropriate, the OEE may issue a direction to a local authority to take specific action within a specified timescale if 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, result in the need for a high degree of coordination. As a result, 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 now has over 1,000 public sector staff registered from ~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 (PCBs) Inventory.

Details of the enforcement actions undertaken by the OEE are available on the EPA website. The most recent report[62] details Ireland's enforcement of environmental law in the period 2009 to 2012 by the EPA and local authorities.

14.1.3 National Transfrontier Shipment Office (NTFSO)

In July 2007, Dublin City Council was nominated as the single national competent authority in relation to the export of, import to or transit through Ireland of waste. The establishment of the NTFSO consolidated and streamlined the administration and enforcement of waste exports and imports and a dedicated enforcement team is in place to enforce the waste shipment regulations and prevent the export or import of illegal shipments of waste. In July 2011, the NTFSO was nominated as the competent authority for the administration of hazardous waste movements within

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

Ireland. All hazardous waste movements are tracked and traced via an online system linking authorised waste collectors with authorised waste facilities.

14.1.4 Local Authorities

Each of the local authorities within the EMR has a dedicated waste enforcement team which has been grant funded since 2004 by the Environment Fund. Revenues from the levies on plastic shopping bags and the landfill of waste are paid into the Environment Fund; however, these revenues have decreased considerably in recent years, primarily due to the reduction in the quantity of waste landfilled in the country. Nevertheless, the DECLG is committed to continuing to grant assist local authorities until at least mid-2015.

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

- **Regulatory enforcement**: Undertaking inspections and taking appropriate measures to bring the relevant parties into compliance. This includes enforcement of regulations in relation to, for example – waste facilities, waste collection, ELVs, WEEE, food waste, packaging, plastic bags, batteries and accumulators, farm plastics, tyres and waste tyres and prohibition of waste disposal by burning. It should be noted that the forthcoming new household waste legislation will allow enforcement staff to issue fixed penalty notices (FPNs) to waste collectors for breaches of their permit, i.e. collecting waste types not listed, using facilities not listed, failure to maintain appropriate insurance and failure to submit an AER. It is intended that an automatic review of their permit shall be initiated where more than three FPNs have been issued over a five-year period. From July 2016, it is intended to have FPNs for households which cannot demonstrate proper management of their waste.
- **Unauthorised waste activities**: Enforce the provisions of the Waste Management Act 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;
- **Litter**: There is considerable overlap between enforcement of the Litter Act 1997 and the Waste Management Act;
- **Complaints**: Responding to complaints is a significant part of local authority enforcement activity; and
- **On-the-spot fines** (Waste Bye-Laws).

It is a matter for the each individual local authority, in the first instance, to investigate illegal disposal of waste in their functional area and to take the appropriate enforcement action. Local authorities have significant powers under the Waste Management Act to enable them to tackle illegal waste activity, including the 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 the 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 **Chapter 3**.

14.2 ENFORCEMENT IN THE EASTERN-MIDLANDS REGION

Since 2007 the local authorities within this region have prepared inspection plans in accordance with the 2001 European Parliament and the Council adopted *Recommendation providing for Minimum Criteria for Environmental Inspections Plan* (RMCEI). The purpose of RMCEI is to strengthen compliance with, and 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. Planning is about determining and defining the proposed work scheduled to be undertaken based on available resources, so that it can be performed in an effective, efficient, transparent and accountable manner. Inspection and monitoring is primarily risk-based and is focused on solving long-term and recurring non-compliances. The key requirements of the plan are as follows:

- Prepare a plan for environmental inspections to include routine and non-routine 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 audit the local authorities in relation to the implementation of these plans and provide annual guidance to local authorities in relation to the national waste priorities for the following year.

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. The purpose of the enforcement policy is to ensure effective, proportionate and dissuasive actions against unauthorised operators and operations through the use of legislative powers. Enforcement policy is underpinned by five key principles:

- Proportionality in the application of environmental law and in securing compliance;
- Consistency of approach;
- Transparency;
- Targeting of enforcement action; and
- Implementation of the polluter pays principle.

A number of enforcement tools are used to ensure compliance with legislation, with prosecution being the ultimate sanction.

14.2.1 Inspections

Local authorities undertake routine and non-routine inspections and respond to complaints as they arise. Routine inspections are carried out to assess compliance with specific waste legalisation, i.e. waste permitted facilities, waste collectors and food waste. Local authorities carry out inspections of the permitted waste facilities (including facilities authorised by certificates of registration) in the EMR. Routine inspections are also carried out to ensure compliance with producer responsibility regulations, i.e. packaging, WEEE, batteries and ELVs. Non-routine inspections include response to complaints and unauthorised activities, and new emerging challenges such as waste associated with diesel laundering activities, particularly in the border area of the region.

Figure 14-1 shows the total number of inspections carried out in the region in 2012.

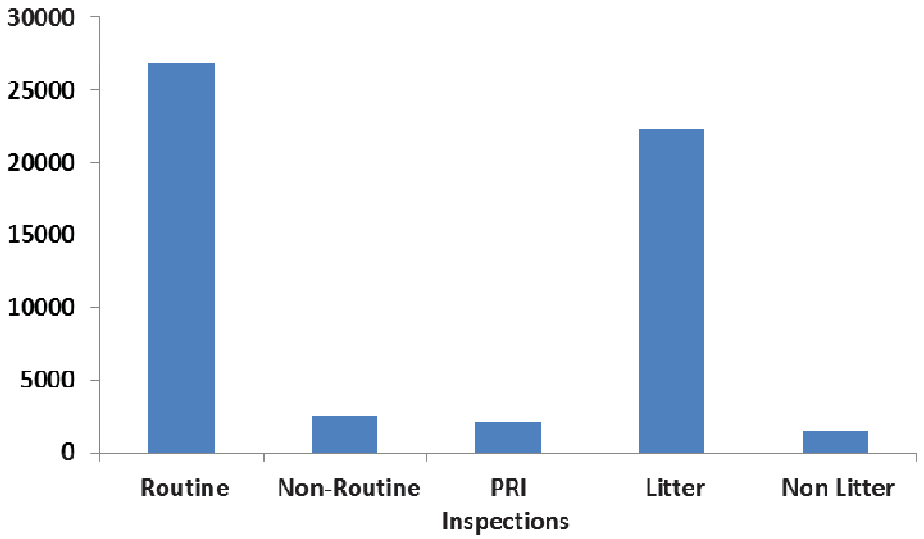

Figure 14-1 Total Annual Inspections in the EMR, 2012[63]

In excess of 26,000 routine inspections were carried out in the region in 2012 in addition to 22,370 litter-related inspections. The non-routine inspections consist of non-litter complaints and include unauthorised sites, abandoned cars and inspections in relation to waste facilities and waste collection activities. The 2,545 non-routine inspections account for a small proportion of total inspections in the region over the year. Investigations of non-routine inspections may lead to the taking of enforcement action in order to resolve the issue. Non-routine inspections can present challenges to local authorities as they are not included in the pre-planned RMCEI and often require the reallocation of resources from planned activities over the year.

Figure 14-2 shows the breakdown of waste inspection activities. Approximately 500 inspections were carried out in relation to authorised facilities and collectors operating in the region. Inspections classified as "Other" include historic landfills, roll-out of segregated bins, waste surveys/surveillance, and inspections under respective bye-laws. A notable 4,037 inspections in

[63] Local Authority RMCEI Annual Returns, 2012.

relation to food waste were carried out in response to DECLG's priority on food waste inspections and the specific targeting of hotels, restaurants and other food establishments. Illegal burning of waste, primarily household waste, accounted for 259 inspections.

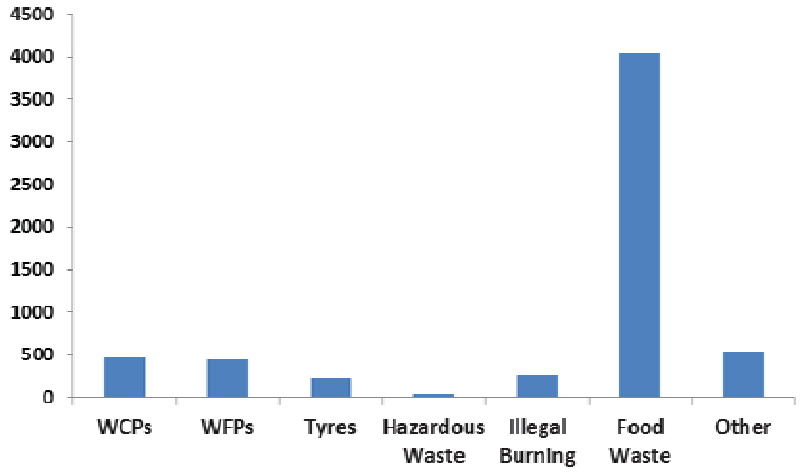

Figure 14-2 Waste Inspection Activities in the EMR, 2012[63]

Figure 14-3 shows that 2,160 inspections were carried out in relation to producer responsibility initiatives in 2012. 665 inspections relate to packaging to ensure that all major producers of packaging are in compliance with the 2007 Regulations. In excess of 1,000 inspections were carried out in relation to WEEE and batteries, accounting for 51% of total PRI inspections in 2012. Inspections in relation to the plastic bag levy were carried out as part of normal business audits of premises. Some 40 inspections were carried out in relation to facilities (authorised and unauthorised) dealing with end-of-life vehicles.

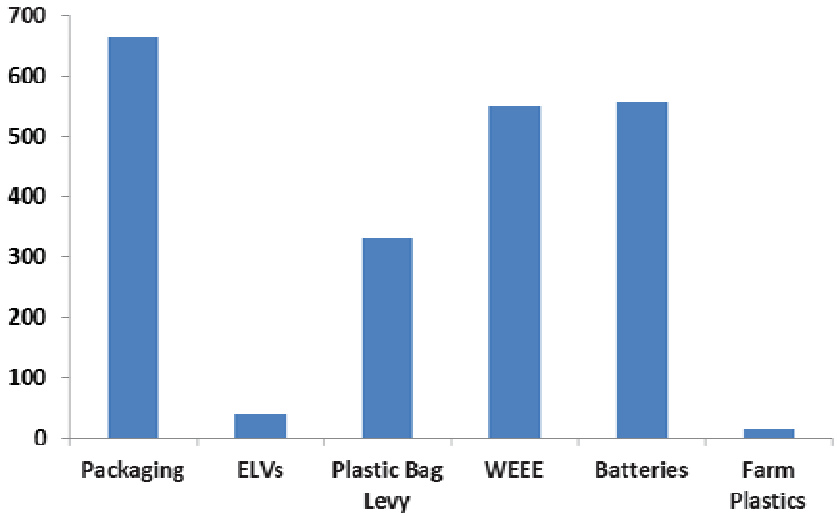

Figure 14-3 PRI Inspections in the EMR, 2012[63]

14.2.2 Enforcement

Enforcement includes both the issuing of notices (legal and non-legal) and prosecution actions. Enforcement is guided by the principles set out in the enforcement policy, which supports the

annual RMCEI plans in each local authority. Correspondence in relation to non-compliance falls into two categories:

- **Non-legal correspondence** – warning letter, advisory letter; and
- **Legal correspondence** – formal legal notice issuing a direction under the Waste Management Act 1996. Legal correspondence can include a requirement to provide information to the local authority or a requirement to take specific action within a specified timeframe. Local authorities also issue legal notices under the relevant regulations, i.e. packaging and landfill levy regulations.

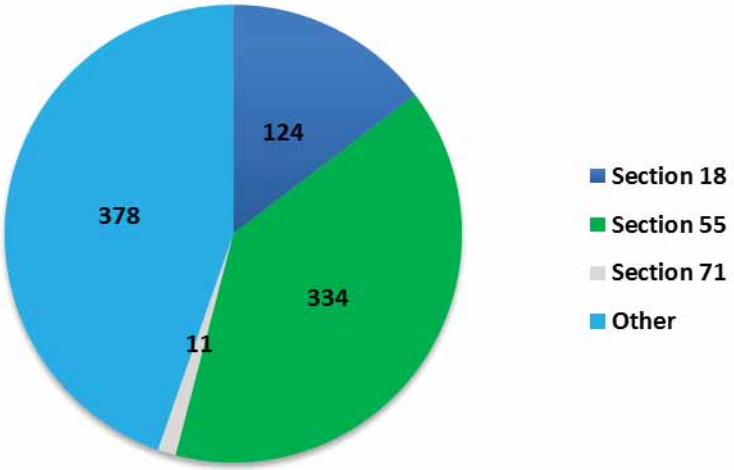

Figure 14-4 Legal Notices Served in the EMR, 2012[63]

Figure 14-4 highlights the number of formal legal notices served during 2012, totalling 847 and reflecting the considerable amount of administrative and legal work supporting on-site inspections.

Notices served under Section 18 of the Waste Management Act relate to requests for specific information to be submitted to the local authority, while notices under Section 55 are directions to undertake specific activities or actions. Section 71 notices specifically relate to abandoned vehicles. "Other" notices account for 45% of total notices served in 2012 and relate to various regulations, i.e. packaging, landfill levy, farm plastics, etc.

Local authorities within the region initiate legal prosecutions in cases where there has been unauthorised management or treatment of waste, failure to comply with notices issued or failure to comply with facility or collection permit conditions. The taking of legal proceedings is a slow process and dependent on Court availability, and incurs significant administrative and legal time and costs to each authority. The number of legal actions taken in the region in 2012 is set out in **Figure 14-5**. There were 88 prosecutions under Section 32 of the Act, accounting for 48% of all legal actions in the region in 2012 relating to the unauthorised management or treatment of waste. Fifty-nine legal actions under Section 55 related to failure to comply with specific measures or directions, while 20 actions under Section 34 related to unauthorised collection of waste. "Other" legal actions accounted for 10 cases which included offences under other Regulations.

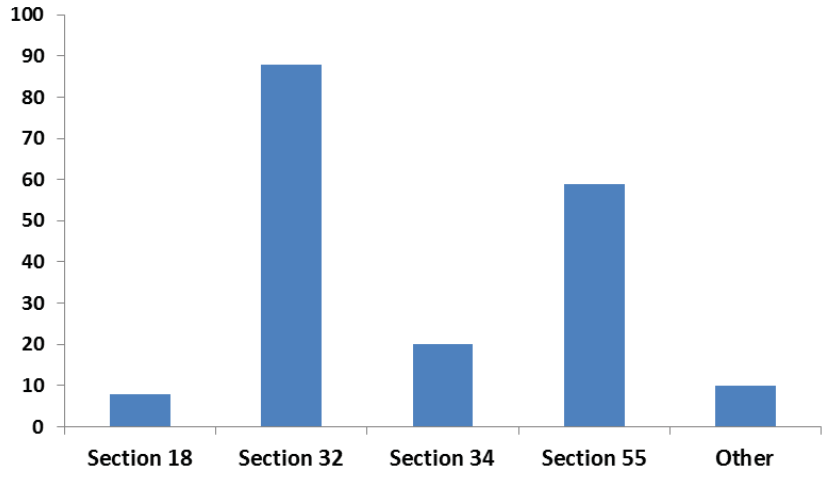

Figure 14-5 Legal Actions taken in the EMR, 2012[63]

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 MULTI-AGENCY 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. The main target of these joint inspections was ELV sites and also at ports, targeting second-hand vehicle exports and electrical and electronic equipment exports. Multi-agency checkpoints were organised within the region and information arising from these enforcement activities was investigated and further joint operations subsequently planned.

14.4 RECENT CHANGES

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. This policy addressed the issue of enforcement 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 in 2012 of the National Waste Collection Permit Office (NWCPO) in Offaly County Council, streamlining and centralising the collection permitting system into one local authority and the management of annual environmental reports and data;
- Introduction of the European Union (Household Food Waste and Bio-waste) Regulations 2013;
- Review of the existing producer responsibility initiative (PRI) agreement in 2012, resulting in the establishment of two Departmental Working Groups on End of Life Vehicles and Waste Tyres (2014); and
- Publication in 2013 of the EPA's Guidance on assessing and costing environmental liabilities.

A number of further measures are due to be implemented shortly:

- Following the publication of the DECLG's consultation on the proposed Waste Management (Collection Permit) Regulations, 2015, a proposed package of legislative measures will give effect to changes to the existing regulatory structure. These changes will include a requirement for householders to avail of a waste collection service or demonstrate how waste is being managed, mandatory pay by weight collections (per kilogram) and the introduction of fixed penalty notices; and
- Following a national review of waste enforcement in 2013 the move towards regional enforcement structures to support local authorities, improved sharing of resources and knowledge, is a key proposal. It is anticipated that a smarter enforcement system will be better equipped to tackle serious environmental crime in the region.

The implementation of the above policies will have a significant impact on how enforcement is governed and applied in Ireland.

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 that 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 with quantities subsequently decreasing from 2008-2012. The decline is linked to a decrease in personal consumption as a 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 2006 to 304 kg per person in 2013. 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 a 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 meet the EU target of 4 kg per inhabitant.

15.2 FACTORS INFLUENCING HISTORICAL WASTE GROWTH

In preparing these waste projections for the Eastern-Midlands Region, it is prudent to examine those generated in previous plans and identify suitable techniques or trends to apply to the new forecasts.

15.2.1 Household Waste

The forecasts contained in the Dublin, Midlands and North East Regional Waste Management Plans calculated arisings for household waste streams based partly, or wholly, on population growth forecast scenarios developed by the relevant area regional planning guidelines. The plans for County Kildare and County Wicklow applied growth factors derived from the National Overview of Waste Management Plans.

The projections made in previous Regional Waste Management Plans are a reflection of the situation at the time they were being written. The North East Region had experienced high population growth in the years prior to this plan being written, a trend that is expected to continue, while the Dublin Region reported significant growth in municipal waste generation, primarily due to commercial and industrial projects. Growth projections made in those plans for the coming years reflected these expected trends.

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 actual recorded arisings for 2010.

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

Household	2003 Arisings[64]	2010 Projected Arisings[64]	2010 reported arisings [65]	% Difference projected over reported
Midlands	113,550	190,000	154,689	+23%
Dublin	459,579	565,567	421,506	+34%
North East	161,350	204,945	185,188	+11%
Kildare	62,636	80,386 (2009)	99,940	-19%
Wicklow	44,456	52,572	41,491 (Collected & brought 2011)	(+27%)
5 Regions	886,027	-	902,814	-
National	1,596,501	-	1,686,387	-

The combined increase in household waste arisings between 2003 and 2010 for the five regions in **Table 15-1** is 7.3%, while the equivalent national arisings increased by 5.4% between 2003 and 2011.

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:

- 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;

[64] 2005–2010 regional waste management plans.
[65] Evaluation reports on Regional Waste Management Plans (Wicklow data from NWP 2011).

- Demographic changes which occurred during the period; and
- The degree to which waste prevention measures inhibited waste production.

15.2.2 Commercial Waste

The previous Regional Waste Management Plans predicted arisings from commercial waste streams using a range of factors. County Kildare based its commercial projections on factors published in the National Overview of Waste Management Plans and used a generation rate of one tonne per person for municipal type material. The other Regions linked their commercial projections to GDP (not GNP) forecasts published by the ESRI. The Dublin Region also applied a "prevention factor" to reflect a projected decoupling of waste generation from GDP.

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

Table 15-2 shows the quantities of commercial waste reported in the previous waste management plans. Also shown are projections made for 2010, along with actual reported figures for 2010 published in the relevant evaluation reports.

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

Commercial	2003 arisings[66]	2010 Projections	2010 reported[67]	Projected change	Actual change
Midlands	63,996	115,000	87,782	+80%	+37%
Dublin	480,682	787,232	316,821	+64%	-34%
North East	98,234	114,236	109,674	+16%	+12%
Kildare	70,178	80,459	52,339	+15%	-25%
Wicklow	44,104[68]	73,117	34,005	+66%	-23%
Regional	**757,194**	**1,170,044**	**600,620**	**+55%**	**-21%**
National	**1,332,735**	**-**	**1,141,015**	**-**	**-14%**

Commercial waste arisings decreased by 21% for the five regions between 2003 and 2010, while commercial waste arisings decreased nationally by 14% in the same period. The projections for the North East most closely approximated the 2011 outcomes.

Some conclusions can be drawn from the commercial projections made.

- The 2003 commercial and industrial data, which formed the basis for the projections, was of poor quality, and a lot of waste entering facilities was not weighed. Estimates were applied

[66] 2005–2010 waste management plans. County Kildare and Wicklow projections are 2009.
[67] Evaluation reports reported more commercial waste in the five regions than EPA reported nationwide. Data for 2010 was calculated using EPA data.
[68] WMP Evaluation Plan Data for Wicklow in is unclear.

rather than actual figures. By 2010, most or all of the commercial 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 benefit from the availability of better quality data; and

- The application in 2004 of a factor to reflect the impact of waste prevention measures seems to have been reasonable, although the value to be assigned will be an approximation rather than one determined 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 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. Different approaches are available to generate waste forecasts and outcomes can vary quite significantly depending on the method used. A review of national and international reports on the key drivers and approaches to be taken when producing waste forecasts has been undertaken to help guide the decisions made in choosing the methods used for generating the projected figures for this plan.

In Ireland, 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 the amount of household waste generated nationally has dropped in spite of an increase in population and stronger economic activity. **Figure 15-1**[69] *"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. The data is reviewed

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

each year and published in the annual national waste report. As the model is no longer funded it is unclear if it will continue to be used as a forecasting tool.

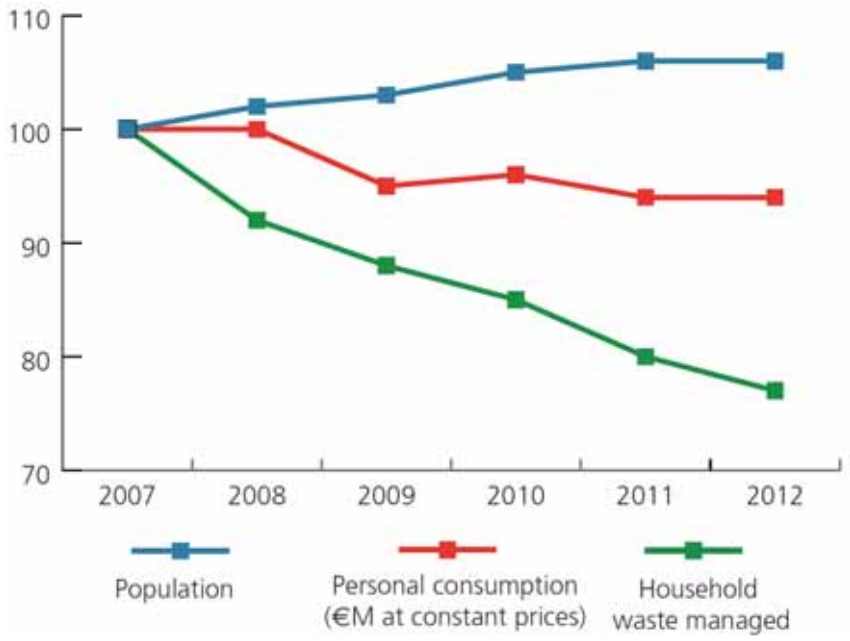

Figure 15-1 Household Waste Managed, Population & Personal Consumption Indices

The European Commission Guidance Note entitled *Preparing a Waste Management Plan – A Methodological Guidance Note, 2012* states that the following parameters can influence waste generation (although the degree of their 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*, published in 2012, provides an overview of the many drivers that can have positive or negative effects on household waste arisings and these are illustrated in **Figure 15-2.**

Regression analysis undertaken by WRAP in 2012 investigated the factors which affected the 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 snacks and takeaways, which increase waste arisings; and
- landfill tax, which has the effect of slightly reducing household waste arisings.

It is not possible to predict with absolute certainty how much waste will be generated in the future. However, there is a need to develop (and review) any forecasts made which act as a basis for securing the necessary treatment capacity for the waste management system.

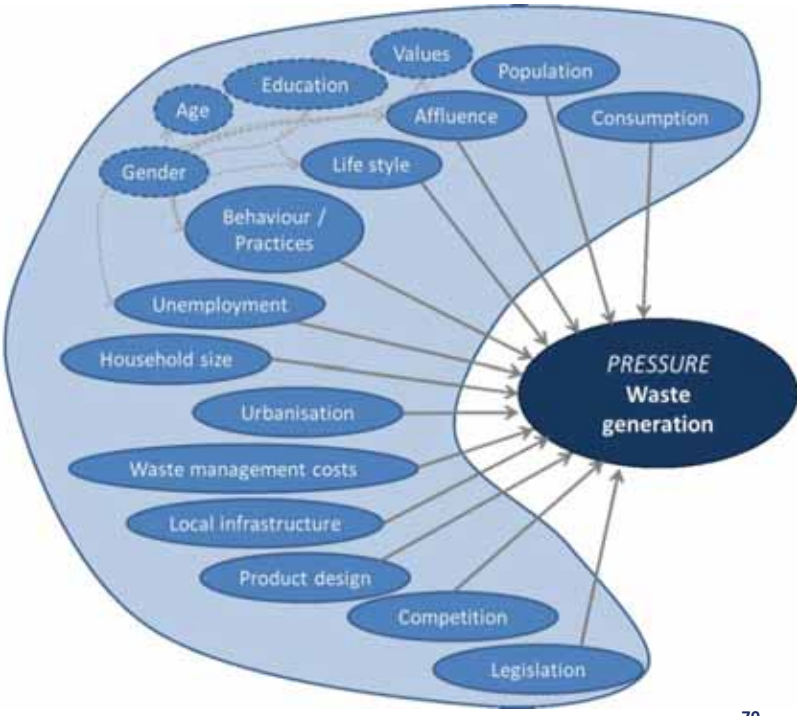

Figure 15-2 Overview of Drivers of Change in Waste Arisings[70]

It is essential that data quality is continually monitored and tracked over the plan period and adjustments made where necessary. 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[71] 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

[70] Decoupling of Waste and Economic Indicators, WRAP, 2012.
[71] DEFRA Information Sheet 8, Waste forecasting, 2005.

waste generated per inhabitant. A low and high value is proposed for both variables to generate a low and high range for the resulting waste generation figure.

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 sought to identify the various items of consumption that most likely generate municipal waste/household waste, assuming 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 applied 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 were 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 would 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 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 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
- By 2030 the ESRI estimates that municipal waste generation will be 33 per cent higher than 2010 levels. In the case of households they forecast waste generation will be 24 per cent higher than current levels.

15.5 MUNICIPAL WASTE PROJECTIONS

This section describes the methodology used in preparing waste projections for the Eastern-Midlands Region.

This chapter sets out projected arisings for household, commercial and municipal waste in the Eastern-Midlands Region. These projections were generated using the waste, economic and demographic data that was available at the time combined with reasonable assumptions on future developments.

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. Eastern-Midlands 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 household waste per capita trends 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

	2012[72]	2013	2015	2017	2019	2021
Consumption Scenario	715,283	693,052	705,483	741,153	786,278	827,667
Population Scenario		735,498	738,150	745,821	755,474	764,073

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

[72] Includes a nominal amount of uncollected waste of over 20,000 tonnes, considerably less than reported.

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 and labour force data. The projections developed are presented in **Table 15-4.**

Table 15-4: Commercial Waste Arisings to 2021

	2012	2013	2015	2017	2019	2021
GNP Scenario	568,873	606,913	677,178	729,618	781,585	829,965

15.5.3 Municipal Waste Projections

The municipal waste projections for the region have been compiled using 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. Their quantities tend to be consistent from year to year. It is anticipated that by 2021 the region will generate between 1.6 and 1.65 million tonnes of municipal waste.

Table 15-5: Municipal Waste Arisings to 2021

	2012	2013	2015	2017	2019	2021
High Range (Consumption and GNP scenarios)	1,284,156	1,299,965	1,382,661	1,470,772	1,567,862	1,657,632
Low Range (Population and GNP Scenarios)		1,332,303	1,415,328	1,475,440	1,537,059	1,594,038

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 may be present in the source data. Things like GNP are difficult features 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 increase in municipal (i.e. combined household and commercial) waste arisings in the Eastern-Midlands Region over the 2012–2021 period will be in the 2–3% range annually. The higher rate of increase in particular presents a challenge to the Eastern-Midlands Region to ensure that adequate collection and treatment capacity is developed to allow the region to achieve its targets. Furthermore, the need to treat more of this material in Ireland means that treatment capacity provision needs to increase at rates above those shown, making the targets even more challenging.

16 MARKET ANALYSIS AND INFRASTRUCTURE PLANNING

This chapter provides a comprehensive review of the treatment capacity market in the EMR 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. The facilities authorised by local authorities and the EPA are listed 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, 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 Eastern-Midlands Region. In mid-2014, there were 247 facilities authorised by local authorities in the region which were permitted to accept and process at least[73] 4.4 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 under 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 included in the Regulation[74]. The table also includes the total authorised capacity by group, and the available intake data reported in 2012 taken from the annual environmental returns submitted by 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 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 land improvement activities (Group 4) while low-volume activities include the management of materials such as CFCs (Group 7) and temporary storage activities (Group 8).

[73] Not all local authorities specified an authorised capacity in tonnage terms for each facility.
[74] Waste Management (Facility Permit and Registration) Regulations, S.I. No. 821 of 2007 (as amended).

The two largest groups account for some 74% of authorised capacity:

- Group 1 (storage/processing and transfer of waste including MSW and C&D waste) activities account for some 1.8 million tonnes or 41% of authorisations; and
- Group 4 (land improvement) activities account for some 1.5 million tonnes or 34% of authorisations.

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

Group and description	WFP Classes[75]	COR Classes[76]	No. of facilities	Total authorised tonnage	Tonnes received 2012	% of capacity received in 2012
G1-Storage/processing	1,7,10	1,7,10	80	1,801,294	638,818	35%
G2-Metals/ELVs	4,12		36	581,354	336,167	58%
G2a-other waste vehicles - non-ELVs	2	3	26	164,036	30,095	18%
G3-WEEE, Batteries	3,9	4	9	136,508	16,691	12%
G4-Land improvement	5,6	5,6,9	56	1,499,441	126,150	8%
G5-Biological treatment	8	11,12	12	193,926	135,692	70%
G6-Organic landspread		13	13	25,999	2,199	8%
G7-Storage of Non-haz, & Refrigerant Wastes	11	14	8	23,722	5,221	22%
G8-Temp. storage		2	7	3,350	1,010	30%
Total	**12**	**13**	**247**	**4,429,629**	**1,292,043**	**28%**

The activities of Group 1 represent the largest treatment capacity available in the region. This grouping has the largest number of facilities (80 of a total of 247) and primarily comprises mechanical pre-treatment facilities which handle and process inert and municipal wastes. The percentage of authorised tonnage used for this grouping (35%) is low relative to the capacity authorised. The region appears to have significant available capacity for the pre-treatment of MSW and C&D wastes. 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 the local authorities must take account of the existing scale of supply of authorised and available capacity as well as the needs of the market.

Group 2 includes metal and ELV activities, consists of 36 facilities and has a utilisation rate of 58%. In this group, authorisations issued by the local authorities are, in some instances, not specified in annual tonnage terms, e.g. ELV authorisations may be defined in terms of the maximum number of cars permitted to be stored on a site at any one time. For such authorisations an estimated annual capacity in tonnes has been used based on the sensible assumptions. This approach may result in an under-estimation of the available capacity.

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

Group 2a activities relate to vehicles that are not ELVs and although there are 26 authorisations in the region, only six of these facilities reported any intake data in 2012.

Group 3 activities, handling WEEE and batteries, describe the main activity at nine facilities that are authorised to accept 136,508 tonnes of waste. Some 16,961 tonnes was accepted in 2012, a utilisation rate of 12%.

The scale of authorisation of Group 4 (land improvement) activities is difficult to present as an annual tonnage. 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. In the region, the 1.5 million tonnes of authorised capacity at 56 authorised facilities is best described as the available market capacity in 2012. 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 recovery may lead to higher demand in coming years 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.

Group 5 facilities are authorised to biologically treat biowaste, agri-sludges and other organic materials. Group 5 includes 12 facilities in the region and the rate of utilisation in 2012 was recorded at 70%. The biological waste recovery sector appears to be buoyant in the region. 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.

Group 6 covers organic land spreading activities in the region. There are 13 facilities registered in the region, all operating under certificates of registration, with authorisation for 25,999 tonnes of material. The utilisation rate waste recorded at 8% in 2012.

Group 7 is made up of facilities that store non-hazardous and refrigerant waste with 23,722 tonnes authorised and a utilisation rate of 22%.

Group 8 in the region is made up of certificate of registration facilities only and the activities cover the storage of farm plastics and the use of PTUs. There are 7 facilities in Group 8, all of which are authorised to accept small tonnages of waste under Certificates of Registration.

16.1.2 Market Capacity Analysis – Findings

Further analysis on the capacity and the rate utilisation by group has been carried out to identify any relevant consistent trends. On paper the region appears to have adequate, or for specific groups an excess 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 247 facilities recorded an intake of almost 1.3 million tonnes of waste in 2012, giving a regional capacity utilisation rate of 28%.

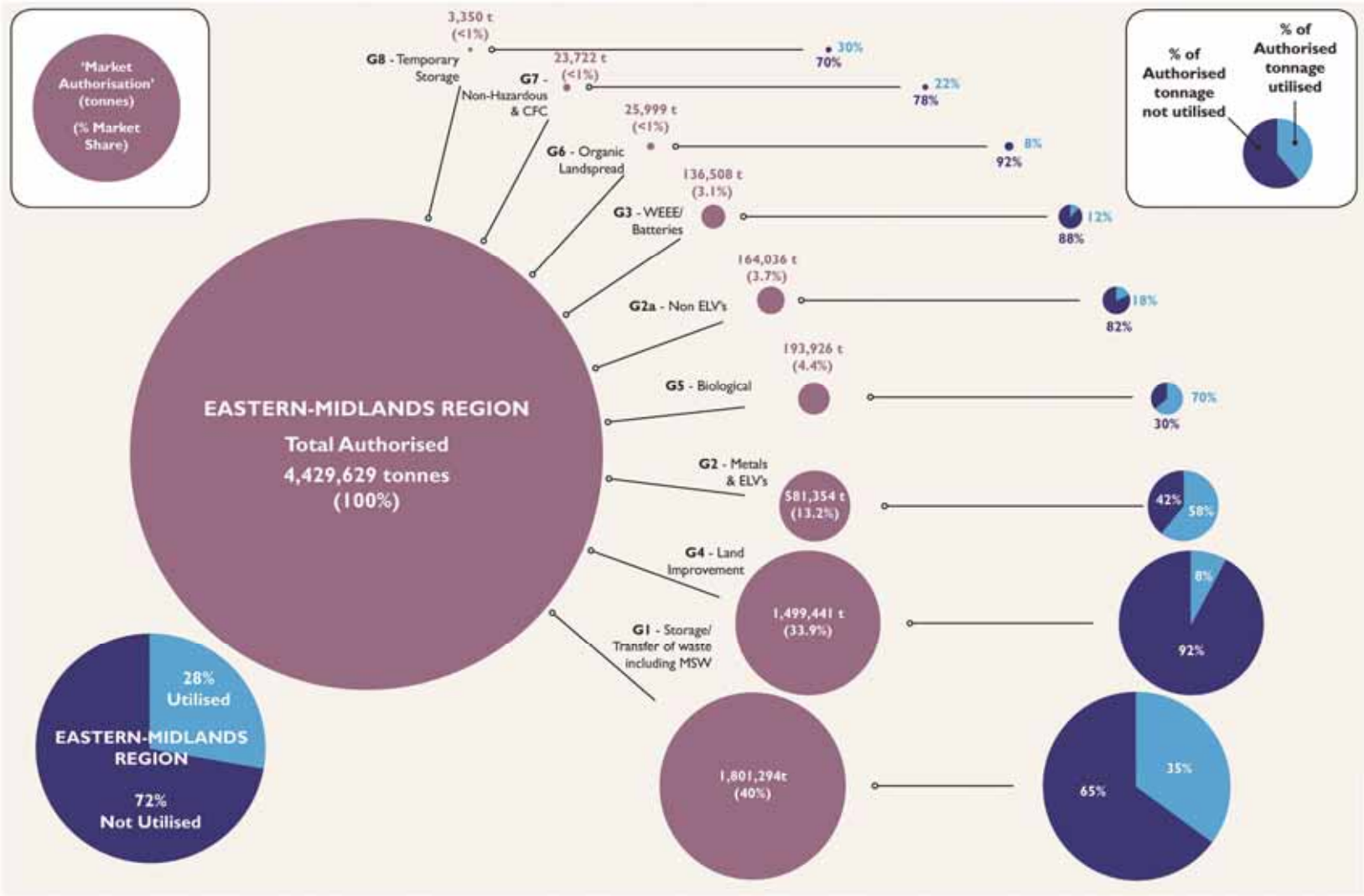

Figure 16-1 Authorisation and Utilisation of Active Treatment Capacities (Grouped) in EMR

Table 16-2 presents on a group basis the number of facilities according to the rate of usage at each site relative to the authorised capacity.

Table 16-2: Number of Local Authority Authorised Facilities in Usage Bands

Usage Bands-Intake in 2012 as a % of Authorised Capacity	G1	G2	G2a	G3	G4	G5	G6	G7	G8	Total
0%	20	3	6	0	28	1	5	0	5	**68**
>0-50%	33	15	11	4	21	2	1	0	1	**88**
50-100%	10	4	2	3	2	2	2	3	1	**29**
>100%	10	1	2	0	1	2	0	0	0	**16**
	73	**23**	**21**	**7**	**52**	**7**	**8**	**3**	**7**	**201**[77]

Table 16.2 shows that significant capacity is authorised in the region that is not currently built or available at the level authorised. The proportion of authorised but unused/underused 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 (35) reported zero intake for 2012 or failed to return an AER. 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. As it stands, the data shows that some 72% of the total authorised "on paper" capacity was not used in 2012.

16.2 EPA WASTE 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

[77] Some 46 facilities either: did not submit an AER; had no authorised tonnage specified; had non-tonnage units specified; or were allocated a limit on amount of waste that may be held on-site at any one time.

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 supplied data to the local authorities relating to licensed, and applied for, waste activities in the region. The data was gathered in 2012 and 2013 and shows there are 106 facilities in the region which hold a waste licence, of which 48 are active at the time of writing.

The licence status of operations at these facilities as categorised by the EPA and further reviewed by the local authorities is shown in **Table 16-3**. In total, these licensed facilities have a gross authorised capacity tonnage (licensed or sought[78]) of 17.6 million tonnes.[79] A facility can be licensed for multiple waste treatment activities with distinct treatment methods or waste streams, often being controlled by separate capacity thresholds. This has been taken into account (where possible) when analysing the capacity data.

Table 16-3: Status and Capacity of EPA Waste Licences and Applications (2012)

Activity Status	Ongoing	Pending		Unlikely		Totals
	Active	Not Commenced	Application Stage	Inactive	Closed	
Number of facilities	48	8	15[80]	24	11	106
Authorised tonnage	7,052,437	1,722,511	3,786,700	4,438,700	691,875	18,692,223
Combined	7,052,437	5,509,211		5,130,575		17,692,223
% of the total	38%	31%		29%		100%

The data in **Table 16-3** shows the scale of licensed (active and pending) capacity in the region but indicates that only an estimated 38% is currently active. Over 5.1 million tonnes of licensed capacity is categorised as inactive or as closed. Many old landfill sites, or landfills which have reached their capacity and are now closed, or other inactive treatment facilities for a prolonged period fall into these categories. These facilities are unlikely to be active in the future and have not been considered further as part of the market analysis.

The pending category includes inactive and closed facilities which have received authorisations but have not yet commenced activities or those at application stage when the register was compiled in 2012 and 2013. The capacities of these facilities were examined and for the most part are expected

[78] Where capacity has been sought in a waste licence application, or additional capacity sought under a waste licence review application.

[79] For the facilities in the region that have applied for amendment to a current waste licence, the incremental tonnage is counted as "pending".

[80] New applications only; the seven facilities seeking extension of existing waste licences are included in "active".

to come on stream, for example the Dublin Waste to Energy Facility, Drehid MBT facility and revisions to existing facilities already operating.[81]

The 48 active facilities in the region have a combined licensed capacity of just over 7 million tonnes. Waste licences granted by the EPA typically specify the principal class of waste activity that is to be 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 tonnage split between the principal classes of activity at the 48 active waste license facilities in the region is outlined in **Table 16-4**. Based on the principal class of activity outlined in the facility waste licences, pre-treatment facilities make up the highest portion of active facilities, accounting for 26 of the total 48 facilities in the region or 47% of the authorised capacity.

Table 16-4: Authorisation Details of Active EPA Waste Licensed Sites

Principal Class of Activity (Waste Treatment Code[82])	No of Facilities	Authorised Tonnage	% of Authorised Tonnage
D1	2	137,200	2%
D5	5	1,985,000	26%
D9*	3	65,257	1%
D13*	1	80,000	1%
D14*	4	679,980	9%
D15*	5	518,000	7%
R1	1	200,000	3%
R2	1	5,000	0%
R3	8	496,000	7%
R5	4	1,230,000	16%
R9	1	110,000	1%
R12*	6	1,110,000	15%
R13*	7	436,000	12%
Total	**48[83]**	**7,052,437**	

*Pre-treatment Codes.

Market information indicates that many other active facilities are primarily engaged in pre-treatment activities, as opposed to actual recovery. This finding was also identified by the EPA in a recent report[84] on capacity and highlights the disparity that can exist between consented treatments and actual treatments once the facility becomes operational. This difference may also be due to inconsistent or outdated interpretations of operational activities and the assignment of the correct treatment codes.

[81] We note that a number of these facilities have become active since the data was compiled by the EPA.
[82] 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
[83] The Drehid Facility is listed twice to account for its separate landfilling and biological treatment capacity; the total number of active facility locations is 48.
[84] National Municipal Waste Recovery Capacity Report, EPA, 2014.

For example, the original waste licence for a facility may indicate a principal activity code of R3 or R5 when in reality the present operation at the site is an R12 or R13 activity. In light of this, the portion of pre-treatment facilities in the region is in reality higher than it appears according to the licences.

The local authorities have reviewed the capacities authorised by the EPA, and current quantities of waste being accepted at these active sites and capacity potentially coming on stream – refer to **Table 16-5**.

Table 16-5: Summary of Active and Pending Facilities and Treatment Capacities

Treatment Code[82] in EPA Licence	Treatment By Hierarchy	No of facilities		Authorised total tonnage		Authorised MSW tonnage	
		Active	Pending	Active	Pending	Active	Pending
R1[85]	Other Recovery	1	2	200,000	665,000	200,000	565,000
R2	Recycling / Pre-Treatment	1	0	5,000	0	0	0
R3	Pre-Treatment / Recycling	8	4	496,000	580,511	223,200	495,000
R5	Pre-Treatment / Other Recovery	4	7	1,230,000	2,587,400	98,000	150,000
R9	Recycling	1	1	110,000	37,000	0	0
R10	Other Recovery	0	1	0	150,000	0	0
R12	Pre-Treatment	6	1	1,110,000	15,000	647,700	0
R13	Pre-Treatment	7	2	436,000	134,000	17,500	77,990
D1	Disposal / Pre-Treatment	2	0	137,200	0	60,000	0
D4	Disposal	0	1	0	300		
D5[86]	Disposal / Other Recovery	5	2	1,985,000	1,100,000	603,750	348,000
D9	Pre-Treatment	3	1	65,257	180,000	0	0
D13	Pre-Treatment	1	1	80,000	60,000	80,000	3,000
D14	Pre-Treatment	4	0	679,980	0	623,540	0
D15	Pre-Treatment	5	0	518,000	0	219,460	0
Total		**48**	**23**	**7,052,437**	**5,509,211**	**2,773,150**	**1,638,990**
		71		**13,011,648**		**4,412,140**	

[85] Note that the R1 row does not include R1 activity of up to 285,000 tonnes authorised at Irish Cement and Lagan Cement. These facilities are operating under IPC licensing and are considered in **Section 16.4.5**.

[86] This row lists only D5 landfills operational during 2014, to reflect closures since 2012.

This table also includes an indication of which tier on the hierarchy facilities belong to. This classification by treatment type has been informed by reviewing the operations at the facilities in question and/or local knowledge, as opposed to relying solely on the consented principal recovery or disposal activity on the waste licence, which, as outlined previously, is not always an accurate reflection of the actual activities undertaken on a particular facility.

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

- Active pre-treatment capacity in the region make up over 2.8 million tonnes or 40% of the active capacity.
- Active landfill capacity accounts for over 1.9 million tonnes or 27% of the active total (1.25 million tonnes of this capacity accepts inert wastes materials only). The "pending" capacity includes two facilities which have not yet come online, one of which is unlikely to be operated as originally intended over the lifetime of this plan. The landfill situation has changed significantly since 2012, when seven facilities were actively accepting MSW. At the time of writing three landfills accepting MSW are recorded as active in the region, plus one landfill accepting ash and two accepting inert and construction and demolition materials. It is the capacity of these five active facilities which is shown in the table.
- Treatments defined by code R5 are primarily soil recovery sites although the list of facilities currently authorised with this code includes two mechanical waste-processing facilities. In reality these are pre-treatment sites and account for 260,000 tonnes of the total (i.e. 1,230,000 tonnes). All of the "pending" capacity relates to soil recovery sites.
- Biological treatment capacity in the region is small when compared to other treatments and represents only 3% of the active capacity. No pending capacity is listed.
- A review of the "active" non-composting facilities allocated code R3 indicates that these facilities are primarily undertaking pre-treatment operations. The bulk of "pending" facilities are similar operations which will result in a further 665,511 tonnes of pre-treatment capacity coming on stream if activated.

The analysis shows that in some instances the codes consented to by the EPA at the application stage differ from the activities which occur "on the ground" when a site becomes operational. Closer examination of the numbers reveals that there are more facilities in the market which are undertaking pre-treatment activities but have been assigned recovery codes, e.g. R3 or R5. It is estimated that the "active" pre-treatment capacity in the region is over 3.2 million tonnes (46% of the active market).

For the "active" authorised facilities, data was available for waste materials transported out of each facility and limited data was available on wastes recovered at the facilities. This data is presented in **Table 16-6**. Comparing the waste transferred off-site to the quantities of waste authorised to be accepted allows an analysis of the rate of utilisation at the active facilities while also providing further insights into the type of the waste treatment activities which are prevalent in the region.

The quantity of waste being handled and processed at pre-treatment sites (R12, R13, D9, D13–D15) in 2012 was over 1.2 million tonnes. This represents almost 66% of the waste handled and treated in that year at active processing sites (the intake at disposal sites is considered separately).

Table 16-6: Waste handled at Active Waste Licensed Facilities

Code[82] & outline	Number facilities	Total authorised intake	Authorised MSW intake	Waste sent offsite[87]/ 2012	MSW Sent offsite[87]/ 2012	Recovered onsite
R1-Use as a fuel[88]	1	200,000	200,000	54,483	25	193,836
R2-Solvent Reclamation	1	5,000	0	496	22	0
R3c-Biological Sites - composting, biogas	4	226,000	226,000	5,917	5,917	61,762
R3-Organic substance - recycling paper plastic	4	270,000	43,000	266,547	242,171	0
R5-Inorganic Substances Recycling Reclamation	4	1,230,000	98,000	200,908	156,164	0
R9-Used oil refining	1	110,000	0	13,763	457	0
R12*-Waste Exchange	6	1,110,000	647,700	363,665	258,034	0
R13*-Storage	7	436,000	17,500	134,036	18,279	0
D1-Deposit on, in or under land	2	137,200	60,000	8,481	3	0
D5-Specially engineered landfill	5	1,985,000	578,750	122,422	944	253,131
D9-Permanent storage	3	65,257	0	18,962	487	0
D13*-Blending / mixing	1	80,000	80,000	59,136	59,136	0
D14*-Repackaging	4	679,980	623,540	381,126	257,838	0
D15*-Storage	5	518,000	219,460	305,027	199,902	107
	48	**7,052,437**	**2,793,950**	**1,812,547**	**1,199,379**	**508,836**

*Pre-treatment Codes

Recovery activity in the region during 2012 was dominated by the active waste-to-energy facility in the region. Active biological treatment sites recovered over 61,000 tonnes including the composting of various biodegradable waste streams, both municipal and industrial, in addition to the bio-stabilisation of "organic fines" arising from the mechanical processing of residual municipal waste. This total also includes the treatment of sludges. In excess of 253,000 tonnes of waste was recovered at the active landfill sites, primarily being used as cover for remediation and restoration works.

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 to waste activities and capacities. The Regulations in place which

[87] Data from EPA Pollutant Release and Transfer Register report which provides the total quantity of wastes sent off-site from waste licensed facilities

[88] Note that the R1 row does not include R1 activity of up to 285,000 tonnes authorised at Irish Cement and Lagan Cement. These facilities are operating under IPC licensing and are considered in **Section 16.4.5**.

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 the local authority and EPA authorised treatment capacities to allow a seamless analysis of the market. Each authorisation area of the 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 Eastern-Midlands Region has over 7 million tonnes of active EPA-authorised treatment capacity and 4.4 million tonnes of local authority authorised treatment capacity. The latest EPA data shows a further pending capacity of 5.5 million tonnes. The active capacity is available for treatment of many types of waste streams. These facilities can accept, and are accepting, wastes from outside the region. Nevertheless, the treatment capacity in the region is significant in its own right and when considered with treatment capacity in the other regions indicates 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 to be avoided where possible. There is a 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 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 the tonnage sought by the developer. Many of the authorised capacity tonnages appear to have been allocated according to the maximum tonnage allowable for that class as defined in 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, it may restrict the development of future facilities in a market which 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 facilities allocated two or more classes of activity. It would be preferable if in future the authorised capacity were 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 the authorisation 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 Articles 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[89] 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 such as "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 2.4 million tonnes of the 4.57 million tonnes of authorised capacity. Pre-treatment facilities represent 53% 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 coordination between the lead authority, local authorities in the region and the EPA.

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.

[89] European Commission, Guidance on the interpretation of key provisions of Directive 2008/98/EC on waste.

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.

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.

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 are a valuable part of the collection infrastructure in the region and help to serve the growing population. In 2012 over 75,400 tonnes of waste was collected using this infrastructure.

Bring banks can be difficult to retain in particular locations due to issues such are 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 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 three in 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[90] residual waste to landfills (see policy action A.1.1 in **Section 19.2**).

The local authorities anticipate 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.

[90] 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.

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[91] 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 ongoing 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 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 with 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.

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.

[91] 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.

For policy E12, it is recommended that 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 authorised sites have a capacity of 0.9 million tonnes, with significant pending capacity for facilities at waste licence application stage. 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 48% 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 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,[92] 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

[92] Such as incineration (waste-to-energy), co-incineration (cement kilns), pyrolysis and gasification.

of the EPA. These facilities typically operate on a national market basis accepting waste from all parts of Ireland.

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 16-7** 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[93]) to accept 1,227,875 tonnes of MSW. Three of the six facilities are currently active. The intake levels at active facilities is 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 that 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 16-7**, 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 it 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 life time 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.

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 16-7**. 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.

[93] 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.

Table 16-7: Active and Pending Capacity for the Thermal Recovery of MSW

Thermal Recovery Activity (Number of facilities)	Active (Tonnes)	Pending (Tonnes)	Total (Tonnes)	Intake (2013)
Waste-to-Energy (2)	220,000[94] (1)	600,000[95] (1)	820,000	206,000
Cement Kilns (3)	215,000 (2)	127,875 (1)	342,875	140,000[96]
Pyrolysis (1)	-	65,000 (1)	65,000	-
Total (6)	**435,000**	**792,875**	**1,227,875**	**346,000**

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 this 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 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[97] abroad. The EPA has 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.

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.

[94] The active capacity refers to the Indaver Waste-to-Energy facility.
[95] The pending capacity refers to an authorised but unbuilt capacity. Only capacity with planning permission and EPA licences has been included.
[96] This figure relates to SRF, which is not exclusively from municipal sources.
[97] 39,612 tonnes was sent for incineration without energy recovery (D10) and 20,464 tonnes was sent for incineration with energy recovery (R1).

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[98] which sits on the recycling tier of the hierarchy.

The capacity for biological treatment both in the region and nationally has grown during the period of the last plans. Nationally, there is 246,000 tonnes[99] of treatment capacity authorised by the Department of Agriculture, Food and the Marine to treat food organics. In the region there is 58,000

[98] It should be noted that biological treatment of organic fines is a recovery activity.
[99] Data valid as of October 2014.

tonnes[99] 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[100] 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[100] tonnes 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[101]. 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 expected increases in biowaste and organic waste which is 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 75,000 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 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.

[100] National Waste Report 2012, Appendix I, EPA (2014).

[101] It is noted that quantities of segregated biowaste are currently being exported to biological facilities in 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.

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 of 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[102] 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[103] 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.

[102] The Irish Recycled Plastic Waste Arisings Study – Update 2011.
[103] 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 components of products that have become waste are prepared so that they can be reused 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 694,441 tonnes through a combination of existing collection systems. The quantity of household waste managed, collected at the kerbside, was 560,786 tonnes or 81% of the total. The overall percentage of households signed up to a kerbside collection service was 95% in 2012, an increase on the previous year.

Approximately 18% 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 where 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[104]. 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.

[104] 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;
- To protect river habitats and water quality, 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;
- Ensure 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 of these buffer zones;
- 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 an 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 adaption measures are likely to include restrictions or modifications to facilities operating within or adjacent to areas of flood risk eliminating 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 RWMPs, 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 CCMA, Dublin City Council (DCC) was selected as the lead authority for the Eastern-Midlands Region.

eastern - midlands
waste region

As lead authority for the region, DCC's responsibilities include the preparation of the RWMP, the coordination of the implementation of the plan and monitoring the implementation of the new plan through the preparation of Annual Reports.

To prepare and coordinate the implementation of the RWMP, DCC, as the Lead Authority for the region established a regional waste management office. The office is staffed by a Regional Coordinator, a Regional Resource Efficiency Officer, a Technical Officer, and a Regional Prevention Officer.

Figure 17-2 Key Stakeholders for Plan Delivery

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.

The role of the lead authority/Regional Waste Management Office includes:

- 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 and facilitate the training needs of the region to help ensure effective implementation to 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.

Governance of Eastern-Midlands Region

Following the designation of the lead authority for the region, a Regional Waste Steering Committee was established consisting of one member from each of the 12 local authorities and representatives from the lead authority. The purpose of the regional Waste Steering Committee is to make the strategic decisions necessary to achieve the objectives set out in the plan, and its their 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 are delivered on time;
- To establish task groups as required to support the delivery of plan objectives; 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 the areas of implementation that are being led by the local authorities. The new set up 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 which will be established following the conclusion of the 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 small minority of local authorities still engaged in the collection of household waste nationally, but none engaged in collection in the 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.

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 the "green your festival" initiative;
- 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 EMR;
- Prepare annual RMCEI report and local authority waste return for the EPA; 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:

- Participate in the NCCWMP;
- 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;
- Publication of the National Waste Report;
- 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 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 applications and review 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 where 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 EMRWMO and local authorities within the region to develop standard mandatory conditions 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 NFTSO regarding enforcement and regulation is fully described in **Section 14.1.3**. To ensure all waste exports and movement of hazardous waste within the state are carried out in accordance with the Regulations;

- To maintain all necessary documentation;
- To liaise with the regional Waste Management Office and local authorities in relation to any issues arising from the export or import of waste; and
- Participation 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 the waste collection.

The 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 DECLG 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 quality recycling;
- Participate in relevant forums and consultations with the EPA, Government Departments and the local authorities; and
- Share expertise in the form of organising 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 to 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 any 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 the emphasis on waste prevention and resource efficiency;
- Segregation of waste produced into appropriate waste streams;
- Adhere to and comply with all 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 co-operative 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 FINANCES AND INVESTMENT

This chapter describes the current projected finances of the local authorities in the region relating to waste management activities.

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 budget 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 local authorities' annual budgets. 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, which shows income by activity.

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.

While budgets are prepared to a statutory format, councils still have some discretion as to where they account for certain forms of transactions. It was decided therefore that certain transactions would be identified and reported separately. These transactions are:

- Finance charges, loans repayments, bad debt write-offs, etc. This aimed to separate financial expenditures from operational ones;
- Regulatory Offices, such as the TFS Office and the NWCPO, which have a national remit; these are provided by one council and are funded by user charges; and
- Private sector landfill levy receipts and expenditures. Where a private sector landfill is in operation, the relevant local authority collects the landfill levy due from the operator and passes it on to the DECLG. This is a "contra" item (though the councils receive a small fee for processing the payments). In practice, some councils show this expenditure and income under Landfill Operations while others account for it under monitoring of waste regulations.

There is, however, one aspect of local authority accounting that cannot be accommodated in this approach, and that is that many councils categorise activities that could be defined as "waste management" under alternative 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

Total expenditure on waste-related activities by the 12 councils in the Eastern-Midlands Region is budgeted to be €160.68 million in 2014, a reduction of the order of €10 million on the expected 2013 outturn. In the event of no new activities being implemented, expenditure is expected to remain broadly at this level annually in real terms (i.e. not allowing for inflation), as shown in **Table 18-1**. There are however, some changes to the profile of the expenditure.

Since the drafting of this plan, the budgets for 2015 have been prepared. However, the assessment of the financial implications will show the expected differences in expenditure and income between the plan scenario and the counterfactual. Consequently, the adoption of the 2015 budgets will have no impact on the conclusions shown in this chapter.

Table 18-1: **Counterfactual Scenario Financial Projections**

	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	30.97	26.78	22.99	23.03	23.06	23.11	23.15	23.20	23.26
Recovery and Recycling	14.07	13.54	13.54	13.54	13.54	13.54	13.54	13.54	13.54
Waste to Energy	3.36	1.80	1.40	1.40	1.40	1.40	1.40	3.30	3.30
Waste Collection	8.29	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45
Litter Management	11.59	11.69	11.71	11.74	11.77	11.82	11.86	11.91	11.97
Street Cleaning	61.97	60.71	60.91	61.12	61.37	61.64	61.93	62.27	62.64
Waste Regulation	13.78	12.49	13.37	13.27	13.18	13.12	13.06	13.02	12.98
Waste Management Plan	4.25	4.20	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Financial Costs	8.65	7.89	7.84	7.34	7.33	7.31	4.50	4.48	4.46
Central National Offices	2.06	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13
Landfill Levy	11.08	14.00	15.80	15.80	15.80	15.80	15.80	15.80	15.80
Total Expenditure	**170.78**	**160.68**	**156.60**	**156.27**	**156.49**	**156.76**	**154.28**	**153.25**	**153.68**
Direct Income	**45.44**	**41.82**	**42.38**	**42.38**	**42.38**	**42.38**	**40.28**	**40.28**	**40.28**
Funding from other sources	**125.33**	**118.86**	**114.22**	**113.89**	**114.11**	**114.38**	**114.00**	**112.97**	**113.40**

Note: The headings used in **Table 18-1** are those of the statutory tables with three additional headings for finance costs, central national offices and collection of the landfill levy from private sector operators.

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 general income such as commercial rates and local property tax**.**

18.2.1 Landfill Operation and Aftercare

A key trend in the Eastern-Midlands Region since 2000 has been the closure of much of the local authority landfill capacity in the region. These included but are not limited to Silliott Hill, Kildare (2001); Dunsink, Fingal (2003); Arthurstown, South Dublin (2010); Rampere, Wicklow (2012); and Whiteriver, Louth (2013).

Landfill sites in Offaly and Laois (e.g. Kyletalesha) receive waste at present, but are acting as transfer stations with the waste collected transported elsewhere for disposal. The current active landfill facilities in the region include three private facilities for non-hazardous waste. These are located in Wicklow (Ballynagran) , Kildare (Drehid) and Meath (Knockharley). There are also three facilities open for the acceptance of inert wastes in Dublin (Naul), Meath (Gormanstown) and Offaly (Clonbullogue).

The financial profile of a landfill closure is typically as follows:

- When a landfill is closed, there is an immediate loss of the revenue generated from the gate fees;
- Operations associated with the deposit of waste cease. However, certain activities continue such as gas monitoring; pipe work; leachate collection, transport and treatment; security; insurance; EPA licensing; testing and sampling work;
- Expenditure is incurred for capping and closure of the landfill. The scale of this expenditure can vary, depending on a range of factors unique to individual landfill sites. Capping and closure may take more than a year to complete and there is often further work of this nature as subsidence occurs;
- Operations expenditure should 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;
- Ongoing monitoring and aftercare will continue for many years, potentially as many as 50.

In the counterfactual for the Eastern-Midlands Region, the reduction in landfill operations and aftercare expenditure from €30.97 million in 2013 to €22.99 million in 2015 shown in **Table 18-1** is largely due to the completion of capping and closure works in Arthurstown. The balance is due to capping and closure works completed at other sites that have closed in recent years. From 2015 onwards, it is anticipated that ongoing operations and aftercare costs will remain at the order of €23 million per annum for the region.

Central overhead costs account for about 12% of landfill operations and aftercare expenditure. As most landfill sites have now closed, the level of income is much lower than was earned in past years. Income from electricity generation in the region is less than €0.25 million per annum. This will fall off in future years as gas output diminishes.

Other than these revenue sources, the budgets for landfill income in 2014 include items such as inter-authority transfers and pension deductions from staff working on the landfill sites and in direct administration functions.

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 no plans in mid-2014 to augment the existing infrastructure of civic amenity centres, bring sites or bottle banks.

Occasional and seasonal expenditures, such as Christmas tree recycling, collection of waste tyres/pallets during Halloween and various 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. Overhead cost allocations, which include some educational and awareness expenditure, account for some 16% of the expenditure under this heading.

The apparent reduction in expenditure on recovery and recycling from 2013 to 2014 is not due to any diminution in the scale of activities, but reflects some property transactions and finance costs. Most of the reduction is due to one council, which purchased a site on which a centre was located. The site had previously been leased and the reduction in expenditure reflects the elimination of the leasing costs. The balanced of the reduction is due to lower loan charges.

In respect of income generation, gate fees and DECLG grants provide some 52% 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 all the related costs.

18.2.3 Thermal Recovery (Waste-to-Energy)

Expenditure under thermal recovery treatment is primarily expenditure on the proposed Dublin Waste-to-Energy facility and reflects mainly financial costs associated with the project.

For the purpose of the counterfactual scenario, it has been assumed that expenditure in respect of this project will fall from €1.80 million in 2014 to €1.40 million during the construction and early operations phase and will then cease. The financial outcomes during the initial periods are not possible to predict, in terms of either amounts or timing. The projected receipts from facility are therefore included under the “Funding from Other Sources” heading shown in **Table 18-1**. However, as with “other sources” such as commercial rates and local property tax, it is not possible to predict what the level of income will be from each of these sources on an individual basis.

18.2.4 Waste Collection

None of the councils in the Eastern-Midlands Region provide any significant waste collection services at this time. Of the €5.45 million expenditure budgeted in 2014, some €3.58 million, or 66%, is central management and other overhead costs that have not been redistributed across the other activities.

Costs accounted for include Dublin MRF costs; brown bin (organic) collection awareness programmes; participation in pilot projects and, in particular, bad debt provisions associated with former waste collection operations. Some waste collection infrastructure debt payments are also included here.

In effect, much of these costs is overhead and legacy costs associated with household and, to some extent, commercial waste collection operations that have now ceased.

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. It may be anticipated that expenditure will reduce if debt recovery improves, but at present, the assumption of no change in expenditure is considered the more conservative.

Income of under €1.0 million is attributed to waste collection and is derived mainly from leasing of waste collection facilities; collection of debt and end-of-life vehicle and packaging registration charges.

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 €4.24 million of the total expenditure on litter management of €11.69 million; litter initiatives and awareness programmes expenditure is €2.81 million; and service support costs €4.64 million. Of the total expenditure of €11.69 million, 65% is accounted for by the four Dublin councils. 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, sometimes carried out in partnership with DECLG and/or Bord Fáilte;
- Competitions such as City Neighbourhoods and Pride of Place;
- 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 at this time, it has been assumed that expenditure in this area will increase marginally. Income under this heading is, in the main, confined to litter fines and pension deductions.

18.2.6 Street Cleaning

Street cleaning is the largest single budgetary heading in the Eastern-Midlands Region, accounting for expenditure of €60.71 million, or 38% of the entire Eastern-Midlands Region 2014 budget. Of this amount, €56.15 million, or 92%, is accounted for by the four Dublin 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

Street cleaning services are provided on a 24 hour basis in Dublin City centre, and in many areas the service is provided on a 15 hour per day basis.

For the purpose of the counterfactual scenario at this time, it has been assumed that expenditure in this area will increase marginally. Budgeted street cleaning income in the region is €0.86 million for 2014. This comprises pension deductions and some contributions from clean-ups that are carried out on a repayable basis.

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; the monitoring and control of waste movements and producer responsibility obligations, such as packaging, WEEE, batteries and accumulators and end-of-life vehicles; together with the operation of the National TFS and Waste Collection Permit Offices. However, the operation of these national offices has been categorised separately in this analysis.

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 broadly at current levels. Income is generated by waste facility permit application, review and inspection fees.

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 broadly at the current level in future years with the management and running of the regional waste office an ongoing cost over the plan period. Income is generally from inter-authority contributions.

Identified financial expenditures, being primarily loan repayments, are budgeted at €7.89 million for 2014. These financial expenditures do not, for example, include bad debt write-offs associated with waste collection services, expenditure on the waste-to-energy facility and other finance costs cited in the previous descriptions.

The financial costs here are primarily loan repayments related to investment in landfill infrastructure, including capping and closing costs and purchase of land. These expenditures are expected to fall marginally in future years.

18.2.9 Central National Offices

There are two central national offices in the Eastern-Midlands Region: the TFS and the NWCPO. These are normally accounted for under the waste regulation and monitoring activities, but are separated in this analysis as they are in effect contra items, i.e. they are expected to recover their full costs through user charges.

18.2.10 Landfill Levy

Where a private operator carries out the business of receiving waste in a licensed landfill, the relevant local authority is responsible for monitoring waste volumes received at the site and for collecting the national landfill levy (€75 per tonne in November 2014). The moneys collected are forwarded to the DECLG as part of the Environment Fund and the local authority retains a small amount to recover administration costs.

18.2.11 Counterfactual Scenario – Summary

In summary, it is not envisaged that there will be any substantive change in local authority waste management activities in the foreseeable future, with one exception. It is expected that expenditure on landfill operations and aftercare will fall progressively as closure and capping activities cease and as some operations – such as leachate generation – will decrease over time. Consequently, expenditure on landfill operations and aftercare should fall in the short term. Elsewhere, expenditure is projected to remain at current levels. 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 fall to the order of €153 million per annum. Income from user charges, specific grants,[105] pension deductions, etc. will increase marginally to just over €40 million.

The funding requirement over the counterfactual period is projected to be under current levels, i.e. in the order of €114 million. This funding is provided from each council's 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
Total Expenditure	160.68	153.25	153.68
Income from User Charges, Specific Grants, etc.	41.82	40.28	40.28
Funding required from other sources	118.86	112.97	113.40

[105] Note: In this discussion, "specific grants" refers to grants that are provided for, and must be used for, specific purposes. Other Government grants are general purposes grants.

18.3 COUNTERFACTUAL ANALYSIS

The counterfactual scenario shows the expenditure profile of the local authorities in the Eastern-Midlands Region to be as in **Table 18-3**. As noted previously, the largest single item of expenditure is street cleaning, which accounted for €60.71 million in 2014. This is 38% of the total expenditure for the region. If it is combined with litter management, the expenditure comes to €72.4 million or 45% of the region's expenditure. This is a substantial commitment, in which there is no potential for cost recovery through user charges. Essentially, street cleaning is an activity that must be funded by general income such as commercial rates or the local property tax (previously general income came from the Local Government fund). Income generation from litter fines is negligible.

Table 18-3: Expenditure Profile by Activity – Current and Projected

	2014 Budget € m		2020 Proj. € m	
Landfill Operation and Aftercare	26.78	17%	23.20	15%
Recovery and Recycling	13.54	8%	13.54	9%
Waste to Energy	1.80	1%	0.00	0%
Waste Collection	5.45	3%	5.45	4%
Litter Management	11.69	7%	11.91	8%
Street Cleaning	60.71	38%	62.27	41%
Waste Regulation	12.49	8%	13.02	8%
Waste Management Plan	4.20	3%	1.45	1%
Financial Costs	7.89	5%	4.48	3%
Central National Offices	2.13	1%	2.13	1%
Landfill Levy	14.00	9%	15.80	10%
Total	**160.68**	**100%**	**153.25**	**100%**

After street cleaning, the next highest activity in terms of expenditure is landfill operations and aftercare, which accounted for some €26.8 million in 2014, or 17% of total expenditure. This activity is very much a legacy of local authority involvement in waste collection and disposal. As there are limited gate fees in the region, and as other income such as electricity generation is quite modest, councils are dependent on retained reserves or charges on general income to fund current operations and aftercare activities.

In the counterfactual scenario, it is not envisaged that the proportion of expenditure accounted for by these three activities (street cleaning, litter management and landfill and aftercare) will diminish to any significant extent. In November 2014, they account for 61.7% of expenditure. It is projected that by 2021 they will account for 63.5%, which is modest increase.

In **Figure 18-1** the expenditure items as shown in the statutory tables have been grouped into categories so as to show the underlying nature of the expenditure more accurately. These groupings are as follows:

- Landfill, waste collection and finance charges. This is in effect the former waste collection and disposal activities. Finance is included in this group as the major portion of the finance costs being borne by the local authorities in the Eastern-Midlands Region relates to waste

disposal infrastructure. As there is very limited revenue generating activity in this group, this can be described as the legacy costs of local authority withdrawal from these services.

- Recovery, recycling and waste-to-energy. The proposed waste-to-energy plant sits on the other recovery tier of the waste hierarchy, hence its inclusion in this group;
- Litter and street cleaning, given the close relationship between these two activities;
- Regulation and monitoring, together with the contra items. Contra items include the national centralised offices such as the TFS Office as well as the collection of the landfill levy from private sector operators.

The allocation of expenditure across these activities is shown in **Figure 18-1**. It can be seen that street cleaning, litter, waste collection and landfill activities accounted for 70% of total expenditure in 2014. This proportion is expected to remain at this level over the duration of this plan. Activities that are at a higher level in the waste hierarchy, such as recovery, recycling and regulation, account for 30% of local authority expenditure.

Figure 18-1 Expenditure, Income and Funding Requirement by Group Activity (2014)

The key finding from this analysis of current expenditure in the Eastern-Midlands Region is that 70% of the expenditure is on "lower order" waste management activities such as landfill aftercare, street cleaning and litter management. Expenditure on "higher order" activities in the waste hierarchy, such as waste prevention, recovery and recycling, is much lower. 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 and, given the length of time required for landfill aftercare, it is likely to remain like this.

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 Eastern-Midlands Region is €118.86 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 gap in money terms is in recovery, recycling and thermal recovery, where the funding gap is just over €8 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, 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 or charges that can be put in place in such a manner as not to change good consumer practice.

In money terms also, the funding requirement for waste regulation and monitoring regulation appears small relative to other gaps. However, given that this group includes the contra items, the shortfall of just over €10 million is due to the regulatory and monitoring activities. The potential to raise additional revenues should be reviewed as part of the plan.

The funding required for landfill, waste collection, street cleaning and litter activities is just in excess of €100 million at present. Two main options should be reviewed here: the scope to reduce costs through operational efficiencies and the potential to reduce the services provided through awareness programmes and improved citizen behaviour, although these measures take time to be effective.

18.5 PLAN SCENARIO

The counterfactual scenario – i.e. assuming that there is no new regional waste plan – does not envisage any substantive change in local authority waste management activities, though it is expected that expenditure on landfill operations and aftercare will fall over time, because certain factors driving expenditure – such as leachate generation – tend to reduce over time.

18.5.1 Potential Cessation of Existing Activities

While developing the plan as presented in this document, 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 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. The existence of 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 would be essential that the effectiveness of current operations was not 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. Decisions such as that illustrated are policy decisions for the relevant local authorities.

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 plan detailed in this document, 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 Eastern-Midlands 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** – The staff implications of the proposed actions are the establishment of a Regional Waste Management Office. For the Eastern-Midlands Region, an office comprising a regional coordinator, a regional resource efficiency officer, a regional prevention officer, a technical officer and administrative support is planned. We suggest that the additional funding required, including administrative and facility overhead costs, will be of the scale of €490,000 per annum. This will be an additional cost to the region, assuming that staff resources are not transferred or re-deployed from existing activities.
- **Environmental awareness services –** As outlined in **Chapter 8,** these activities focus on specific areas and aspects of waste management including waste prevention and resource efficiency. It is imperative that each local authority appoints or retains at least one EAO on a whole-time basis to work on activities including the implementation of the waste plan. In addition, a provision for an additional expenditure of €750,000 in the EMR 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 as policy B1.2 in **Chapter 19**.

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 ongoing 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 rearrange sites
D 2.1	Establish Regional Waste Management Office (RWMO) and the requisite structures	Waste Management Plan	Environmental Fund	Lead Authority – Regional Office	Can be partially fulfilled by re-deployment	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	Can be partially fulfilled by re-deployment	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	Monitor apartment complexes to improve compliance with the segregation of waste	Waste Regulation Monitoring	Permit Fees	Local Authorities	None	Funding required
G 2.3	Prepare applications for high-risk landfill sites	Landfill Aftercare Costs	DECLG	Local Authorities	None	Funding required

Action	Summary Description	Activity Heading	Potential Funding Source(s)	Main Responsibility	Staffing Required (Over & above existing staff)	Additional Finances
G 2.4	Remediate high-risk sites (subject to funding being available)	Landfill Aftercare Costs	DECLG	Local Authorities	None	Funding required
G 4.1	Identify areas of low household waste collection coverage and determine the cause	Environmental Awareness Services	Environmental Fund	Lead Authority – Regional Office	None	Funding required to cover the survey
G 4.2	Design and implement a programme to regulate areas of low household waste collection coverage	Environmental Awareness Services	Environmental Fund	Local Authorities	None	Funding required for implementation
G 4.3	Engage with waste collectors to serve areas of low collection coverage	Environmental Awareness Services	Environmental Fund	Lead Authority – Regional Office	None	Some funding implications for LAs
H 2.1	Investigate viability of pilot scheme for farm chemicals reuse	Recycling Activities	Range of Fees; LEOs; PRI Schemes	Lead Authority – Regional Office	None	Yes
H 2.2	Examine the expanding of reuse schemes for bulky or hazardous waste	Recycling Activities	Range of Fees; LEOs; PRI Schemes	Lead Authority – Regional Office	None	Yes
E3	Develop the existing networks for bring infrastructure to facilitate Hazardous and Non-Hazardous wastes	Recycling Activities	Local authority budgets	Local Authorities	None	Yes
E5	Explore the possibility of accepting hazardous waste at existing CA facilities	Recycling Activities	Local authority budgets	Local Authorities	None	Yes
E7	Work with the EPA and others to support collection of hazardous farm waste	Recycling Activities	Local authority budgets	Local Authorities	None	Yes
E11	Consider the potential to develop activities at closed landfill sites	Other	Local authority budgets	Local Authorities	None	Yes

- **Recycling activities** – The actions in respect of recycling are focused on improving recovery of waste for potential reuse; as well as collection of hazardous waste and the establishment of pilot schemes aimed at areas such as farm chemical reuse. We provide an expenditure of €1.0 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 €200,000 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 Eastern-Midlands Region is currently of the order of €27 million per annum and is projected in the counterfactual case to fall to circa €23 million by 2021. 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 11 sites of this nature in the Eastern-Midlands Region and the potential cost is between €23.52 million and €41.15 million. This is based on experience elsewhere in Ireland. In this waste strategy, we provide for expenditure of €4 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**. The incremental funding needs for local authorities arising from these Action Plans in the Eastern-Midlands Region is estimated at €1.45 million per annum initially, rising to €1.55 million.

Table 18-5: Summary of Additional Expenditure Needs

	Expenditure per annum €	Income per annum €
Regional WMO	490,000	0
Environmental Awareness Services	750,000	0
Recycling Activities	1,000,000	1,000,000
Waste Regulation Monitoring	200,000	200,000
Remediation of High-Risk Landfill Sites from 2017	4,000,000	3,600,000
Total	**6,440,000**	**4,800,000**

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 Eastern-Midlands Region, no capital investment[106] requirements are foreseen. For the Eastern-Midlands 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 reuse infrastructure is anticipated.

Additional private sector investment is anticipated in the development of other recovery facilities to treat residual municipal wastes and residual hazardous wastes. The latter need is identified by the EPA in the National Hazardous Waste Management Plan 2014–2020. The capacity need expressed in the plan for these types of treatment is on a national basis.

[106] 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 €62.5 million. These investments are to provide additional waste management capacity – nationally and regionally – and are those specified in this regional waste strategy. 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 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[107] 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 least substantially to regional capacity.

Table 18-6: Anticipated Investment – Private Sector

Infrastructure Element	Capacity (Tonnes)	Estimated Cost (€)
National Treatment		
Thermal Recovery	300,000	200 million
Hazardous Waste Thermal Recovery	50,000	60 million
Total Investment		**260 million**
Regional Treatment		
Biological Treatment – biowaste	75,000	22.5 million
Biological Treatment – agri-waste		40 million
Reuse; Reprocessing; Pre-Treatment	–	Not Quantified
Total Investment		**62.5 million**

[107] Refer to 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 Eastern-Midlands Region given in Table 18-7.

Table 18-7: Counterfactual Scenario – Funding Requirement

	2014	2015	2016	2017	2018	2019	2020	2021
	Budget € m	Proj. € m	Proj. € m	Proj. € m	Proj. € m	Proj. € m	Proj. € m	Proj. € m
Total Expenditure	160.68	156.60	156.27	156.49	156.76	154.28	153.25	153.68
Income from User Charges, Specific Grants, etc.	41.82	42.38	42.38	42.38	42.38	40.28	40.28	40.28
Funding required from other sources	118.86	114.22	113.89	114.11	114.38	114.00	112.97	113.40

It can be seen that in this counterfactual scenario, the funding required from sources other than user charges or specific grants over the period of the plan is, in real terms (i.e. no provision for inflation), of the order of €4 million to €6 million less than the funding requirement shown in the 2014 budgets. In summary, it is envisaged that the financial implications of the regional plan for the Eastern-Midlands Region are that:

- Local authorities in the region will incur additional current expenditure of the order of €2.44 million in 2015, i.e. from the €156.60 million shown in the counterfactual case, Table 18-7, to €159.04 million shown for 2015 in the Regional Waste Plan scenario, Table 18-8. A similar increase is projected in 2016. The increase in total expenditure should rise to €6.44m in 2017 and remaining 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 €1.2 million in 2015 and 2016, rising to €4.8 million in 2017 onwards;
- The additional funding required to be provided by local authorities from their own resources is estimated at €1.24 million for 2015 and 2016, rising to €1.64 million from 2017 onwards;
- No additional local authority capital investment in the Eastern-Midlands 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 €55 million on regional facilities; with an unknown amount to be spent on replacement plant and new technology.

Table 18-8 shows the funding requirement for the Eastern-Midlands Region under the proposed regional waste plan.

While the funding required over the period of this plan is higher than that shown in the counterfactual scenario it is lower than the funding requirement shown in the 2014 budgets. In effect, the regional waste plan proposes that the expected savings derived from shifts in future

activities should be retained for environmental activities and be re-allocated to the actions and policies proposed in the Action Plans.

Table 18-8: Funding Requirement - Regional Waste Plan Scenario

	2014	2015	2016	2017	2018	2019	2020	2021
	Budget € m	Proj. € m	Proj. € m	Proj. € m	Proj. € m	Proj. € m	Proj. € m	Proj. € m
Total Expenditure	160.68	159.04	158.71	162.93	163.20	160.72	159.69	160.12
Income from User Charges, Specific Grants etc.	41.82	43.58	43.58	47.18	47.18	45.08	45.08	45.08
Funding required from other sources	118.86	115.46	115.13	115.75	116.02	115.64	114.61	115.04

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 Eastern-Midlands Region may be small – and in effect mean the forgoing in the short term of potential future savings 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. The total cost to the State over the period 2015 to 2021 is €30.64 million, of which €20 million or 64% is accounted for by the remediation of high-risk landfill sites. 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 Eastern-Midlands Region, except for the staffing of the Regional Waste Management Office discussed previously. Potential incremental expenditure over the counterfactual scenario during the period of the plan on the part of State organisations (incl. DECLG; EPA) is estimated at €30.64 million.[108] The job creation potential of landfill remediation is unknown, but if it was at the same rate as, say, construction, then it would create some 40 new jobs each year. If the job creation of the balance of the expenditure is considered, the plan may create of the order of 50 jobs per annum. This waste plan does not make any claim on the job creation potential of the private sector investment cited previously, though it should be noted that many of the proposed actions 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

[108] 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.

segregation, would justify the costs of the strategy. Source segregation would be a far more effective means – in terms of both technology and costs – of reducing the quantities of recyclable materials being consigned to landfill.

- **Recycling and reuse** – It is more difficult to provide a quantitative estimate for the benefits of developing the reuse of particular waste items, such as WEEE. In 2012, the EPA reported[109] that 40,818 tonnes of WEEE was collected in Ireland. 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 reused 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 WEEE reuse alone 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 ongoing 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 reuse 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 additional, there are unmeasurable 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 strategy 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.

[109] National Waste Report 2012, EPA 2014.

19 POLICY ACTIONS AND TARGETS

The strategic vision for the EMR 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 EMR has three main overarching performance targets; these are detailed in **Section 5.4.2** and 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[110] 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 EMR 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 developed

[110] 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.

to implement the plan policies are linked and referenced accordingly (A.1.1, 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; and
- 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 **in bold** 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.

A.1.1 Policy action	**Move waste further up the hierarchy by eliminating the direct disposal of unprocessed residual municipal waste to landfill**[111]
Targets	Consult with the EPA & and recommend new collection permit conditions for issue to NWCPO
Expected Timeline	July 2016
Indicator	% residual municipal waste (unprocessed) delivered directly to landfill
Responsibility	**Lead Authority**, EPA & NWCPO
SEA Mitigation Proposed	Negative impacts associated with Policy A.1 and Policy Action A1.1 relate to

[111] ECJ 323/13.

	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 *Siting Guidelines* in due course to guide development of infrastructure in a sustainable manner which protects the environment and human health.

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.

A.2.1 Policy action	**Review the application fee structures related to regulatory activities for local authority facility authorisations**
Targets	Complete review and issue suggested changes to the DECLG
Expected Timeline	Q4 2016
Indicator	N/A
Responsibility	**Lead Authority**, DECLG, and local authorities
SEA Mitigation Proposed	Any review of fees and charges should take into account how they might indirectly encourage unsustainable waste management activities.
A.2.2 Policy action	**Review and implement (if appropriate) charging structures in place for wastes accepted at local authority civic amenity and other local authority waste facilities**
Targets	Complete review and implement appropriate charges
Expected Timeline	Q3 Annually
Indicator	N/A
Responsibility	**Local Authority**, 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.

A.3.1 Policy action	**Prepare an annual report on the progress of policy actions and the implementation of mandatory and waste plan performance targets (refer to Chapter 5)**
Targets	Prepare annual report and disseminate information
Expected Timeline	Annually
Indicator	All statistical indicators & progress on policy actions
Responsibility	**Lead Authority**, EPA, NWCPO, PROs and local authorities
SEA Mitigation Proposed	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.

A.4.1 Policy action	**Monitor and report on planned, authorised and utilised capacity on a regional and national basis (building on the work done for the waste plan)**
Targets	Establish, maintain and publish capacity database
Expected Timeline	Ongoing
Indicator	Not applicable
Responsibility	**Lead Authority**, 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.1.1 Policy action	**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.**
Targets	Retain EAO staff and clarify role as needed
Expected Timeline	Ongoing
Indicator	Number of EAO staff
Responsibility	**Local Authority,** Lead Authority
B.1.2 Policy action	**Ensure an ongoing 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.**
Targets	A minimum of €0.15/inhabitant to be spent on local prevention projects to be reviewed annually
Expected Timeline	Q1 each year
Indicator	Total prevention/reuse budget per annum
Responsibility	**Local Authorities**

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.2.1 Policy action	**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.**
Targets	Implement at least one regional campaign per annum
Expected Timeline	Q4 each year
Indicator	Number of regional campaigns per year
Responsibility	**Lead Authority** Local Authorities
B.2.2 Policy action	**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.**
Targets	Review library of prevention documentation annually and explore sectoral gaps
Expected Timeline	Q4 each year
Indicator	Number of documents in the library database
Responsibility	**Lead Authority**
B.2.3 Policy action	**Maintain the implementation of effective local prevention, awareness and education campaigns targeting households, communities, schools and businesses.**
Targets	Improve waste management practices through behavioural change
Expected Timeline	Ongoing
Indicator	Number of local events, workshops and campaigns
Responsibility	**Local Authorities**
B.2.4 Policy action	**Maintain, develop and integrate waste prevention measures and systems into all local authority offices and operations to best practice standards.**
Targets	Reduce the quantity of waste generated at local authority head office by 10% over the baseline year (2015) during the plan period
Expected Timeline	2020
Indicator	% reduction over baseline year and/or % reduction per employee
Responsibility	**Lead Authority** Local Authorities

B.3 Policy Build and maintain a strong partnership with the National Waste Prevention Programme (NWPP).

B.3.1 Policy action	**Establish regional and local structures and networks through the regional office to ensure effective, consistent and practical coordination and implementation of NWPP initiatives**
Targets	Set up a workable regional framework for implementing NWPP initiatives
Expected Timeline	Q4 2015
Indicator	N/A
Responsibility	**Lead Authority**

B.3.2 Policy action	**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.**
Targets	Engage with the EPA at least 3 times per annum on prevention issues
Expected Timeline	Ongoing
Indicator	Number of meetings attended per annum
Responsibility	**Lead Authority** 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.4.1 Policy action	**Promote the prevention of hazardous wastes to households, communities and small businesses building on effective initiatives and disseminating best practice throughout the region**
Targets	Implement one campaign per annum on hazardous waste prevention
Expected Timeline	Q4 each year
Indicator	Number of campaigns on hazardous waste prevention
Responsibility	**Local authorities** Lead Authority
B.4.2 Policy action	**Work with manufacturers, designers, compliance schemes, and national authorities on the development of waste prevention measures for products and services.**
Targets	Meet annually with key stakeholders to discuss solutions to prevent waste
Expected Timeline	Annually
Indicator	n/a
Responsibility	**Lead authority** EPA, Irish Water, DECLG, PROs, Local authorities
B.4.3 Policy action	**Collaborate with other national authorities and agencies delivering communication and information campaigns to include messaging on waste prevention and recycling.**
Targets	Communicate with relevant authorities annually to discuss upcoming campaigns and potential for collaboration
Expected Timeline	Annually
Indicator	Number of householders to receive communication on waste issues
Responsibility	**Lead authority** Irish Water, Sustainable Energy Authority of Ireland, local authorities, other State Agencies and government departments
SEA Mitigation proposed	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.

C.1.1 Policy action	**Engage with and facilitate enterprises in the development of repair and preparing for reuse activities**
Targets	To engage with the sector to explore and develop possibilities
Expected Timeline	Ongoing
Indicator	Number of reuse activities
Responsibility	**Lead Authority** Local Authorities
SEA Mitigation Proposed	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.
C.1.2 Policy action	**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).**
Targets	Aim to reuse or prepare for reuse of up to 10% of non-residual waste at local authority CA sites
Expected Timeline	Ongoing
Indicator	Tonnage of materials reused/prepared for reuse at local authority CA sites
Responsibility	**Lead Authority** Local Authorities
C.1.3 Policy action	**Engage with the Community Reuse Network Ireland (CRNI) and other similar networks to develop a network of reuse/upcycling activities and promotional events**.
Targets	To promote reuse and upcycling in communities.
Expected Timeline	Annually
Indicator	Number of activities/events
Responsibility	**Lead Authority**, 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.

C.2.1 Policy action	**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.**
Targets	Review existing bye-laws.
Expected Timeline	Q4 2018
Indicator	Number of waste bye-laws reviewed or introduced
Responsibility	**Lead Authority**, Local Authorities, Elected Members
C.2.2 Policy action	**Produce a code of practice for local authority authorised facilities to maximise the quantity and quality of material produced.**
Targets	To produce the code of practice in consultation with the EPA
Expected Timeline	Q4 2017
Indicator	Code of practice completed
Responsibility	**Lead Authority**, Local Authorities, EPA
SEA Mitigation proposed	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.

C.3.1 Policy action	**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**
Targets	Meet with economic development departments and promote awareness regarding rethinking raw materials for new and established enterprises
Expected Timeline	Ongoing
Indicator	To be confirmed following discussion with economic development department
Responsibility	**Lead Authority, Local Authority**

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.

C.4.1 Policy action	**Prepare resource efficiency criteria for local authority waste related contracts.**
Targets	Review existing contractors and develop new criteria for resource efficiency
Expected Timeline	Q4 2016
Indicator	Number of contracts containing resource efficiency criteria as a % of total contracts issued
Responsibility	**Lead Authority**, Local Authorities

C.4.2 Policy action	**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.**
Targets	To meet with local or regional procurement officers and relevant staff of the OGP at least every six months.
Expected Timeline	Annually from Jan 2016 onwards
Indicator	Number of meetings with procurement officers or staff of OGP
Responsibility	**Lead Authority**, 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.

C.5.1 Policy action	**Encourage SMEs (including micro-enterprises) and industry to realise the environmental and economic benefits of resource efficiency.**
Target	Promote the concept of resource efficiency among business support agencies
Expected Timeline	Ongoing
Indicator	To be confirmed following discussion with business support agencies
Responsibility	**Lead Authority,** 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.

D.1.1 Policy action	**Participate in relevant national groups to formulate waste policy and practice**
Targets	Attend all relevant meetings
Expected Timeline	Annually over duration of the plan
Indicator	Number of meetings attended
Responsibility	**Lead Authority,** 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.

D.2.1 Policy action	**Establish and/or maintain funded regional waste management office and the requisite structures (including administrative, technical & communication) to implement national and regional policy**
Targets	Ensure a funded regional office is maintained over the life of the plan
Expected Timeline	Mid 2015
Indicator	Operational office in place
Responsibility	**Lead Authority**, DECLG, local authorities
D.2.2 Policy action	**Establish or maintain a Regional Co-Ordinator, Regional Resource Efficiency Officer, Regional Prevention Officer, Technical Officer and administrative support.**
Targets	Ensure roles are in place or maintained
Expected Timeline	Mid 2015
Indicator	Number of staff.
Responsibility	**Lead Authority**, Local Authorities
D.2.3 Policy action	**Identify training needs and coordinate future shared training to develop knowledge and expertise at regional & local level**
Targets	Meet the training needs of the region
Expected Timeline	End 2016
Indicator	Number of training events
Responsibility	**Lead Authority**, 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.

D.3.1 Policy action	**Establish partnerships to build knowledge capacity and to promote higher order waste activities (prevention, reuse, resource efficiency and recycling).**
Targets	Ongoing
Expected Timeline	Over lifetime of plan
Indicator	Number of partnerships and networks established, research & pilot projects undertaken
Responsibility	**Lead Authority**, 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.

D.4.1 Policy Action	**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**
Targets	Monitor and apply for funding calls
Expected Timeline	Ongoing
Indicator	Number of funding applications
Responsibility	**Lead Authority**, 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.

F.1.1 Policy action	**Allocate resources to the systematic monitoring of household compliance with the segregation of waste with a particular focus on prioritising the reduction of contamination.**
Targets	To increase the level of monitoring and inspection at household levels.
Expected Timeline	Annually (Resource allocation and target monitoring numbers to be set out in annual RMCEI)
Indicator	Number of inspections at household level as per RMCEI.
Responsibility	**Local Authorities**, Lead Authority for waste enforcement
F.1.2 Policy action	**Allocate resources to the systematic monitoring of apartment complexes to improve compliance with the segregation of waste prioritising the reduction of contamination.**
Targets	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
Expected Timeline	Ongoing
Indicator	Number of apartment blocks targeted
Responsibility	**Local Authorities**, Lead Authority for waste enforcement
F.1.3 Policy action	**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.**
Targets	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.
Expected Timeline	Annually
Indicator	Number of visits
Responsibility	**Local Authorities**, Lead Authority for waste enforcement and NWCPO
F.1.4 Policy action	**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**
Targets	To engage with the waste industry and NWPCO to provide the requisite data to monitor adherence to the time schedule as per the regulations
Expected Timeline	Timeline as per regulations
Indicator	% of households served in scheduled agglomeration
Responsibility	**Local Authorities**, Lead Authority for waste enforcement and NWCPO

F.2 Policy Enforce all waste regulations through increased monitoring activities, and enforcement actions for non-compliance with authorisations and regulatory obligations.

F.2.1 Policy action	**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.**
Targets	To improve enforcement through greater regional coordination, information sharing, and prioritisation of enforcement activities
Expected Timeline	Annually
Indicator	Regional RMCEI Plan
Responsibility	**Lead Authority for waste enforcement**, local authorities
SEA Mitigation Proposed	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.
F.2.2 Policy action	**Work in partnership with the compliance schemes and other bodies to address ongoing regulatory obligations**
Targets	To identify ongoing issues
Expected Timeline	Ongoing
Indicator	Number of meetings held
Responsibility	**Local Authorities,** local authorities, lead authority for waste enforcement, PROs
F.2.3 Policy action	**Maintain high level of site inspections of existing local authority waste authorisations and ensure that these are reflected in the RMCEI**
Targets	Prioritise the inspections in accordance with the risk
Expected Timeline	As per RMCEI plan annual review
Indicator	Number of Inspections - as per RMCEI
Responsibility	**Lead Authority,** Lead Authority for waste enforcement, Local Authorities
F.2.4 Policy action	**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**
Targets	To increase the level of annual inspections
Expected Timeline	Ongoing
Indicator	Number of inspections
Responsibility	**Local Authorities;** 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.

F.3.1 Policy action	**Identify and maintain the role of Environmental Complaints Coordinator to manage an unauthorised waste activity database based on complaints received and monitoring undertaken.**
Targets	Establish and maintain consistent database of unauthorised waste activities consistent across the region
Expected Timeline	Annually
Indicator	Maintain an up to date database
Responsibility	**Lead authority for waste enforcement,** local authorities
F.3.2 Policy action	**Carry out investigations and issue notifications, as required, as dictated by the unauthorised waste activity database and as directed by the EPA.**
Targets	Increased investigation and prevention of unauthorised waste activities
Expected Timeline	Annually
Indicator	% of unauthorised waste complaints investigated
Responsibility	**Local Authorities,** Lead Authority for waste enforcement
F.3.3 Policy action	**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.**
Target	Prevent and address unauthorised activities in the region
Expected Timeline	Annually
Indicator	Prepare and publish the action plan
Responsibility	**Lead Authority for waste enforcement**, Local Authorities
SEA Mitigation Proposed	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.

F.4.1 Policy action	**Work with NWCPO to standardise Waste Collection Permit conditions with standard mandatory conditions and local discretionary conditions**
Targets	To meet with NWCPO when required
Expected Timeline	Ongoing
Indicator	N/A
Responsibility	**NWCPO**, Lead Authority for waste enforcement and Local Authorities

F.4.2 Policy action	**Move to standardise conditions for Waste Facility Permit/COR conditions with standard mandatory conditions and local discretionary conditions**
Targets	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
Expected Timeline	Q1 2017
Indicator	Issue standard class specific templates
Responsibility	**Lead Authority for waste enforcement**, local authorities, EPA and the DECLG
SEA Mitigation Proposed	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.

G.1.1 Policy action	**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.**
Targets	Carry out an initial review with a view to increasing expenditure on prevention, reuse and recycling.
Expected Timeline	Q3 2015 (initial review), Q3 2016 (complete review)
Indicator	% change in budget for prevention, reuse and recycling activities
Responsibility	**Lead Authority**, Local Authority

G.2 Policy 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.

G.2.1 Policy action	**Each region is to rank the class A high risk historic unregulated landfill sites (1977–1996).**
Targets	To rank 100% of Class A sites
Expected Timeline	Q4 2015
Indicator	% sites ranked
Responsibility	**Lead Authority**

G.2.2 Policy action	**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)**
Targets	Prepare roadmap
Expected Timeline	Q4 2016
Indicator	Roadmap in place
Responsibility	**Lead Authority**, Local authorities, DECLG, EPA
G.2.3 Policy action	**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)**
Targets	Prepare and apply for authorisation to the EPA
Expected Timeline	Q1 2021
Indicator	Number of applications submitted
Responsibility	**Local authorities** Lead authorities, DECLG, Landowners, EPA
G.2.4 Policy action	**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 & Water Framework Directive (subject to Department funding being available)**
Targets	Remediation all authorised sites
Expected Timeline	Q1 2021
Indicator	Number of authorised sites remediated
Responsibility	**Local authorities**, lead authorities, DECLG, Landowners, EPA
SEA Mitigation Proposed	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.

G.3.1 Policy action	**Prepare siting guidelines for waste facilities and review general environmental protection criteria as set down in the waste plan.**
Targets	Determine if the general environmental protection criteria are appropriate and put siting guidelines in place
Expected Timeline	Siting guidelines to be prepared in 2015 & all documents reviewed every 2 years
Indicator	n/a
Responsibility	**Lead authority**, local authorities, DECLG, An Bord Pleanála, EPA
SEA Mitigation Proposed	The application of environmental protection criteria will offset the potential shorter term temporary construction impacts associated with infrastructure. It is recommended that consideration be given to developing *Siting Guidelines* in due course to guide development of infrastructure in a sustainable manner which protects the environment and human health

G.3.2 Policy Action	**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.**
Targets	To ensure climate proofing measures are implemented at sites identified as being of high risk to prevent impacts on the environment
Expected Timeline	Lifetime of the plan
Indicator	n/a
Responsibility	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.

G.4.1 Policy action	**Identify areas of low collection coverage and survey householders who are currently not availing of a household waste collection service to determine the cause.**
Targets	Report on surveys of low coverage areas and the causes in cooperation with the authorised household waste collectors
Expected Timeline	End 2016
Indicator	Number of surveys issued
Responsibility	**Lead Authorities**, Local authorities and waste collectors
G.4.2 Policy action	**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**
Targets	Implement programme of communication and carry out follow-up enforcement inspections
Expected Timeline	Ongoing
Indicator	Number of households with a kerbside collection service Quantity of unmanaged waste
Responsibility	**Local authorities** Lead authority
G.4.3 Policy action	**Engage with authorised waste collectors to design solutions to serve communities or areas of low collection coverage and implement the solutions**
Targets	Complete review and identify solutions and implement
Expected Timeline	Q4 2017
Indicator	Number of households with a kerbside collection service, Quantity of unmanaged waste
Responsibility	**Lead authority,** 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.

G.5.1 Policy Action	**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.**
Targets	To ensure relevant existing development consents relating to waste activities and infrastructure have been screened for AA and ensure a Natura Impact Statement is provided by the applicant/operator where considered appropriate.
Expected Timeline	Ongoing
Indicator	Number of AA screenings completed
Responsibility	For AA Screening: **Local Authorities**; Lead Authority, Lead Authority for waste enforcement, applicant/operator For NIS **Applicant/Operator**;

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.

H.1.1 Policy action	**To engage with Irish Water in relation to national planning and management of wastewater treatment plant sludge and water treatment plant sludge.**
Targets	Lead authorities to meet with Irish Water once per annum regarding their plan objectives and the associated treatment options for sludge waste.
Expected Timeline	Q4 Annually
Indicator	Number of meetings held with Irish Water
Responsibility	**Lead Authority** Irish Water and local authorities

H.1.2 Policy action	**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.**
Targets	To meet with Local Authorities to review inspections and outcomes once per annum
Expected Timeline	Annually
Indicator	Quantity of septic tank waste collected per annum
Responsibility	**Local Authorities**, EPA and lead authority
H.1.3 Policy action	**To engage with the NWCPO regarding specific conditions for private waste collectors collecting septic tank waste**
Targets	To meet with NWCPO regarding specific conditions for septic tank collectors
Expected Timeline	Annually
Indicator	Conditions in place
Responsibility	**Lead Authority,** 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).

H.2.1 Policy action	**To investigate the viability of running a pilot scheme for the management of medicines and waste oils**
Targets	To consult with the relevant industry and examine the practicalities of developing a management scheme for medicines and waste oils. Roll-out a scheme in 1-3 local authorities where high volumes of the waste steam are available and expand if successful and practical.
Expected Timeline	Q4 2016 (investigate) Q4 2017 (roll-out)
Indicator	Quantity of medicines and waste oils collected through the scheme
Responsibility	**Lead Authority**, Local Authorities
H.2.2 Policy action	**Examine the possibility of expanding existing reuse schemes in place throughout the region**
Targets	Grown existing reuse schemes for specific wastes in the region
Expected Timeline	Q4 2017
Indicator	Quantity of stream reused/recycled
Responsibility	**Lead Authority** & local authorities
SEA Mitigation Proposed	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.

H.2.3 Policy action	**To transfer knowledge and skills on the successful schemes to all local authorities in all Regions**
Targets	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
Expected Timeline	Annually
Indicator	Number of attendees at the event
Responsibility	**Lead Authority** & Local Authorities

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.

H.3.1 Policy action	**Participate in working groups for setting up of new national producer responsibility schemes.**
Targets	Ensure at least one representative on behalf of the three regional lead authorities participates in each working group established by the DECLG
Expected Timeline	Ongoing
Indicator	Not applicable
Responsibility	**Lead Authority**, DECLG and EPA
H.3.2 Policy action	**To ensure better segregation of hazardous waste and non-hazardous wastes at the point of collection from households and small businesses.**
Targets	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
Expected Timeline	Q4 2015
Indicator	Number of websites with the info included Quantity of household hazardous wastes collected at CAs/Recycling Centres
Responsibility	**Local Authorities** Lead Authority

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** conducted by the regional 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 National Waste reports from the EPA. There is also a need for municipal waste characterisation data for the annual report highlighting the ongoing 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 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 **Table 20-1** to **Table 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 and Plan Performance 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
Packaging waste	
Packaging waste managed/inhabitant	tonnes / inhabitant
Packaging waste recovered/inhabitant	tonnes/inhabitant
C&D:	
Total C&D waste collected	tonnes
Soil & stone waste collected	tonnes
Contaminated soils collected	tonnes
WEEE:	
Total Household WEEE (Compliance Scheme) Collected for Recovery	tonnes
Household WEEE (Compliance Scheme) Collected for Recovery/ 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
Batteries:	
Separately Collected (Portable only)(Compliance Scheme) for Recovery	tonnes
Separately Collected (Portable only) (Compliance Scheme) for Recovery/inhabitant	g/inhabitant
ELVs:	
Quantity of ELVs accepted at ATFs within the Region	tonnes/year/region
Certificates of Destruction (CODs) issued	number
Waste tyres:	
Quantity of waste tyres collected	tonnes
Farm Plastics:	
Quantity of farm plastics collected	tonnes
Number of farmers who availed of the collection service	number
Other:	
Healthcare waste collected	tonnes
Waste oils collected	tonnes
PCBs collected	tonnes

Table 20-4: Secondary Waste Indicators

% Schools participating in green schools
Waste Prevention & Minimisation:
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
Green Schools/Green Flags:
Number of schools in the region
Number of schools registered with Green Schools Programme
% of schools registered with Green Schools Programme
Number of schools participating in the Green Schools Programme
Number of schools with Green Flag
% of schools with Green Flag
BeGreen Programme:
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
Household Refuse Collection Service:
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
Recycling Centres/Civic Amenity Sites (CAS):
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
Bring Banks:
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 Landfill Register held by Local Authorities, Historic Landfill 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 Landfill Register held by Local Authorities Historic Landfill 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
Quantity of residual waste exported annually (Quantified nationally).	National Waste Report, published annually, Environmental Protection Agency (EPA)
Quantity of household waste generated per capita (measured nationally). % municipal waste recycled (measured nationally).	Waste statistics data from Local authorities, private waste collectors, Lead authority for waste enforcement

Indicator	Sources & Responsibilities
Quantity of residual kerbside household waste sent for disposal.	National Waste Report/Bulletin, published annually, Environmental Protection Agency (EPA)

APPENDIX A

CONSULTATION INFORMATION

Appendix A Pre-Draft Submissions & Stakeholder Meeting 9/4/14 Attendance List

Pre-Draft Submissions	Stakeholder Workshop 9/4/14 Attendance
An Taisce	CIWM
An Taisce County Westmeath Association	IWMA
Limerick Institute Technology (Thurles Campus)	NWCPO
Big Bin	REPAK
Bord na Móna	RGDATA
Cement Manufacturers Ireland (CMI)	RPS
Greyhound Recycling & Recovery	Smile Exchange
CIWM	Connacht-Ulster Waste Region (Lead Authority)
Clean Ireland	Eastern-Midland Waste Region (Lead Authority)
Community Reuse Network	Southern Waste Region (Lead Authority)
Mulleady's Ltd	WEEE Ireland
Panda	Westmeath County Council
Country Clean Recycling	CEWEP
Cré	Cre
WEEE Irl	CRNI
Zero Waste Alliance	DECLG
EPA	EPA
Geological Survey of Ireland (GSI)	Greyhound Recycling & Recovery
Greenstar	IBEC
IBEC	IFFPG
Indaver	IRBEA
Irish Motor Vehicles Recyclers Association	
IWMA	
Rehab	
SMILE	
Stream Bio-Energy	
The Rediscovery Centre	

Appendix A Draft Plan List of Submissions

Draft Plan Consultation – List of Submissions	
AGB Landfill Holdings Ltd.	Uisce Éireann
An Taisce	Irish Waste Management Association
Boomerang Recycling	Behan Land Restoration Ltd.
Bord na Móna	Local Authority Prevention Network
The Chartered Institution of Wastes Management	Cllr. Andrew Keegan & Cllr. Brid Smith
Clean Ireland Recycling	Northern Ireland Environment Agency
Cement Manufacturers Ireland	Nurendale
Country Clean Recycling	Offaly County Council
Cork Environmental Forum	Mary Morrisey (Public)
Cré	Rachel Rice (Public)
Community Reuse Network	Betty O'Shea (Public)
Clean Technology Centre	Peggy Lee (Public)
Department of the Environment, Community and Local Government	Peter Fegan (Public)
Inland Fisheries (Dept. Of Communications, Energy & Natural Resources)	Rehab Group
Geological Survey of Ireland (Dept. Of Communications, Energy & Natural Resources)	REPAK
Duncan Laurence Environmental Ltd.	Sandymount and Merrion Residents Association
Dublin Waste to Energy Ltd.	Roadstone Limited
Environmental Action Alliance-Ireland Ltd.	Environment and Engineering Strategic Policy Committee – Dublin City Council
Local Authority National Environmental Awareness Officers Group	Stream BioEnergy Ltd.
The Environmental Pillar	Technology Centre for Biorefining & Bioenergy
Environmental Protection Agency	The Rediscovery Centre, Ballymun
Fingal County Council	Thorntons Recycling
Gas Networks Ireland	VESI Environmental Ltd.
The Green Party	Voice of Irish Concern for the Environment Ltd.
Greenstar	WEEE Ireland
IBEC	Westmeath County Council
The Irish Charity Shops Association	Wicklow County Council
Irish Farmer's Association	Zero Waste Alliance Ireland
Indaver	Cllr. John McGinley
Cllr. Padraig McEvoy	
Irish Concrete Federation	
Irish Motor Vehicle Recyclers Association	

APPENDIX B

LIST OF LEGISLATION

List of European Legislation
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 Persistant 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

List of National Legislation
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 Persistant 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 Unlicenced 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

Local Authority	Total Household Waste Managed 2010 (t)	Total Household Waste Managed 2011 (t)	Total Household Waste Managed 2012 (t)
Dublin City Council	166,265	159,705	151,257
Dún Laoghaire-Rathdown County Council	62,764	66,389	67,512
Fingal County Council	98,903	98,131	99,629
South Dublin County Council	100,883	96,479	88,917
Meath County Council	54,614	58,759	57,534
Louth County Council	51,939	47,501	45,327
Laois County Council	19,297	23,459	23,045
Offaly County Council	21,308	16,159	18,009
Longford County Council	10,705	11,793	10,390
Westmeath County Council	28,756	26,283	26,281
Kildare County Council	78,584	79,236	69,715
Wicklow County Council	21,961	42,624	36,824
EMR Total	715,979	726,518	694,441

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	2012 Waste Intake
1	WFP	Eco Mattress Recycling Ltd.	WFP-DC-12-0032	Dublin City Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	880	-
2	WFP	Everyday Waste & Skip Hire Ltd.	WFP-DC-10-0020	Dublin City Council	Classes 7 & 10 /PI/3S	Storage/Processing and Transfer	G1	20,000	13,651
3	WFP	Leech Papers Ltd.	WFP-DC-10-0017	Dublin City Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	-	1,189
4	WFP	Levet Ltd.	WFP-DC-09-0012	Dublin City Council	Class 10/PI/3S/	Storage/Processing and Transfer	G1	-	-
5	WFP	Northside Recycling Ltd.	WFP-DC-11-0031	Dublin City Council	Classes 7 & 10/PI/3S	Storage/Processing and Transfer	G1	19,500	3,003
6	WFP	Padraig Thornton Waste Disposal Ltd.	WFP-DC-10-0021	Dublin City Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	50,000	30,031
7	WFP	Padraig Thornton Waste Disposal Ltd.	WFP-DC-11-0023	Dublin City Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	5,500	1,866
8	WFP	Rehab Enterprises Ltd.	WFP-DC-11-0024	Dublin City Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	300	-
9	WFP	Rehab Enterprises Ltd.	WFP-DC-11-0025	Dublin City Council	Class 10/PI/3S/	Storage/Processing and Transfer	G1	4,583	753
10	WFP	Shred – IT ROI Limited	WFP-DC-09-0011	Dublin City Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	5,000	3,862
11	WFP	The G eorge Fellow (Enterprises) Ltd.	WFP-DC-09-0009	Dublin City Council	Classes 1, 7 and 10/PI/3S	Storage/Processing and Transfer	G1	9,450	10,805
12	WFP	Blancomet Recycling IE Ltd.	WFP-DC-12-0034	Dublin City Council	Classes 3, 4 & 9 /PI/3S	Metals & ELVs	G2	18,300	7

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
13	WFP	Dawnlane Ltd.	WFP-DC-11-0022	Dublin City Council	Class 4 /PI/3S	Metals & ELVs	G2	1,880	621
14	WFP	Edward O'Reilly	WFP-DC-11-0026	Dublin City Council	Class 4/PI/3S	Metals & ELVs	G2	605	497
15	WFP	G & T McG overns Ltd.	WFP-DC-08-0002	Dublin City Council	Class 4/PI/3S	Metals & ELVs	G2	2,318	1,027
16	WFP	The Hammond Lane Metal Company Ltd.	WFP-DC-09-0013	Dublin City Council	Classes 2, 4 and 9/PI/3S	Metals & ELVs	G2	350,000	143,279
17	WFP	Rogers Recycling Ltd.	WFP-DC-11-0030	Dublin City Council	Classes 2, 4, 9 & 12/PI/3S	Other Waste Vehicles	G2a	1,000	377
18	WFP	Summerhill Spares Ltd.	WFP-DC-10-0018	Dublin City Council	Classes 2, 4 and 12 /PI/3Sof	Other Waste Vehicles	G2a	9,760	394
19	WFP	Tom Murphy Recovery & Towing Services Ltd.	WFP-DC-11-0027	Dublin City Council	Classes 2, 4, 9 & 12 Part 1 of the Third Schedule	Other Waste Vehicles	G2a	1,000	22
20	WFP	Chevron Environmental Ltd.	WFP-DC-09-0015	Dublin City Council	Class 3 /PI/3S	WEEE & Batteries	G3	750	264
21	WFP	Dublin Sanitary Disposals Ltd.	WFP-DC-09-0007	Dublin City Council	Class 11 /PI/3S	Non-Hazardous & Refrigerants	G7	250	123
22	WFP	Mitchell Taylor (Exports) Ltd.	WFP-DC-11-0028	Dublin City Council	Class 11 /PI/3S	Non-Hazardous & Refrigerants	G7	1,600	939
23	CoR	Emerald Waste Company Ltd	COR-DC-13-0004	Dublin City Council	Class 2 /PII/3s	Temporary Storage (e.g. PTUs)	G8	500	-
24	CoR	Jengus Ltd.	COR-DC-11-0003	Dublin City Council	Class 2 /PII/3s	Temporary Storage (e.g. PTUs)	G8	900	-
25	CoR	GreenKing Composting	COR-DLR-11-0001-03	Dún Laoghaire Rathdown County Council	Class 13 /PII/3s	Organic Landspread	G6	1,000	1,000
26	CoR	Landscape Providers	COR-DLR-10-0001-02	Dún Laoghaire Rathdown County Council	Class 13 /PII/3s	Organic Landspread	G6	1,000	1,000

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
27	CoR	St John's National School	COR-DLR-13-0001-01	Dún Laoghaire Rathdown County Council	Class 2 /PII/3s	Temporary Storage (e.g. PTUs)	G8	1,000	1,000
28	WFP	Enable Ireland	WFP-FG-10-0006-02	Fingal County Council	Class 10	Storage/Processing and Transfer	G1	2,150	1,849
29	WFP	Green Energy Recycling Ltd. t/a A Plus Skip Hire	WFP-FG-11-0008-01	Fingal County Council	Class 7/PI/3S Class 11/PI/3S Class 12/PI/3S	Storage/Processing and Transfer	G1	24,500	*23,092*
30	WFP	Johmick Ltd.	WFP-FG-13-0001-01	Fingal County Council	Class 10	Storage/Processing and Transfer	G1	5,500	-
31	WFP	Pacon Waste & Recycling Ltd	WFP-FG-10-0004-01	Fingal County Council	Class 7/PI/3S	Storage/Processing and Transfer	G1	22,250	27,802
32	WFP	Roadstone Wood Limited	WFP-FG-09-0006-01	Fingal County Council	Not defined	Storage/Processing and Transfer	G1	24,950	3,228
33	WFP	Starrus Eco Holdings Ltd	WFP-FG-08-0002-02	Fingal County Council	Class 10	Storage/Processing and Transfer	G1	49,950	49,541
34	WFP	Gannon City Recovery & Recycling Services	WFP-FG-09-0009-02	Fingal County Council	Class 12	Metals and ELVs	G2	7,000	5,289
35	WFP	Industrial, Agri & Engineering Salvage Ltd T/A Greener Metal Recycling Ltd.	WFP-FG-10-0001-01	Fingal County Council	Class 4	Metals and ELVs	G2	5,500	779
36	WFP	O'Reilly Recycling	WFP-FG-12-0002-02	Fingal County Council	Class 4 Class 9	Metals and ELVs	G2	6,000	1,023
37	WFP	TD Euroscrap Metals	WFP-FG-12-0001-01	Fingal County Council	Class 4	Metals and ELVs	G2	2,500	67
38	WFP	James McNally	WFP-FG-10-0007-01	Fingal County Council	Class 5	Land Improvement	G4	24,000	6,750

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
39	WFP	Carno International,t/a Flood Paper Recycling	WFP-FG-10-0002-01	Fingal County Council	Class 11	Non-Hazardous & Refrigerants	G7	5,000	*3,866*
40	WFP	OCS Ltd./Canon Hygiene	WFP-FG-11-0002-01	Fingal County Council	Class 11	Non-Hazardous & Refrigerants	G7	250	*215*
41	WFP	Allied Waste Management Ltd	WFP-KE-08-0347-01	Kildare County Council	Class 3 and 10/PI/3S	Storage/Processing and Transfer	G1	23,700	15,063
42	WFP	Bolton RVO Ltd	WFP-KE-10-060-01	Kildare County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	5,000	6,577
43	WFP	Callan Sand and Gravel Ltd	WFP-KE-09-0355-01	Kildare County Council	Class 7/PI/3S	Storage/Processing and Transfer	G1	5,000	32,083
44	WFP	Longsland Ltd	WFP-KE-13-0069-01	Kildare County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	3,700	-
45	WFP	Padraig Thornton Waste Disposal Ltd	WFP-KE-10-061-01	Kildare County Council	Class 4 and 10/PI/3S	Storage/Processing and Transfer	G1	2,000	21,879
46	WFP	Rehab Glassco Ltd	WFP-KE-09-0357-01	Kildare County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	45,800	96,494
47	WFP	Ryston Industries	WFP-KE-12-0066-01	Kildare County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	-	-
48	WFP	Kildare Metal Recycling Ltd.	WFP-KE-13-0067-01	Kildare County Council	Class 4/PI/3S	Metals and WEEE	G2	540	-
49	WFP	Irish Lamp Recycling Ltd	WFP-KE-14-0072-01	Kildare County Council	Classes 3, 4 & 9 /PI/3S	WEEE & Batteries	G3	1,048	756
50	WFP	Arkill Ltd	WFP-KE-12-0068-01	Kildare County Council	Classes 5 and 7/PI/3S	Land Improvement	G4	15,000	1,297
51	CoR	Jane McLoughlin	COR-KE-13-0025-01	Kildare County Council	Class 5 /PII/3s	Land Improvement	G4	3,245	-
52	CoR	Keara Dunne	COR-KE-08-0007-01	Kildare County Council	Class 5 /PII/3s	Land Improvement	G4	5,400	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
53	CoR	Martin Coyne & Adele Clinton	COR-KE-11-0017-01	Kildare County Council	Class 5 /PII/3s	Land Improvement	G4	6,200	1,570
54	CoR	Rose Devine of Prosperous United A.F.C.	COR-KE-09-0012-02	Kildare County Council	Class 5 /PII/3s	Land Improvement	G4	23,500	6,161
55	WFP	Seamus McCaul	WFP-KE-08-0354-01	Kildare County Council	Class 5/PI/3S	Land Improvement	G4	23,400	-
56	WFP	Tom & John Keogh	WFP-KE-13-068-01	Kildare County Council	Class 5/PI/3S	Land Improvement	G4	35,000	-
57	CoR	Tom Yates	COR-KE-12-0021-01	Kildare County Council	Class 5 /PII/3s	Land Improvement	G4	25,000	14,890
58	CoR	Willie Watson	COR-KE-11-0018-01	Kildare County Council	Class 5 /PII/3s	Land Improvement	G4	8,300	-
59	WFP	Cleary Compost & Shredding Ltd	WFP-KE-10-0064-01	Kildare County Council	Class 8/PI/3S	Biological Treatment	G5	10,000	2,909
60	WFP	Edward Mangan	WP-329/2008	Kildare County Council	Class 8/PI/3S	Biological Treatment	G5	98,926	39,825
61	WFP	Kildangan Stud Unlimited	WFP-KE-0009-0059-01	Kildare County Council	Class 8/PI/3S	Biological Treatment	G5	5,000	8,100
62	WFP	Paul Mooney	WFP-KE-12/0065-01	Kildare County Council	Class 8/PI/3S	Biological Treatment	G5	10,000	0
63	WFP	Tom Gavin	WP 277/2007	Kildare County Council	Class 8/PI/3S	Biological Treatment	G5	-	45,095
64	CoR	Robert Wilson Wright	COR-KE-13-0024-01	Kildare County Council	Class 13 /PII/3s	Organic Landspread	G6	999	-
65	CoR	Shane Thornton	COR-KE-09-0011-01	Kildare County Council	Class 13 /PII/3s	Organic Landspread	G6	1,000	-
66	CoR	Shane Thornton	COR-KE-09-0015-01	Kildare County Council	Class 13 /PII/3s	Organic Landspread	G6	1,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
67	CoR	Environmental Compaction Systems Ltd	COR-KE-12-022-01	Kildare County Council	Class 2 /PII/3s	Temporary Storage (e.g. PTUs)	G8	150	-
68	WFP	Alan Ashe	WFP-LS-11-0004-01	Laois County Council	Class 10	Storage/Processing and Transfer	G1	50,000	-
69	WFP	Irish Polymer Extrusions Ltd	WFP-LS-13-0001-01	Laois County Council	Class 10	Storage/Processing and Transfer	G1	-	-
70	WFP	ROC Recycling Solutions Ltd	WFP-LS-11-0001-01	Laois County Council	Class 10	Storage/Processing and Transfer	G1	-	-
71	WFP	Walker Recycling Services Ltd	WMP 044C	Laois County Council	Class 10	Storage/Processing and Transfer	G1	50,000	14,233
72	WFP	Corcoran's Auto Body Works Ltd.	ATF WMP 029B (1)	Laois County Council	Classes 2,4, 9 & 12	Metals and ELVs	G2	500	-
73	WFP	Corcoran's Auto Body Works Ltd.	ATF WMP 029B	Laois County Council	Classes 2,4, 9 & 12	Metals and ELVs	G2	600	-
74	WFP	Martin Byrne Car Dismantlers	ATF WMP 002D	Laois County Council	Classes 1,2,3,4,9 & 12	Metals and ELVs	G2	2,050	1493
75	WFP	Munnelly Brothers	ATF WMP 140A	Laois County Council	Classes 2, 4 & 12	Metals and ELVs	G2	550	-
76	WFP	ONE 51 ES Metals t/a A1 Metal Recycling	ATF WMP 007E	Laois County Council	Classes 1,2,3,4,9 & 12	Metals and ELVs	G2	-	28,821
77	WFP	V Tech Metals & Dismantlers Ltd.	WFP-LS-12--0002-03	Laois County Council	Classes 2,4 & 12	Metals and ELVs	G2	1,000	-
78	WFP	Whelan's Auto Dismantlers Ltd	ATF WMP 008D	Laois County Council	Classes 2, 4 & 12	Metals and ELVs	G2	1,850	720 units
79	WFP	Interrec BV Ireland Ltd	WFP-LS-12-0001-01	Laois County Council	Classes 1 & 3	WEEE & Batteries	G3	50,000	~273
80	CoR	Brendan Conlan	COR -124B	Laois County	Class 5	Land Improvement	G4	25,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
				Council					
81	CoR	Christy McCormack	COR 128B	Laois County Council	Class 5	Land Improvement	G4	25,000	4,448
82	CoR	Dowling's Quarries Ltd	COR-LS-13-0001-01	Laois County Council	Class 5	Land Improvement	G4	-	-
83	WFP	Eamonn O'Reilly	WMP 62 B	Laois County Council	Class 5	Land Improvement	G4	25,000	78
84	WFP	Park Plant Hire	WMP24 C	Laois County Council	Class 5	Land Improvement	G4	22,500	2,360
85	WFP	Patrick Larke	WMP 112B	Laois County Council	Class 5	Land Improvement	G4	50,000	7
86	WFP	Pierre Lewis	WFP 63 C	Laois County Council	Class 5	Land Improvement	G4	100,000	1,130
87	WFP	McMahon Biogas Plant	WFP-LS-11-0003-01	Laois County Council	Class 8	Biological Treatment	G5	-	-
88	WFP	Furniture Recycling Ltd.	WFP-LD11-0004-01	Longford County Council	Class 10	Storage/Processing and Transfer	G1	15,000	208
89	WFP	Mulleady's Limited	WFP-LD10-0001-01	Longford County Council	Classes 1, 9 and 11/PI/3S	Storage/Processing and Transfer	G1	3,051	421
90	WFP	Waste Not Want Not Recycling	WFP-LD11-0003-01	Longford County Council	Classes 4 and 10/3s	Metals and ELVs	G2	1,000	26
91	WFP	Longford Auto Recyclers Ltd	WFD-LD11-0006-02	Longford County Council	Classes 2,4 & 9	Other Waste Vehicles	G2a	12,000	136
92	WFP	M&N Nolan	WFP-LD11-0002-01	Longford County Council	Class 2/PI/3S/	Other Waste Vehicles	G2a	200	28
93	CoR	Cooke George West	COR-LD12-0003-01	Longford County Council	Classes 5 and 6/3s	Land Improvement	G4	2,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
94	CoR	John Matthews	COR-LD11-0004-01	Longford County Council	Class 6 /PII/3s	Land Improvement	G4	500	-
95	CoR	Noel Flynn	COR-LD13-0003-01	Longford County Council	Classes 5 and 6/PII/3s	Land Improvement	G4	2,100	-
96	CoR	Rhyne Rock Ltd.	COR-LD13-0002-01	Longford County Council	Class 5/PII/3s	Land Improvement	G4	11,000	-
97	CoR	Designwell Ltd.	COR-LD12-0002-01	Longford County Council	Class 2 /PII/3s	Temporary Storage (e.g. PTUs)	G8	50	-
98	WFP	Ace Environmental Ltd	WFP-LH-10-0006-01	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	50,000	1,943
99	WFP	Crumb Rubber Ireland Ltd	WFP-LH-10-0005-01	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	50,000	6,965
100	WFP	Drogheda Port Company (1)	WFP-LH-11-0006-01	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	50,000	-
101	WFP	Drogheda Port Company (2)	WFP-LH-12-0004-01	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	50,000	1,040
102	WFP	Drogheda Port Company (3)	WFP-LH-13-0001-01	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	50,000	-
103	WFP	Express Mini Mix & Skip Hire Ltd	WFP-LH-10-0002-01	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	5,000	1,257
104	WFP	Gotvista Ltd	WFP-LH-08-0002-02	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	50,000	5,590
105	WFP	Greenore Port Ltd	WFP-LH-13-0004-01	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	50,000	-
106	CoR	Kilsaran Concrete	COR-LH-13-0004-01	Louth County Council	Class 7 /PII/3s	Storage/Processing and Transfer	G1	9,700	-
107	WFP	Lenviron Ltd	WFP-LH-11-0002-	Louth County	Class 10/PI/3S	Storage/Processing	G1	50,000	21,073

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
			01	Council		and Transfer			
108	WFP	Michael Taffe	WFP-LH-10-0001-01	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	1,100	-
109	WFP	O'Hanlon & Sons Contractors Ltd	WFP-LH-12-0002-01	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	50,000	-
110	WFP	Tyres2Oil Limited	WFP-LH-12-0003-01	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	50,000	-
111	WFP	V&W Recycling (Dundalk) Ltd	WFP-LH-11-0001-01	Louth County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	2,000	245
112	WFP	Fiodav Ltd	WFP-LH-10-0004-01	Louth County Council	Class 12/PI/3S	Metals & WEEE	G2	-	85
113	WFP	Gary Myles	WFP-LH-10-0003-01	Louth County Council	Class 12/PI/3S	Metals & WEEE	G2	-	155
114	WFP	John & Mark McShane	WFP-LH-10-0008-01	Louth County Council	Class 12/PI/3S	Metals & WEEE	G2	360	45
115	WFP	Oriel Auto Specialists Ltd	WFP-LH-11-0007-01	Louth County Council	Class 12/PI/3S	Metals & WEEE	G2	-	336
116	WFP	Dungooley Auto Salvage Ltd	WFP-LH-11-0004-01	Louth County Council	Classes 2, 9, 10, 12/PI/3S	Other Waste Vehicles	G2a	50,000	17
117	CoR	M&M Recovery and Breakdown Services Ltd	COR-LH-09-0003-01	Louth County Council	Class 3 /PII/3s	Other Waste Vehicles	G2a	-	48
118	CoR	Gibson Brothers (Ireland) Ltd	COR-LH-12-0002-01	Louth County Council	Class 5 /PII/3s	Land Improvement	G4	25,000	-
119	CoR	Gibson Brothers (Ireland) Ltd	COR-LH-13-0002-01	Louth County Council	Class 5 /PII/3s	Land Improvement	G4	25,000	-
120	WFP	John O'Hagan	WFP-LH-09-0005-01	Louth County Council	Classes 5 & 6/PI/3S	Land Improvement	G4	25,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
121	WFP	John O'Neill	WFP-LH-13-0003-01	Louth County Council	Classes 5 & 6/PI/3S	Land Improvement	G4	100,000	-
122	WFP	McParland Brothers (Ireland) Ltd	WFP-LH-09-0002-01	Louth County Council	Class 5/PI/3S	Land Improvement	G4	100,000	2,170
123	CoR	Mr James Duffy	COR-LH-11-0001-01	Louth County Council	Classes 5 (PA), 6 /PII/3s	Land Improvement	G4	25,000	1,664
124	CoR	Ready Mixed Concrete (Ireland) Ltd	COR-LH-11-0002-01	Louth County Council	Classes 5 (PA), 6 & 7 /PII/3s	Land Improvement	G4	35,000	-
125	CoR	The Trustees of Naomh Moinne Hurling	COR-LH-11-0003-01	Louth County Council	Class 5 /PII/3s	Land Improvement	G4	25,000	-
126	CoR	Clearpower Ltd	COR-LH-10-0002-01	Louth County Council	Class 13 /PII/3s	Organic Landspread	G6	1,000	-
127	CoR	Clearpower Ltd	COR-LH-10-0003-01	Louth County Council	Class 13 /PII/3s	Organic Landspread	G6	1,000	-
128	CoR	John Conlon	COR-LH-11-0005-01	Louth County Council	Class 13 /PII/3s	Organic Landspread	G6	1,000	199
129	WFP	OCS One Complete Solution Ltd	WFP-LH-11-0005-01	Louth County Council	Class 11/PI/3S	Non-hazardous & Refrigerants	G7	7,500	3
130	CoR	Rethink Europe Ltd	COR-LH-12-0003-01	Louth County Council	Classes 2, 4 /PII/3s	Temporary Storage (e.g. PTUs)	G8	250	10
131	WFP	Great White Destruction Ltd	WFP-MH-11-0010-01	Meath County Council	Classes: 1, 3, & 10	Storage/Processing and Transfer	G1	1,030	1,100
132	WFP	Iron Mountain (Ireland) Secure Shredding Ltd	WFP-MH-10-0012-01	Meath County Council	Class 10 & 11	Storage/Processing and Transfer	G1	12,050	2,490
133	WFP	Kiernan Sand & Gravel Ltd	WMP 2007/22	Meath County Council	Class 10	Storage/Processing and Transfer	G1	126,000	16,134
134	WFP	Kilsaran Concrete Ltd	WFP-MH-10-0015-	Meath County	Class 7	Storage/Processing	G1	16,000	20,000

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
			01	Council		and Transfer			
135	WFP	Mark Ryan	WMP 2008/28	Meath County Council	Class 10	Storage/Processing and Transfer	G1	4,830	48,504
136	WFP	McKenna Waste Paper Recycling Ltd	WFP-MH-10-0011-01	Meath County Council	Class 10 & 11	Storage/Processing and Transfer	G1	1,280	350
137	WFP	OMD Waste Recycling Ltd	WFP-MH-09-0008-01	Meath County Council	Class 7 & 10	Storage/Processing and Transfer	G1	50,000	2,492
138	WFP	Rabbitte Catering Services Ltd	WFP-MH-12-0005-01	Meath County Council	Class 10	Storage/Processing and Transfer	G1	10,000	183
139	WFP	Roadstone Wood Ltd	WFP-MH-11-0003-01	Meath County Council	Class 7	Storage/Processing and Transfer	G1	30,000	14,745
140	WFP	Slane Farm Oils	WFP-MH-10-0005-01	Meath County Council	Class 10	Storage/Processing and Transfer	G1	2,940	2,940
141	WFP	Michael Ferguson Ltd,	WFP-MH-12-0007-01	Meath County Council	Class 12	Metals & WEEE	G2	-	-
142	WFP	Nicro Metals Recycling Ltd	WFP-MH-10-0013-01	Meath County Council	Class 4 & 10	Metals & WEEE	G2	25,000	122,995
143	WFP	Sylvan Tractor Spares	WFP-MH-09-0009-01	Meath County Council	Classes 4, 9, & 12	Metals & WEEE	G2	6,000	275
144	WFP	Diamond Car Parts	WFP-MH-12-0004-01	Meath County Council	Classes: 12,2, & 4	Other Waste Vehicles	G2a	10,000	30
145	WFP	Labroc Ltd,	WFP-MH-12-0002-01	Meath County Council	Classes: 12, 2, & 4	Other Waste Vehicles	G2a	115	-
146	WFP	Maynooth Spare Parts Ltd	WFP-MH-10-0007-01	Meath County Council	Classes: 2, 4, 9, & 12	Other Waste Vehicles	G2a	690	2,289
147	WFP	Oristown Auto Recyclers Ltd	WFP-MH-10-0001-01	Meath County Council	Classes: 2,4, 9 & 12	Other Waste Vehicles	G2a	26,000	5,417

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
148	WFP	T.D. Caldwell & Sons Ltd	WFP-MH-10-0002-01	Meath County Council	Classes: 2,4, 9 & 12	Other Waste Vehicles	G2a	250	1,226
149	WFP	The Recycling Village Ltd	WFP-MH-11-0005-01	Meath County Council	Classes: 3,4, & 9	WEEE & Batteries	G3	10,000	5,899
150	WFP	Coffey Construction (1) Limited	WFP-MH-12-0008-01	Meath County Council	Class 5	Land Improvement	G4	12,500	-
151	WFP	Damian Fitzsimons Transport	WFP-MH-10-0004-01	Meath County Council	Class 5 & 10	Land Improvement	G4	42,500	4,172
152	WFP	Jim Lenehan	WFP-MH-11-0009-01	Meath County Council	Class 5	Land Improvement	G4	18,434	-
153	CoR	John Prior	COR-MH-13-0002-01	Meath County Council	Class 5	Land Improvement	G4	1,862	-
154	WFP	Martin Brady	WFP-MH-10-0008-01	Meath County Council	Class 5 & 10	Land Improvement	G4	42,000	16,200
155	WFP	Phoenix Rock Enterprises Limited,	WFP-MH-13-0002-01	Meath County Council	Class 5	Land Improvement	G4	13,000	-
156	WFP	Thomas Curtis	WFP-MH-10-0010-01	Meath County Council	Class 5 & 10	Land Improvement	G4	12,000	-
157	CoR	Adrian Lindsay-Fynn	SSF-COR-MH-12-0001-01	Meath County Council	Class 8	Biological Treatment	G5	3,500	-
158	CoR	Biocore Environmental Ltd	SSF-COR-MH-13-0001-01	Meath County Council	Class 8	Biological Treatment	G5	3,500	-
159	WFP	Peter Joseph Barry	WFP-MH-08-0004-02	Meath County Council	Class 8, 10	Biological Treatment	G5	35,000	37,441
160	CoR	Clearpower Ltd	SSF-COR-MH-12-0002-01	Meath County Council	Class 13	Organic Landspread	G6	3,000	-
161	CoR	Clearpower Ltd	SSF-COR-MH-12-	Meath County	Class 13	Organic	G6	9,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
			0003-01	Council		Landspread			
162	CoR	Paddy Brady Agri Limited	SSF-COR-MH-13-0003-01	Meath County Council	Class 13	Organic Landspread	G6	3,000	-
163	CoR	Paddy Brady Agri Limited	SSF-COR-MH-13-0002-01	Meath County Council	Class 13	Organic Landspread	G6	3,000	-
164	WFP	Better Bathroom Co. Ltd	WFP-OY-10-0189-01	Offaly County Council	Class 10	Storage/Processing and Transfer	G1	50,000	-
165	WFP	Condron Tyres Ltd	WFP-OY-13-0193-01	Offaly County Council	Class 10	Storage/Processing and Transfer	G1	50,000	-
166	WFP	Guessford Ltd	WFP-OY-10-0183-02	Offaly County Council	Classes 7; 10 & 11	Storage/Processing and Transfer	G1	50,000	10,498
167	CoR	Killeshal Precast	COR-11-OY-0004-01	Offaly County Council	Class 7/3s Part II	Storage/Processing and Transfer	G1	25,000	1,600
168	WFP	Condron Car Dismantlers Ltd.	WFP-OY-10-0180-01	Offaly County Council	Classes 4 & 12	Metals & WEEE	G2	-	400
169	WFP	Ballycumber Exports Ltd	WFP-OY-10-0182-01	Offaly County Council	Classes 2; 4; 9 & 12	Other Waste Vehicles	G2a	-	1,111
170	WFP	Christopher Langan	WFP-OY-10-0191-01	Offaly County Council	Classes 2 & 12	Other Waste Vehicles	G2a	-	160
171	WFP	David N. Bracken	WFP-OY-10-0186-01	Offaly County Council	Classes 2; 4; 9 & 12	Other Waste Vehicles	G2a	-	152
172	WFP	Gregory Kinahan Sales Ltd T/A GKS	WFP-OY-10-0184-01	Offaly County Council	Classes 2 & 12	Other Waste Vehicles	G2a	-	-
173	WFP	Guinan Waste Recovery Ltd	WFP-OY-13-0194-01	Offaly County Council	Classes 2; 3; 4; 9; 10 & 12	Other Waste Vehicles	G2a	50,000	-
174	WFP	James Hanamy	WFP-OY-10-0190-01	Offaly County Council	Classes 2 & 12	Other Waste Vehicles	G2a	-	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
175	WFP	Source Imaging Supplies Ltd	WFP-OY-10-0181-01	Offaly County Council	Classes 3;4 & 10	WEEE & Batteries	G3	50,000	250
176	WFP	Ellsport Ltd	WFP-OY-08-0178-01	Offaly County Council	Class 5	Land Improvement	G4	-	-
177	WFP	Hinch Plant Hire Ltd	WFP-OY-08-0167-02	Offaly County Council	Class 5	Land Improvement	G4	66,000	11,466
178	WFP	Arneg Gate Ltd_Skip Trans	WFP-DS-11-0002-02	South Dublin County Council	Class 7/PI/3S	Storage/Processing and Transfer	G1	5,000	154
179	WFP	Asset Management Ireland Ltd	WFP-DS-11-0004-01	South Dublin County Council	Class 1/PI/3S	Storage/Processing and Transfer	G1	835	159
180	WFP	Frylite (Dublin) Ltd.	WFP-DS-10-0009-01	South Dublin County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	7,500	4,350
181	WFP	Kilsaran Concrete (Ballinascorney) Limited	WFP-DS-11-0009-01	South Dublin County Council	Class 10 /PII/3s	Storage/Processing and Transfer	G1	10,000	3,171
182	CoR	KN Network Services Ltd.	COR-DS-11-0002-01	South Dublin County Council	Class 7	Storage/Processing and Transfer	G1	10,000	36,172
183	WFP	Natural Energy & Recycling Ltd	WFP-DS-11-0001-03	South Dublin County Council	Class 10/PI/3S	Storage/Processing and Transfer	G1	20,000	799
184	WFP	Pulp Recycling Limited	WFP-DS-12-0001-02	South Dublin County Council	class 10/PI/3S/	Storage/Processing and Transfer	G1	5,000	1,579
185	WFP	Rentokil Initial Ltd	WFP-DS-10-0001-01	South Dublin County Council	Class 1	Storage/Processing and Transfer	G1	100	-
186	WFP	Roadstone Wood Ltd	WFP-DS-11-0005-01	South Dublin County Council	Class 7/PI/3S/	Storage/Processing and Transfer	G1	50,000	31,173
187	WFP	Summerhill Investments Ltd	WFP-DS-12-0008-01	South Dublin County Council	Class 10/PI/3S/	Storage/Processing and Transfer	G1	20,000	-
188	WFP	Bonnerpoint Limited	WFP-DS-13-0003-01	South Dublin County Council	Class 12/PI/3S	Metals & WEEE	G2	3,000	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
189	WFP	Electrical waste Management Ltd	WFP-DS-11-0014-03	South Dublin County Council	Class 4/PI/3S	Metals & WEEE	G2	82,803	7,567
190	WFP	Hammond Lane Metal Co. Ltd	WFP-DS-10-0005-02	South Dublin County Council	Classes 1,4,7&9	Metals & WEEE	G2	24,748	15,529
191	WFP	Marie Cullen	WFP-DS-12-0013-01	South Dublin County Council	Class 12/PI/3S	Metals & WEEE	G2	150	59
192	WFP	Mark O'Reilly	WFP-DS-10-0002-02	South Dublin County Council	Class 4	Metals & WEEE	G2	7,500	5,076
193	WFP	Motor Rescue Direct Limited	WFP-DS-11-0012-01	South Dublin County Council	Class 12/PI/3S	Metals & WEEE	G2	3,000	633
194	WFP	OMC Motors Ltd.	WFP-DS-12-0009-01	South Dublin County Council	Class 12/PI/3S/	Metals & WEEE	G2	200	-
195	WFP	Robert Cullen	WFP-DS-12-0005-01	South Dublin County Council	Class 12/PI/3S	Metals & WEEE	G2	1,500	4
196	WFP	The Hammond Lane Metal Co. Ltd	WFP-DS-09-0009-06	South Dublin County Council	Classes 2, 4 & 12	Metals & WEEE	G2	24,900	1,572
197	WFP	Themroc Ltd.	WFP-DS-10-0013-02	South Dublin County Council	Class 2	Other Waste Vehicles	G2a	21	4
198	WFP	Westlink Recovery Services Limited	WFP-DS-09-0001-01	South Dublin County Council	Classes 2 & 12	Other Waste Vehicles	G2a	3,000	772
199	WFP	Clondalkin Community Recycling Initiative Limited	WFP-DS-10-0010-02	South Dublin County Council	Classes 3, 9 & 11	WEEE & Batteries	G3	1,150	553
200	WFP	Kavanagh Recycling & Recovery Ltd	WFP-DS-14-0003-01	South Dublin County Council	Class 3 & 9/PI/3S/	WEEE & Batteries	G3	2,000	150
201	WFP	Rehab Enterprises Ltd.	WFP-DS-11-0008-01	South Dublin County Council	Class 3/PI/3S	WEEE & Batteries	G3	11,560	7,629
202	WFP	Rehab Enterprises Ltd.	WFP-DS-10-0008-	South Dublin	Class 3 & 9/PI/3S/	WEEE & Batteries	G3	10,000	1,191

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
			03	County Council					
203	WFP	Kennedy Landscape Supplies Limited	WFP-DS-10-0007-01	South Dublin County Council	class 8 /PI/3S/	Biological Treatment	G5	1,000	323
204	CoR	Refrigeration Distributors Ltd.	COR-DS-10-0001-01	South Dublin County Council	Class 14 /PII/3s	Non-hazardous & refrigerants	G7	36	-
205	CoR	RSL Ireland Limited	COR-DS-10-0002-01	South Dublin County Council	Class 14 /PII/3s	Non-hazardous & refrigerants	G7	36	2
206	WFP	Smart Waste Limited	WFP-DS-09-0008-01	South Dublin County Council	Class 1 Class 10 & Part 2, Class 14/PI/3S/	Non-hazardous & refrigerants	G7	9,050	74
207	CoR	The Emerald Waste Company Ltd.	COR-DS-13-0001-01	South Dublin County Council	Class 2	Temporary Storage (e.g. PTUs)	G8	500	-
208	WFP	Barna Waste Ltd (Mr. Sean Curran)	WFP-WM-2011-0004-01	West Meath County Council	Class 10	Storage/Processing and Transfer	G1	-	-
209	WFP	Chris Lynch Waste Management Ltd.	WFP-WM-2010-0003-01	West Meath County Council	Class 10	Storage/Processing and Transfer	G1	20,000	3,365
210	WFP	G & J O'Neill	WFP-WM-2010-0001-01	West Meath County Council	Class 10	Storage/Processing and Transfer	G1	14,365	5,366
211	WFP	John Gannon Concrete Ltd	WFP-WM-2009-0007-01	West Meath County Council	Class 10	Storage/Processing and Transfer	G1	50,000	10,540
212	WFP	O'Reilly Commericals, Ballinalack	WFP-WM-2013-00002	West Meath County Council	Classes 2,4,9,12	Metals & WEEE	G2	-	-
213	WFP	AEP Factors Ltd	WFP-WM-2013-00003	West Meath County Council	Classes 2,4,9,12	Other Waste Vehicles	G2a	-	-
214	WFP	Auto Euro Parts Ltd	WFP-WM-2013-0004	West Meath County Council	Classes 2,4,9,12	Other Waste Vehicles	G2a	-	-
215	WFP	E. Hamill & Sons Ltd	WFP-WM-2011-0001-01	West Meath County Council	Classes 2,4,12	Other Waste Vehicles	G2a	-	-

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
216	WFP	Ganly Motors Ltd	WFP-WM-2014-01	West Meath County Council	Classes 2,4,9,12	Other Waste Vehicles	G2a	-	-
217	WFP	Joe Devery Car Dismantlers	WFP-WM-2010-0002-01	West Meath County Council	Classes 2,4,12	Other Waste Vehicles	G2a	-	200
218	WFP	The Hammond Lane Metal Company Ltd.	WFP-WM-2011-0002-01	West Meath County Council	Classes 2,4,12	Other Waste Vehicles	G2a	-	17,713
219	WFP	Albert Casey	WFP-WM-2011-0005-01	West Meath County Council	Class 5	Land Improvement	G4	-	3,040
220	WFP	BD Flood Ltd.,	WFP-WM-2009-0003-01	West Meath County Council	Classes 5,6	Land Improvement	G4	15,000	10,020
221	WFP	Cois River Sand and Gravel Ltd	WFP-WM-2009-0005-01	West Meath County Council	Class 5	Land Improvement	G4	100,000	-
222	CoR	Eamonn Cuinnffe	COR-WH-11-00002-01	West Meath County Council	Class 6	Land Improvement	G4	-	8,668
223	WFP	Gerry Flynn	WFP-WM-2012-0004-01	West Meath County Council	Class 6	Land Improvement	G4	30,000	2,500
224	WFP	Healion Contractors Ltd	WFP-WM-2012-0001-01	West Meath County Council	Class 5	Land Improvement	G4	100,000	-
225	WFP	Michael McManus	WFP-WM-2013-00001	West Meath County Council	Class 6	Land Improvement	G4	25,000	-
226	WFP	Johnstown Recycling	WFP-WM-2010-0005-01	West Meath County Council	Classes 8,10	Biological Treatment	G5	2,000	1,999
227	CoR	BioCore Environmental	COR-WH-12-00001-01	West Meath County Council	Class 13	Organic Landspread	G6	-	-
228	WFP	Cullen Excavations Limited	WFP-WW-13-0003-02	Wicklow County Council	Classes 5,7	Storage/Processing and Transfer	G1	50,000	24,775
229	WFP	Dan Morrissey Limited	WFP-WW-11-0023-	Wicklow County	Class 7	Storage/Processing	G1	10,000	137

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
			01	Council		and Transfer			
230	WFP	East Coast Transport Limited	WFP-WW-12-0031-01	Wicklow County Council	Class 7	Storage/Processing and Transfer	G1	25,000	-
231	WFP	Polymer Recovery Limited	WFP-WW-12-0030-01	Wicklow County Council	Class 10	Storage/Processing and Transfer	G1	23,900	-
232	WFP	QTLS Limited	WFP-WW-14-0033-01	Wicklow County Council	Class 10	Storage/Processing and Transfer	G1	23,900	-
233	WFP	Wicklow Farm Relief Services Limited	WFP-WW-10-0020-01	Wicklow County Council	Class 10	Storage/Processing and Transfer	G1	1,000	300
234	WFP	Wicklow Port Company	WFP-WW-12-0007-02	Wicklow County Council	Class 10	Storage/Processing and Transfer	G1	50,000	-
235	CoR	Cullen Excavations Limited	COR-WW-13-0019-01	Wicklow County Council	Class 5	Land Improvement	G4	25,000	-
236	CoR	Emma Kennedy	COR-WW-10-0009-01	Wicklow County Council	Class 5	Land Improvement	G4	15,000	-
237	CoR	Greystones Golf Club	COR-WW-10-0010-01	Wicklow County Council	Class 5	Land Improvement	G4	10,000	-
238	CoR	James Bradbury	COR-WW-11-0014-01	Wicklow County Council	Class 5	Land Improvement	G4	5,000	216
239	WFP	James Nolan	WFP-WW-12-0012-03	Wicklow County Council	Class 5	Land Improvement	G4	25,000	1,600
240	WFP	John Webb	WFP-WW-12-0029-01	Wicklow County Council	Class 5	Land Improvement	G4	12,000	1,360
241	CoR	Michael Byrne	COR-WW-11-0015-01	Wicklow County Council	Class 5	Land Improvement	G4	5,000	5,236
242	WFP	Ray Kavanagh	WFP-WW-10-0017-01	Wicklow County Council	Class 5	Land Improvement	G4	75,000	1,776

Map Label No.	Type	Name of Facility	Authorisation No.	Local Authority	Class of Activity	Class of Activity Description	Group	Total Authorised Capacity	2012 Waste Intake
243	CoR	Sinead Brannagh	COR-WW-10-0007-01	Wicklow County Council	Class 5	Land Improvement	G4	7,000	-
244	CoR	TP & S Delahunt	COR-WW-12-0016-01	Wicklow County Council	Class 5	Land Improvement	G4	25,000	8,792
245	WFP	Vincent Cousins	WFP-WW-11-0028-01	Wicklow County Council	Class 5	Land Improvement	G4	25,000	8,580
246	CoR	SEDE Limited	COR-WW-13-0018-01	Wicklow County Council	Class 8	Biological Treatment	G5	25,000	-
247	CoR	Laurence behan	COR-DS-12-0002-01	South Dublin County Council	Class 7	Land Improvement	G1	10,000	-

APPENDIX E

INVENTORY OF EPA WASTE LICENSED 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.

Facilities No. 92 – 106 (which are at application stage) are not mapped.

Map Label No	Facility Name	Licence No	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	Carbury Compost Limited	W0124-01	Inactive	Kildare County Council	R3	Compost Facility	56,600	-	-
2	Bord na Móna Plc	W0198-01	Active	Kildare County Council	R3	Compost Facility	96,000	1,609	17,736
3	Kings Trees Services Composting Facility	W0218-01	Active	Wicklow County Council	R3	Compost Facility	40,000	1,814	1,700
4	Organic Gold (Marketing) Ltd.	W0219-01	Active	Meath County Council	R3	Compost Facility	25,000	7	392
5	Kilmainhamwood Compost	W0195-02	Active	Meath County Council	R3	Compost Facility	40,000	2,487	30,091
6	Lower Oriel Street	W0083-01	Closed	DCC	R4	Hazardous Waste Facility	10,000	-	-
7	National Recycling and Environmental Protection Ltd	W0112-01	Closed	South Dublin County Council	R13	Hazardous Waste Facility	3,000	-	-

Map Label No	Facility Name	Licence No	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
8	Ormonde Organics Limited	W0237-01	Not Commenced	South Dublin County Council	R9	Hazardous Waste Facility	37,000	-	-
9	Sita Environmental Ltd.	W0035-01	Closed	South Dublin County Council	D9	Hazardous Waste Facility	Unclear	-	-
10	Tolka Quay Road	W0036-02	Active	DCC	D15	Hazardous Waste Facility	50,000	7,569	-
11	Sorundon Ltd t/a Irish Environmental Services	W0040-01	Closed	South Dublin County Council	D15	Hazardous Waste Facility	3,440	No data	-
12	ENVA Ireland Ltd	W0184-01	Active	Laois County Council	R9	Hazardous Waste Facility	110,000	13,763	-
13	Rilta Environmental Limited	W0185-01	Active	South Dublin County Council	R13	Hazardous Waste Facility	60,000	2,788	-
14	MacAnulty Clear Drains	W0196-01	Active	South Dublin County Council	D9	Hazardous Waste Facility	35,400	667	-
15	SRCL Ltd (Eco-Safe)	W0054-02	Active	South Dublin County Council	D9	Hazardous Waste Facility	11,857	9,206	-

Map Label No	Facility Name	Licence No	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
16	Soltec (Ireland) Limited	W0115-01	Active	Westmeath County Council	R2	Hazardous Waste Facility	5,000	496	-
17	SRCL Limited	W0055-02	Active	South Dublin County Council	D9	Hazardous Waste Facility	18,000	9,089	-
18	Safety Kleen Ireland Ltd	W0099-01	Active	South Dublin County Council	R13	Hazardous Waste Facility	not specified	218	-
19	KMK Metals Recycling Limited	W0113-03	Active	Offaly County Council	R13	Hazardous Waste Facility	20,000	19,352	-
20	Nurendale Limited trading as Panda Waste Services Limited	W0140-03	Active	Meath County Council	R5	Integrated Waste Management Facility	165,000	150,473	-
21	Dublin Waste to Energy Project	W0232-01	Not Commenced	Dublin City Council	R1	Integrated Waste Management Facility	600,000	-	-
22	Tonge Industries Limited	W0239-01	Closed	South Dublin County Council	R4	Integrated Waste Management Facility	1,135	-	-

Map Label No	Facility Name	Licence No	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
23	Silliot Hill Landfill	W0014-01	Active	Kildare County Council	D1	Integrated Waste Management Facility	67,200	8,481	-
24	Dundalk Landfill & Civic Waste Facility	W0034-02	Active	Dundalk Town Council	R3	Integrated Waste Management Facility	20,000	8,879	-
25	Greenstar Limited	W0053-03	Active	Wicklow County Council	D14	Integrated Waste Management Facility	200,000	125,665	-
26	Oxigen Environmental Limited	W0208-01	Active	South Dublin County Council	R12	Integrated Waste Management Facility	350,000	106,753	-
27	Kilshane Cross Recycling Park	W0223-01	Not Commenced	Fingal County Council	R3	Integrated Waste Management Facility	211,511	-	-
28	Indaver Ireland Limited	W0167-02	Active	Meath County Council	R1	Integrated Waste Management Facility	200,000	54,483	-

Map Label No	Facility Name	Licence No	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
29	Dunsink Landfill aka Dunsink Civic Amenity	W0127-01	Inactive	Fingal County Council	R5	Landfill	195,500	No data	-
30	Drogheda Landfill	W0033-01	Inactive as landfill	Drogheda Borough Council	D1	Landfill	10,000	No data	-
31	Murphy Concrete Manufacturing Ltd. Murphy Environmental Hollywood Ltd	W0129-02	Active	Fingal County Council	D5	Landfill	500,000	41,564	-
32	Fingal Landfill, Nevitt	W0231-01	Not Commenced	Fingal County Council	D5	Landfill	500,000	-	-
33	Balleally Landfill	W0009-03	Inactive	Fingal County Council	D5	Landfill	451,500	-	12,117
34	Basketstown Landfill Facility	W0010-02	Inactive	Meath County Council	D1	Landfill	Unclear	-	-
35	Ballyogan Landfill Facility Ballyogan Recycling Park	W0015-01	Inactive as landfill	Dun Laoghaire-Rathdown County Council	D1	Landfill	400,000	-	-
36	Ballylinan Landfill Site	W0046-01	Inactive		D1	Landfill	650,000	-	-
37	Kerdiffstown	W0047-02	Closed	Kildare County Council	D5	Landfill	Unclear	-	-
38	Kilmurry South	W0048-01	Inactive as landfill	Wicklow County Council	D1	Landfill	100,000	-	-

Map Label No	Facility Name	Licence No	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
39	Marlinstown Landfill	W0071-02	Closed	Westmeath County Council	D1	Landfill	100,300	-	-
40	Dillonsdown	W0080-01	Inactive	Wicklow County Council	D1	Landfill	150,000	-	-
41	Murphy Concrete Manufacturing Ltd. Murphy Concrete Manufacturing Ltd	W0151-01	Active	Meath County Council	D5	Landfill	750,000	-	11,176
42	Annaskinnan Landfill	W0153-01	Inactive	Westmeath County Council	D5	Landfill	175,000	-	0
43	KTK Sand & Gravel Ltd	W0156-01	Inactive	Kildare County Council	D5	Landfill	242,000	-	0
44	Swalcliffe Limited	W0181-01	Inactive	Wicklow County Council	D9	Landfill	16,000	-	0
45	Brownfield Restoration Ireland Ltd	W0204-01	Not Commenced	Wicklow County Council	D9	Landfill	180,000	-	0
46	Knockharley Landfill	W0146-02	Active	Meath County Council	D5	Landfill	200,000	-	129,264
47	Cemex (ROI) Limited	W0254-01	Application	Kildare County Council	D5	Landfill	600,000	-	0
48	Ballymurtagh Landfill Facility	W0011-02	Inactive as landfill	Wicklow County Council	D1	Landfill	1,000	-	0

Map Label No	Facility Name	Licence No	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
49	Arthurstown Landfill	W0004-04	Inactive	South Dublin County Council	D5	Landfill	600,000	-	0
50	Ballydonagh Landfill	W0028-03	Inactive	Westmeath County Council	D5	Landfill	60,000	-	0
51	Rampere Landfill	W0066-03	Inactive	Wicklow County Council	D5	Landfill	50,000	-	15,508
52	Whiteriver Landfill Site	W0060-03	Inactive	Louth County Council	D5	Landfill	96,000	-	47,382
53	Ballynagran Residual Landfill	W0165-02	Active	Wicklow County Council	D5	Landfill	175,000	0	216,052
54	Drehid Waste Management Facility	W0201-03	Active	Kildare County Council	D5	Landfill	360,000	69,662	411,183
54	Drehid Waste Management Facility	W0201-03	Active	Kildare County Council	R3	Compost Facility	25,000	-	11,843
55	Derryclure Landfill	W0029-04	Inactive	Offaly County Council	D5	Landfill	100,000	-	-
56	Kyletalesha Landfill	W0026-03	Inactive	Laois County Council	D5	Landfill	47,100	-	37,143
57	KTK Landfill Limited	W0081-04	Closed	Kildare County Council	D5	Landfill	275,000	-	-
58	Clonbullogue Ash Repository	W0049-02	Active	Offaly County Council	D1	Landfill	70,000	3	-

Map Label No	Facility Name	Licence No	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
59	Ballymount MRF (Merrywell)	W0238-01	Active	Dublin City Council	R12	Materials Recovery Facility	100,000	62,163	-
60	Thorntons Recycling Centre	W0242-01	Not Commenced	Fingal County Council	R13	Materials Recovery Facility	100,000	-	-
61	Padraig Thornton Waste Disposal Ltd	W0206-01	Active	Meath County Council	R13	Materials Recovery Facility	50,000	5,332	-
62	Greyhound Recycling & Recovery	W0205-01	Active	South Dublin County Council	R12	Materials Recovery Facility	250,000	-	-
63	Panda Waste	W0261-01	Active	Fingal County Council	R3	Materials Recovery Facility	50,000	70,660	-
64	Drumman Materials Recycling and Waste Transfer Facility	W0275-01	Application	Offaly County Council	R3	Soil Remediation Facility	99,000	-	-
65	Drehid MBT Facility	W0283-01	Application	Kildare County Council	R3	Materials Recovery Facility	250,000	-	-
66	Blackhall Soil Recovery Facility	W0247-01	Active	Kildare County Council	R5	Soil Recovery Facility	400,000	-	-

Map Label No	Facility Name	Licence No	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
67	Fassaroe Waste Recovery Facility	W0269-01	Active	Wicklow County Council	R5	Soil Recovery Facility	570,000	8	-
68	Swalcliffe Limited	W0097-01	Closed	DCC	D15	Waste Transfer Station	50,000	-	-
69	Ballymount Baling Station	W0003-03	Active	South Dublin County Council	D14	Waste Transfer Station	324,480	17,942	-
70	Nurendale Ltd trading as Panda Waste Services Ltd	W0039-02	Active	South Dublin County Council	D14	Waste Transfer Station	150,000	237,144	-
71	Dean Waste Co. Ltd.	W0045-01	Inactive	South Dublin County Council	D13	Waste Transfer Station	300,000	-	-
72	Greenstar Ltd	W0079-01	Active	South Dublin County Council	R13	Waste Transfer Station	145,000	19,438	-
73	Midland Waste Disposal Company Limited	W0131-02	Active	Meath County Council	R5	Waste Transfer Station	95,000	50,427	-
74	Athy Civic Amenity Centre	W0175-01	Active	Kildare County Council	D14	Waste Transfer Station	5,500	375	-

Map Label No	Facility Name	Licence No	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
75	Greenstar Limited	W0183-01	Active	South Dublin County Council	R12	Waste Transfer Station	220,000	87,471	-
76	Greenstar Ltd (Greenogue)	W0188-01	Active	South Dublin County Council	R12	Waste Transfer Station	95,000	67,758	-
77	Thornton's Recycling Centre	W0044-02	Active	South Dublin County Council	D15	Waste Transfer Station	250,000	242,443	-
78	Mulleady's Ltd	W0169-01	Active	Louth County Council	D15	Waste Transfer Station	95,000	24,030	-
79	Ray Whelan Ltd	W0158-01	Active	Laois County Council	D15	Waste Transfer Station	33,000	30,985	-
80	Dean Waste Company Ltd (Upper Sheriff Street)	W0042-01	Closed	DCC	D13	Waste Transfer Station	150,000	-	-
81	Oxigen Environmental Ltd	W0152-03	Active	South Dublin County Council	D13	Waste Transfer Station	80,000	59,136	-
82	Oxigen Environmental Limited	W0144-01	Active	Louth County Council	D15	Waste Transfer Station	90,000	-	-

Map Label No	Facility Name	Licence No	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
83	Labre Park Civic Amenity Site	W0221-01	Not Commenced	Dublin City Council	R13	Waste Transfer Station	34,000	-	-
84	Advanced Environmental Solutions (Ireland) Limited	W0222-01	Inactive	Fingal County Council	R3	Waste Transfer Station	95,000	-	-
85	AES (Ireland) Ltd	W0194-02	Closed	Laois County Council	R3	Waste Transfer Station	99,000	-	-
86	Lawlor Brothers Waste Disposal Ltd t/a Access Skip Hire	W0227-01	Active	South Dublin County Council	R12	Waste Transfer Station	95,000	39,520	-
87	Green Waste Facility	W0228-01	Inactive	South Dublin County Council	R13	Waste Transfer Station	20,000	-	-
88	Mulleady's Limited	W0197-02	Active	Westmeath County Council	R13	Waste Transfer Station	50,000	8,073	-
89	Rilta Environmental Limited	W0192-03	Active	South Dublin County Council	R13	Waste Transfer Station	111,000	78,835	-
90	Irish Packaging Recycling Limited	W0263-01	Active	South Dublin County Council	R3	Waste Transfer Station	150,000	126,485	-

Map Label No	Facility Name	Licence No	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
91	Advanced Environmental Solutions (Ireland) Ltd	W0104-02	Active	Offaly County Council	R3	Waste Transfer Station	50,000	60,523	-
92	Kiernan Sand & Gravel Limited	W0262-01	Application	Meath County Council	R5	Soil Recovery Facility	167,400	-	-
93	Sand & Gravel Merchants Limited	W0264-01	Application	Kildare County Council	R5	Soil Recovery Facility	440,000	-	-
94	Clashford Recovery Facility Limited	W0265-01	Application	Meath County Council	R5	Soil Recovery Facility	180,000	-	-
95	Milverton Waste Recovery Facility	W0272-01	Application	Fingal County Council	R5	Soil Recovery Facility	400,000	-	-
96	Huntstown Inert Waste Recovery Facility	W0277-01	Application	Fingal County Council	R5	Soil Recovery Facility	750,000	-	-
97	Mullaghcrone Quarry	W0278-01	Application	Meath County Council	R10	To be Assessed	150,000	-	-
98	Rehab Glassco Limited	W0279-01	Application	Kildare County Council	R5	Materials Recovery Facility	150,000	-	-
99	Glanpower Limited	W0282-01	Application	Offaly County Council	R1	Integrated Waste Management Facility	65,000	-	-
100	Bio Agrigas Limited	W0285-01	Application	Westmeath	R3	To be	20,000	-	-

Map Label No	Facility Name	Licence No	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
				County Council		Assessed			
101	The Recycling Village Ltd	W0286-01	Application	Meath County Council	R12	Mechanical Treatment	15,000	-	-
102	Mr Badri Gharzeddine trading as Enviro Star Solutions	W0288-01	Application	South Dublin County Council	D4	To be Assessed	300	-	-
103	Mr John Morrin	W0251-01	Application	Kildare County Council	R5	Soil Recovery Facility	500,000	-	-
104	BUCHPA Limited (The Norse Family)	W0252-01	Inactive	Wicklow County Council	R5	Soil Recovery Facility	1,134,000	-	-
105	Lyndon Douglas	W0268-01	Inactive	Meath County Council	D1	Soil Recovery Facility	0	-	-
106	Yellow Bins (Waste Disposal) Ltd	W0114-01	Not Commenced	Kildare County Council	D13	Waste Transfer Station	60,000	-	-

APPENDIX F

LEGACY AND HISTORIC LANDFILLS

The historic and legacy landfill information presented in the following table was sourced directly from local authorities in the EMR.

Site ID	Local Authority	Site Name	Risk
S22-02292	Dublin City Council	Artane school	
S22-02329	Dublin City Council	Labre park	
S22-02330	Dublin City Council	Californian hills	
S22-02331	Dublin City Council	Long meadows	
S22-02332	Dublin City Council	Sundrive road	
S22-02333	Dublin City Council	Irishtown	
S22-02334	Dublin City Council	Bond road	
S22-02335	Dublin City Council	East wall road	
S22-02336	Dublin City Council	Clontarf park	
S22-02337	Dublin City Council	Mount temple schools	
S22-02338	Dublin City Council	Edenmore park	
S22-02339	Dublin City Council	Lauder's lane	
S22-02340	Dublin City Council	Ballyboggan quarry	
S22-02341	Dublin City Council	Tolka valley	
S22-02342	Dublin City Council	Merville quarries	
S22-02343	Dublin City Council	James larkin road	
S22-02344	Dublin City Council	Bull island causeway	
S22-02619	DLR County Council	Jennings	C
S22-02625	DLR County Council	Woodbrook	C
S22-02619	DLR County Council	Kilbogget	C
S22-02655	Fingal County Council	Barnageeragh	C
S22-02658	Fingal County Council	Curkeen Quarry	C
S22-02669	Fingal County Council	St. Doolagh's Quarries	B
S22-02670	Fingal County Council	Burrow Road	B
S22-02691	Fingal County Council	Porterstown	C
S22-02692	Fingal County Council	Tolka River Park	C
S22-02745	Fingal County Council	Castlemoate House	C
S22-02746	Fingal County Council	Nevitt	C
S22-02747	Fingal County Council	Belcamp Lane	B
S22-02817	Fingal County Council	Fancourt	C

Site ID	Local Authority	Site Name	Risk
S22-02363	Kildare County Council	Oghill Refuse Depot, Monasterevin	C
S22-02364	Kildare County Council	Monasterevin Refuse Depot	C
S22-02424	Kildare County Council	Ballysize, Donore, Carragh	C
S22-02430	Kildare County Council	Carrigeen, Clane	A
S22-02431	Kildare County Council	Mountrice Refuse Depot, Monasterevin	B
S22-02432	Kildare County Council	Digby Bridge, Barrettstown, Sallins	C
S22-02433	Kildare County Council	Pollardstown Refuse Depot, Loughbrown, The Curragh	C
S22-02436	Kildare County Council	Donnelly's Hollow, The Curragh	C
S22-02437	Kildare County Council	Landenstown, Sallins	B
S22-02438	Kildare County Council	Rathangan Refuse Depot	B
S22-02439	Kildare County Council	Rahandoon, Sallins	B
S22-02440	Kildare County Council	Waterstown, Sallins	B
S22-02441	Kildare County Council	Yellowbogcommon, Kilcullen	B
S22-02442	Kildare County Council	Robertstown Refuse Depot	B
S22-02443	Kildare County Council	Knocknagarm Refuse Depot, The Curragh	A
S22-02507	Kildare County Council	Greenhills Refuse Depot, Athy	A
S22-02508	Kildare County Council	Prusselstown Refuse Depot, Athy	A
S22-02509	Kildare County Council	Moone Refuse Depot	C
S22-02763	Kildare County Council	Waterstown 2, Donore, Sallins	C
S22-02843	Kildare County Council	Bleach 1, Athy	B
S22-02844	Kildare County Council	Bleach 2, Athy	B
S22-02835	Kildare County Council	Hillsborough, Newbridge	C
S22-02837	Kildare County	Pollardstown (Michael and Padraig	B

Site ID	Local Authority	Site Name	Risk
	Council	Munnelly), The Curragh	
S22-02838	Kildare County Council	Pollardstown (Thomas and Patrick Munnelly), The Curragh	A
S22-02839	Kildare County Council	Ryevale, Leixlip	C
S22-02840	Kildare County Council	Silliot Hill, Kildare Town	C
S22-02845	Kildare County Council	Tonelagee Lawns, Athy	B
S22-02834	Kildare County Council	Wolfestown, Eadestown, Naas	A
S22-02273	Laois County Council	Kilmainham	C
S22-02274	Laois County Council	Rathdowney road	B
S22-02275	Laois County Council	Oughaval	B
S22-02276	Laois County Council	Trumera landfill	C
S22-02277	Laois County Council	Ballydine landfill	C
S22-02278	Laois County Council	Ballymorris landfill	B
S22-02280	Laois County Council	Aghanure landfill	B
S22-02282	Laois County Council	Castletown landfill	C
S22-02284	Laois County Council	Coolkerry landfill	C
S22-02285	Laois County Council	Cooltederry landfill	C
S22-02286	Laois County Council	Kilabban	B
S22-02287	Laois County Council	Kilbreedy landfill	C
S22-02288	Laois County Council	Mountrath town landfill	C
S22-02289	Laois County Council	Rathmoyle landfill	C
S22-02290	Laois County Council	Ridge road landfill	C
S22-02291	Laois County Council	Wynne park landfill	B
S22-02485	Longford County Council	Lissard	C

Site ID	Local Authority	Site Name	Risk
S22-02486	Longford County Council	Ballymahon	B
S22-02487	Longford County Council	Ballymaurice	A
S22-02488	Longford County Council	Barnacor	B
S22-02489	Longford County Council	Cartron big	A
S22-02490	Longford County Council	Longford town no. 1	A
S22-02491	Longford County Council	Longford town no. 2	B
S22-02653	Longford County Council	Ballymulvey	C
S22-02652	Longford County Council	Drumlish	C
S22-02450	Louth County Council	Ardee town dump	B
S22-02451	Louth County Council	Bolies county dump	B
S22-02452	Louth County Council	Carlingford town dump	A
S22-02453	Louth County Council	Omeath town dump	C
S22-02198	Meath County Council	Fletcherstown Bog	A
S22-02207	Meath County Council	Drumconrath Town Dump	B
S22-02209	Meath County Council	Oldcastle Town Dump	C
S22-02211	Meath County Council	Jenkinstown Dump	C
S22-02388	Offaly County Council	Clonbrone, birr	B
S22-02389	Offaly County Council	Ballydaly, tullamore	C
S22-02390	Offaly County Council	Ballydrohid, tullamore	C
S22-02391	Offaly County Council	Ballyvora, ferbane	C
S22-02392	Offaly County Council	Ballybracken little	B
S22-02393	Offaly County Council	Cloncannon, edenderry	C
S22-02394	Offaly County	Pre cloncannon	C

Site ID	Local Authority	Site Name	Risk
	Council		
S22-02484	Offaly County Council	Scurragh landfill	C
S22-02499	Offaly County Council	Kilbride, kilcoursey, clara	B
S22-02166	South Dublin County Council	Friarstown	A
S22-02167	South Dublin County Council	Waterstown	A
S22-02168	South Dublin County Council	Mill lane	B
S22-02397	South Dublin County Council	Corbally Tallaght hill Ref C221	C
S22-02399	South Dublin County Council	Cruagh, rockbrook	A
S22-02400	South Dublin County Council	Glassamucky	C
S22-02402	South Dublin County Council	Kilnamanagh Ref 233	C
S22-02403	South Dublin County Council	Lucan demesne	A
S22-02632	South Dublin County Council	Bohernabreena (Ref B 215)	C
S22-02645	South Dublin County Council	Greenhills Road Site (Ref 232)	C
S22-02649	South Dublin County Council	Whitehall Road west /St Peter's Crescent	C
S22-02711	South Dublin County Council	Bluebell ,J.F.K industrial Estate Map Ref 234	C
S22-02742	South Dublin County Council	Nangor Road, Ballybane Ref 238	C
S22-02748	South Dublin County Council	Corbally Sargat Map Ref.222 Durcan	C
S22-02749	South Dublin County Council	Corbally Saggat Paul Joyce	A
S22-02750	South Dublin County Council	Robinhood Road Landfill Map Ref 235	C
S22-02751	South Dublin County Council	Clondalkin Papermill Map Ref 237	A
S22-02752	South Dublin County Council	Tymon Lane near Balrothery	C
S22-02753	South Dublin County Council	Balrotherty Landfill Map ref 208	C
S22-02754	South Dublin County Council	Firhouse Road	B

Site ID	Local Authority	Site Name	Risk
S22-02756	South Dublin County Council	Edmonstown Road Map B 201	B
S22-02757	South Dublin County Council	Edmondstown Road Landfill Map Ref.202	C
S22-02758	South Dublin County Council	Woodtown Map Ref A 205	A
S22-02766	South Dublin County Council	Mountpelier,East of Friarstown,map Ref 211	C
S22-02767	South Dublin County Council	Bohernabreena Landfill Map Ref B216	C
S22-02777	South Dublin County Council	Piperstown, Tallaght Ref B212	C
S22-02778	South Dublin County Council	Ballinascorney Ref 217	C
S22-02779	South Dublin County Council	Mount Seskin Road Landfill Map Ref. B218	C
S22-02818	South Dublin County Council	Calliaghstown Upper (W. of Brittas) Map Ref 225	
S22-02293	Westmeath County Council	Golden island	B
S22-02412	Westmeath County Council	Moate	A
S22-02413	Westmeath County Council	Kilbeggan	B
S22-02414	Westmeath County Council	Tyrrellspass	C
S22-02415	Westmeath County Council	Rochfortbridge	C
S22-02416	Westmeath County Council	Killucan	C
S22-02417	Westmeath County Council	Marlinstown	A
S22-02418	Westmeath County Council	Milltownpass dump	C
S22-02425	Westmeath County Council	Ballinlig, clonmellon	C
S22-02426	Westmeath County Council	Castlepollard	C
S22-02428	Westmeath County Council	Coole dump	C
S22-02429	Westmeath County Council	Delvin dump	C
S22-02434	Westmeath County Council	Christianstown, collinstown	B
S22-02435	Westmeath County	Lickbla	A

Site ID	Local Authority	Site Name	Risk
	Council		
S22-02631	Wicklow County Council	Clogga , Arklow	B
S22-02639	Wicklow County Council	Fassaroe No. 2	B
S22-02633	Wicklow County Council	Fassaroe No.3A	A
S22-02635	Wicklow County Council	Fassaroe No.3B	C
S22-02637	Wicklow County Council	Fassaroe No.3C	A
S22-02626	Wicklow County Council	Kilcoole	C
S22-02624	Wicklow County Council	Maheramore	C
S22-02646	Wicklow County Council	Newtownmountkennedy	C
S22-02558	Wicklow County Council	Coolroe, Tinahely	C
S22-02621	Wicklow County Council	Aughrim	B
S22-02848	Wicklow County Council	Killegar - private	B
S22-02772	Wicklow County Council	Kilmullin - private	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 8.1.2

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 8.1.2

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 8.3.7

Policy:

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

Policy B4 Section 8.3.7

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 8.2.5

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 17.2.10

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 17.2.2

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 – E7 Section 16.4.2

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-E12 Section 16.4.3

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 75,000 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 13.3.1

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 Directives.

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.